

CHAPTER SIXTEEN

Researching Speaking

Rebecca Hughes

Speaking is a capacity that human beings draw on almost as easily and unconsciously as we breathe, and yet it is one that is richly complex to research. Spoken discourse is at the heart of both the most sophisticated and the most mundane of human activities. Everyday conversation is the social glue which underpins all human relationships. By the age of three, a child who develops normally has gained a good day-to-day working vocabulary and by the age of five or six has grasped the basic linguistic and pragmatic skills required to develop their own identity and relationships within their family and the wider community (see Ochs & Shefflin 2009 for a useful survey of child language acquisition embedded in social and cultural contexts).

At a more abstract level, the spoken language, from preliterate times to the present day, has been the originating and facilitating medium of a great deal of the creative, performative, political, educational and ideological developments through human history. Despite technological developments, face-to-face speech remains a primary medium by which all humans collaborate about information and tasks, develop organizational behaviour and express and comprehend emotional life with others.

Yet, despite (or perhaps because of) this pervasiveness and significance, research into spoken language remains a complex field to engage with and is the focus for much debate in applied linguistics theory and practice. This complexity arises in part from the fact that, depending on the aspect of the spoken form being researched, the central questions being investigated may relate to the narrowest aspect of speech – for example, investigating a particular phonetic feature (as in Levy & Strange 2008 ‘Perception of French vowels by American English adults with and without French

language experience') or the broadest, such as understanding the effects of the development of a literate culture in an oral society (see, for example, the collection *The Making of Literate Societies*, Olson & Torrance 2001). The nature of the research techniques and strategies employed, and paradigms regarded as valid, will vary in line with the topic and outcomes of research which, as noted, may be extremely varied themselves.

In addition, the nature of the research will be strongly affected by the purposes for which it is undertaken and where it sits on the cline of theory and applications. One of the most tantalizing aspects of research into speech is that there is very little cross reference between areas with potentially overlapping interests. For example, the constraints on, and the nature of, lexical retrieval and articulation (how we come up with words and say them) have relevance to understanding the grammar of the spoken form. Speakers tend to construct utterances in predictably different ways from writers and this is in part due to the need to process the language being spoken in real time and with no potential for editing. However, many of the major advances in the understanding of spoken grammar have come from large studies of corpora (Biber et al. 1999; Carter & McCarthy 2006; Close & Aarts 2010; John & Brooks 2014; Leech 2000; Svartvik 1990), and there is little interplay between the insights of speech processing which shape these grammatical choices and speech captured as text in the form of a corpus. The work of scholars who take the 'emergent' nature of talk very seriously has gained ground somewhat in recent years. In the field known as 'interactional linguistics', Peter Auer, for instance, works at the intersection between grammar and conversation analysis (CA). Auer and Pfänder (2011) provide a useful set of perspectives and insights from those who follow this approach. More directly within the CA tradition, but with a strong focus on the temporality of speech, is the work of Elizabeth Couper-Kuhlen. Couper-Kuhlen (2012) shows how the work can sit between detailed analysis of emerging talk and some fundamental questions of linguistic theory. Many other influential researchers have adopted a similar approach. Fox et al. (2012) in *The Handbook of Conversation Analysis* published by Wiley provide an overview of the techniques involved.

Equally, the work in psycho- or neurolinguistics about unimpaired and impaired speech, or spoken-language recognition, is generally carried out in isolation from, for example, the needs of the second language learner or the norms of speech against which oral assessment is conducted. While these may seem distant areas from one another, taking an aspect of spoken language such as hesitations and reformulations (often listed in oral assessment criteria) and understanding the norms and constraints on spoken language in non-assessed contexts shows how there may be insights that have obvious relevance to each other.

Overall, therefore, in considering the focus of research into speaking, it has to be remembered that the individual speaker and the society in which they produce their discourse are inevitably difficult for the researcher into

speaking to disentangle, and the exact nature of the object of study is not as clear-cut as it may seem at first glance. Much of the debate around approaches to researching speaking revolves around these issues, together with the fundamental issue of how to capture and analyse, without distortion, what is a transitory and dynamic medium.

Bearing in mind the necessary diversity of approaches to researching speaking outlined above, this chapter will aim to give an overview of some of the major approaches to research into speech and a brief summary of the typical methods by which investigations are undertaken.

Research strategies and techniques

Research into speaking is generally carried out via two main means: capturing and examining authentic speech data and capturing and examining elicited or non-authentic speech data. These areas are dealt with in more detail below, but, due to its centrality in a number of research methods, the section begins with some discussion of the role of transcription as a key tool in spoken language research.

A great number of approaches to spoken-language research depend on being able to access conversational or other forms of speech data and make it available through time for analysis. These range from discourse and CA to ethnographic approaches to large spoken corpora. In psycholinguistics and second language acquisition (SLA) studies, the role of transcription is less central, however, even though, in the former, there is often a role for elicited experimental data from subjects which needs to be captured in written form. This makes transcription one of the most key tools in spoken-language research and one which any new researcher needs to take into consideration in setting up their methodological framework.

Transcription of spoken data

Many types of research into spoken language depend on capturing the data via not only electronic recording but subsequently transcribing this into the static and more easily analysable written mode. Until the development of speech-recognition software which can assist the automation of transcription to some extent, the transfer of speech data into the written mode was an extremely time-consuming process and one that needed to be factored in to the research project framework design both practically (it can take at least six minutes to make an accurate, basic transcription of a single minute of talk) and from a theoretical perspective.

A primary question in spoken-language research is often therefore the type of transcription to be used. The decisions which a researcher needs to

take about this can be regarded as relating to a basic process of materials gathering, and in some respect of developing an investigative tool. The reason for this is that writing down speech is not a neutral process, and decisions as to what features to capture and how best to represent these in the static, visual medium of writing relate closely to the overall purpose of the investigation. All transcription conventions attempt to represent the acoustic information in some way, but no system can capture the full breadth of linguistically salient information which even a short and apparently simple burst of speech contains.

The simplest conversation when transcribed and put under the microscope of analysis looks, to the untrained eye, chaotic. Here, for instance, is a two-person question and answer exchange transcribed for research into medical discourse and consulting skills (Ph = pharmacist, Pt = patient) (Salter et al. 2007, p. 4):

- 1 Ph 05. Yeah okay and you're happy with the box that you are using
- 2 Pt 09. Yeah I can manage them (0.2) they ain't all the same some of them have
- 3 Pt 09. got a slide but you have to watch you don't un uncover more than one
- 4 Pt 09. hole=
- 5 Ph 05. =Yes yeah I've actually brought some with me here
- 6 Pt 09. You see
- 7 Ph 05. I think the one you mean is (0.2) is it like that (0.3) is it like that so you
- 8 Ph 05. have to be careful when you pull the *slides out*
- 9 Pt 09. *That's right* yeah they're the ones
- 10 Ph 05. Yeah
- 11 Pt 09. Yeah (0.3) so that just pull one pull pull down to them morning
- 12 Ph 05. Pull down to the one you want
- 13 Pt 09. And then the next dinner time
- 14 Ph 05. Yeah and make sure you only go so far with them=
- 15 Pt 09. =That's right
- 16 Ph 05. Yeah

A variety of transcription conventions have emerged over the years, and the researcher using spoken data needs to familiarize themselves with these and decide on the level of detail and the salient features which are necessary to capture in the study in question.

The extract of talk between a pharmacist and patient above shows some of the very commonly used conventions in transcribing spoken language. For instance, you will see an ‘equals’ sign (=) at the end of the utterance at line 4 and another one at the start of the utterance at line 4. This indicates that the pharmacist interrupts, or overlaps with, the patient and that the word ‘hole’ and ‘yes’ are said simultaneously. You will also see numbers in brackets placed within an utterance: ‘I think the one you mean is (0.2) is it like that (0.3) is it like that...’. These numbers indicate the length of pauses made by a speaker. In these examples, the pauses are 0.2 and 0.3 of a second respectively. Both pauses and overlapping talk can have significance in conversational analysis, and it is very common therefore to see this level of detail in a transcription.

A seminal chapter containing what has come to be known as *the Jefferson system* is shown in Sacks et al. (1978), and this has formed the basis of the transcription systems used in literally hundreds of other studies. Edwards and Lampert (1993) provide a thorough survey of transcription methods in relation to research frameworks. A good, and user friendly, summary of transcription conventions typically used in conversational analysis, discourse analysis and ethnographic studies can be found in ten Have (1999). Grundy (2013) provides a thoughtful introduction to transcription in the field of pragmatics for the novice researcher.

Parsing and tagging

A very specific kind of transcription is used in corpus linguistics and speech-recognition systems to capture not only acoustic information but also lexical and syntactic details. *Parsing* refers to the process by which spoken data is broken down into its grammatical constituents, and *tagging* is the means by which these constituents, often down to the level of individual words and parts of words (morphemes), are labelled so that a computer can aid the researcher in the process of analysis. The development of sophisticated search engines that can seek and analyse data on the World Wide Web is expanding the breadth and depth of this work (Kilgarrieff & Grefenstette 2003; Kilgarrieff et al. 2010). However, a further stage in the development of multimodal corpora and relevant tagging and searching devices is still needed for spoken-language research to be carried out on a par with the simplicity and directness of written word searches and tools which have been around for decades such as concordancers.

Elicited data and experimental approaches

As noted in the previous sections, for theoretical and methodological reasons, research into speech does not always or indeed necessarily take

place directly on samples of spoken language as found in our daily lives. Those who do not use spontaneous spoken discourse fall broadly into two categories: those who seek to mimic authentic spoken data closely and elicit it in a more manageable way for analysis; those who step further away from contextualized speech data and construct experimental frameworks within which very precisely constrained samples of speech can be analysed.

An example of the former approach would be the well-known approach referred to as a *map task experiment*. This is a technique to elicit dialogue in ways that are predictable and constrained but, at the same time, create the need for explanation, clarification and convergence of understanding. Participants seek to share information of a route from A to B from two slightly different maps without showing them to each other. The maps are designed to have slight but important differences between them, and this leads to a rich, spontaneous, dialogue between the participants as they try to carry out the task of getting one or other of them to a specific destination. A corpus of these dialogues has been made publicly available at: <http://groups.inf.ed.ac.uk/maptask/index.html>, viewed 16 March 2014.

Speech data are often gathered under much stricter experimental protocols, particularly when there is a very narrow research question being investigated. The approach involves, for example, a group of subjects who have a particular feature (dyslexic children, brain damaged patients, the elderly), a control group (children of similar age and background without dyslexia, etc.) and a set of carefully chosen prompts to elicit spoken data of the kind required by the investigator. Altmann et al. (2008), in the realm of health sciences and communication, investigated the oral performance of dyslexic children by means of a strictly experimental approach that elicited a narrow sample of responses required by the research design. The careful construction of the prompts by means of which samples of speech were gathered, and their relationship to the research questions, becomes clear in the following extract concerning their methods:

In the current study, we presented participants with three-word stimuli that included a verb form and two nouns differing in animacy.¹ Noun stimuli consisted of a proper name and an inanimate noun chosen to be a good argument for a particular verb, so that a conceptual connection between the two could be easily established (e.g. kicked + football). Verb stimuli consisted of the past participles of three types of transitive verbs: control (CON) verbs comprised agent–patient verbs with regular morphology (e.g. stirred, kicked). Experimental verb types included agent–patient verbs with irregular (IRR) morphology (e.g. shaken, thrown) and theme–experiencer (TE) verbs with regular morphology (e.g. bored, confused). The two experimental verb types imposed different metalinguistic demands on participants. IRR verbs required participants to recognize that the past participle form could only be used in perfective sentences (e.g. had hidden), passive sentences (e.g. was hidden by), or in

adjectival structures (e.g. the hidden X). Thus, to succeed in using IRR verbs participants had to detect the small orthographic/phonological differences signalling the morphological form, and be explicitly aware of the grammatical constraints inherent in this morphological form (Altmann et al. 2008, pp. 58–59).

Disciplines in linguistics that value elicited/experimental speech data, or approach speech from a decontextualized perspective, and regard the norms of actual talk as less relevant include SLA, psycholinguistics and speech processing, among others.

Authentic data and CA approaches

The sharp contrast between the approach described above and that used by researchers who prioritize authentic data is clear when compared to the influential method or indeed whole school or sub-discipline of applied linguistics, known as *conversation analysis* or ‘CA’. Those who use elicited data of one kind or another often argue that this is necessary because even large samples of authentic data simply may not show the feature that the investigators are interested in. Those who begin from authentic spoken interaction, however, turn this argument around and propose that even the apparently simplest and shortest example of a real exchange between situated interlocutors will provide a rich source of linguistic data. It is the starting point of such an approach to say that language is socially constructed, that meaning resides not so much in the words and clauses as in the understanding that emerges between speakers and that, on a moment-by-moment basis, speakers and hearers accommodate to one another in the achievement of conversational interaction. The detailed transcription, repeated hearings and interpretation by the researcher (often in discussion with others) of stretches of talk are the fundamental research tools of the CA tradition.

A guest editorial by Nielsen and Wagner (2007) in the *Journal of Pragmatics* provides an excellent overview and key references of the history of this influential approach from early studies situated in the field of sociology, through talk in institutional settings and what this reveals about individuals and organizations, to *interactional linguistics* and other newer branches. The role of authentic, situated, speech data is nicely summed up thus:

Although CA research has engaged in new topics, settings, and disciplines, it has kept its identity and has acted as a discipline in its own right with a well-defined methodology and a strong analytic tradition in which new studies are written. Studies are carefully crafted collections of cases, sometimes assembled over many years due to low frequency. The cases

are the basis for and the proof of the description of the recipies [*sic*] for social actions described in the studies. Herein lies the core of CA: testable sequential description of social actions, carried out on the basis of data, which have not been elicited but collected in the field. (Nielsen & Wagner 2007, p. 442)

A useful and publicly available set of some of the seminal transcriptions used in the CA approach can be found at: <http://www.talkbank.org/CABank/>, viewed 16 March 2014).

Other research approaches that value actual spoken data at different levels of its production include: sociolinguistic and ethnographic approaches (which situate the research in a culture and a society and focus on interaction), corpus studies (which tend to focus more on word and clause level and the patterns that can be found in large bodies of speech data) and acoustic phonetics (which, at its most basic, deals with the stream of speech in terms of sounds as opposed to higher units such as words or clauses). The last two areas – particularly phonetic studies which have a very specialized set of measurement techniques, dedicated software and equipment – provide a warning not to confuse the using of actual instances of speech data with a particular set of research methods. It is not the case that using real-speech data equates to qualitative work. Samples of speech can be analysed in a number of ways, and approaches that value authentic data can be placed on a spectrum moving from situated/qualitative (such as CA or ethnographic work) to decontextualized/quantitative (such as acoustic phonetics, frequency studies from large corpora).

Synthesis of current thinking and research

Spoken-language research is rather unusual in that many of the debates surrounding questions of theory are intertwined with the very practical issues touched on above of what data are regarded as acceptable as a basis for investigation and how these are best approached. These issues go to the heart of a very fundamental question indeed for researching speaking: ‘What is speaking and how do you analyse it?’ In part, the question under debate is the need (or not) for wholly authentic speech data to be the basis of spoken-language research, and, in part, these conundrums relate to the much bigger question of the role of naturally occurring data in linguistic theory. A classic distinction in linguistics is that proposed by Noam Chomsky (1965) between *competence* (underlying aptitude in human beings for handling the language system) and *performance* (the tangible evidence of language used in the real world). This distinction set the tone of debates from the 1960s onwards and is still seen by many as relevant – in 2007 a whole issue of the *Modern Language Journal* was dedicated to questions arising from the basic distinction posed forty years earlier, and the conceptual distinction continued to have currency into the second decade of the twenty-first century (see, for instance, Neeleman

2013; Syrett & Lidz 2011). The reason for the longevity of the distinction is that it sits at the heart of a debate in linguistic inquiry that was neatly summed up by the editor of the *Modern Language Journal* special issue:

Is acquiring a second language essentially a cognitive process situated in the mind of the individual learner? Or, is it, first and foremost, a social process because language learning necessarily occurs through interactive use with target language speakers? (Magnan 2007, p. 733)

Some of the complexities of research into spoken discourse therefore cross refer to ongoing debates in applied linguistics (for instance the interface between social and contextualized aspects of language and SLA theory) (Larsen-Freeman 2007) or the debates surrounding the role of culture on the grammar of an individual language (Everett 2005). An individual researcher's position in relation to this central debate will inform what evidence they regard as valid and useful in their approach to researching speaking. These issues, in turn, relate to the stance of the researcher and the general framework or paradigm they regard as most compelling. Therefore, as outlined in the previous section, the techniques and methods in spoken-language research are not only quite diverse, but they are also sometimes somewhat 'loaded' in terms of how they relate to competing views of language itself. All these points will influence a researcher's choices as to whether, for example, entirely natural or elicited speech data are preferable in a given study.

These methodological debates, in the same way as the theoretical ones outlined above, are not new and have been the locus of heated discussions since the 1960s and before. For instance, there is the well-known concept in applied linguistics called the *observer's paradox* which was first set out in a seminal chapter by William Labov (Labov 2006, first published 1966). This is based on the idea that when speech data is the object of study, it can be influenced by the presence of a researcher in significant ways. Put simply, all of us will tend to behave differently if we think we are being observed and that what we are saying is being recorded for future analysis. Labov himself solved this problem by designing an ingenious method for his data gathering. By asking various shop assistants quickly for a particular item, he elicited an unselfconscious answer ('fourth floor') that contained the particular spoken feature he was interested in.

There have been two major trends which are starting to bring spoken-language research firmly into the centre of debates in applied linguistics once more. The first is the acknowledgment in SLA and cognitive linguistics that the role of context and culture is difficult to exclude from theories that are to be meaningful rather than simply internally consistent. The role of the situated speaker or 'situated cognition' as it affects communicative outputs particularly in the realm of SLA is gaining more attention (Doehler 2010; Mori 2007). Influential applications of research such as work on oral

assessment in large and high-stakes international examinations of second language use have also tended to push researchers to ask about the norms of spoken discourse in a variety of contexts (Hughes 2004; Pearce & Williams 2013).

The second area that is, and will continue to be, strongly influential is the role of new technologies on our capacity to capture, store and analyse large quantities of digitally recorded speech in audio and video formats. This trend is meeting up with two powerful drivers of change: the World Wide Web and commercial interests which require human–computer interactions to address spoken dialogue (currently mostly in restricted domains such as a call centre). Although essentially a text- and image-based medium, the web with its ‘openness’, data sharing potential and sheer size allows groups of users to draw on spoken data in quantities that were simply unthinkable five years ago. A search on the term ‘conversation’ in the popular video clip site YouTube (http://www.youtube.com/results?search_query=conversation&page=1, viewed 24 July 2014) generated over 90,000 hits in 2008 and about six-and-a-half-million returns in 2014. While some of these will include the mildly psychotic talking in monologue to their favourite tree, this is just one example of the richness of oral material which the web can provide. This trend for openly accessible multimodal data is changing the way that research into speaking is carried out in applied linguistics. For instance, the idea of the individual researcher recording data simply for a small, local, project and the data only being captured in the oral form seems quite old-fashioned as large archives or open access sites of video materials become readily available online. Second, the notion of a private corpus of speech will become less and less attractive as researchers understand the benefits of sharing the workload of capture, transcription and aligning sound files with transcriptions.

These changes will happen all the sooner if some of the commercial interests (for instance, gaming or automation of responses to human interlocutors via a call centre) that are encouraging practical approaches to analysing dialogue are able to link up with applied linguistic research. This will be particularly powerful for researchers in the field if a means is found to search and to model dialogues in ways that make them as accessible as text and meaningful to computers. Work in this field is already quite sophisticated, and in computational linguistics, an array of publications and platforms are being produced to deal with human–machine interactions via the spoken medium. Earlier versions included a site where a ‘chatbot’ learned to speak to you purely from the input you provided: <http://www.jabberwacky.com/>, viewed 19 April 2009 and these developed exponentially into highly diverse mobile applications such as the conversational puppy app ‘Pupito’ (<https://itunes.apple.com/us/app/pupito/id522091447?mt=8>, viewed 16 March 2014) or the personalized language learning platform ‘Duolingo’ (<https://www.duolingo.com/>, viewed 16 March 2014). Some of these new approaches step outside the debates around the cognitive or

cultural basis for language learning and are allowing a more sophisticated and data-driven set of theories to emerge about spoken language in context.

Sample studies

As has been noted throughout this chapter, speaking is a multifaceted human skill and there is no single research approach that can cover all the areas that interest the academic and wider community. Therefore, this section presents two contrasting studies that look at the same area of speaking – the details of interactive behaviour – in order to give a sense of the diversity of approaches and some examples of the typical stages to projects in the field of spoken discourse. Speaking is distinguished by its high potential for interactivity, and spontaneous conversational data is the hardest of all for linguistic theory and for human–computer systems to model. Within speaking, the mechanisms that allow smooth and seamless turn-taking have been an object of considerable attention. Both the studies presented here see turn taking as a key language resource in spoken language, but are carried out by sharply contrasting means.

Sample study 1: Durational aspects of turn-taking in spontaneous face-to-face and telephone dialogues (ten Bosch et al. 2004)

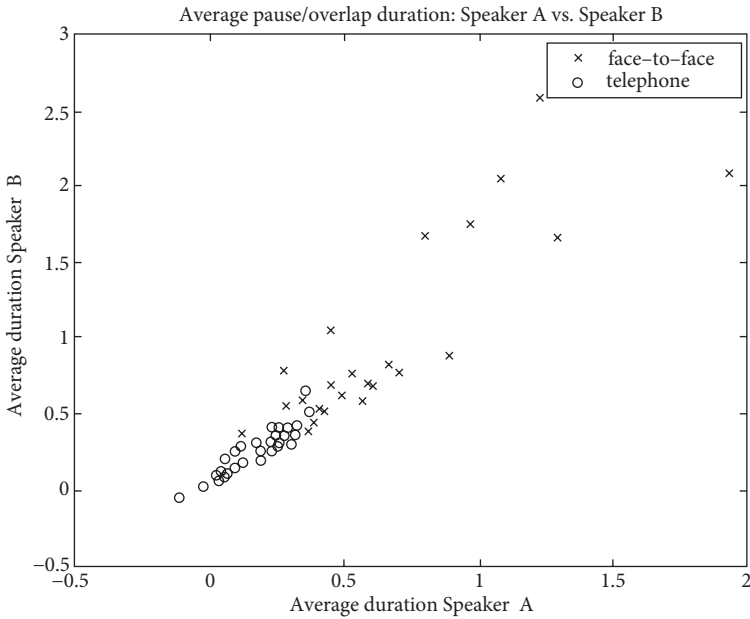
In this study, ten Bosch and colleagues wanted to look at the differences in turn-taking behaviour in two contexts: face to face and on the telephone. Their approach was corpus-based and rigorously quantitative. Using such a framework, it is crucial to match the data carefully and define the units that are being analysed extremely objectively. In part, this is simply the conventions of the quantitative approach and, in part, it is due to the need for researchers to include sufficient information for other researchers to carry out similar studies and compare or challenge results. The researchers took comparable examples of speech in the two contexts from a pre-existing corpus and analysed the duration of pauses between speaker turns. They defined a ‘turn’ in a way that lent itself to the quantitative approach: utterances between silences (see also e.g. Koiso et al. (1998) for an influential study on Japanese in this area which uses the same technique). They introduce their definition thus:

A study by Weilhammer and Rabold (2003) on durational aspects of turn-taking, which was based on task-oriented dialogue data, has shown that the logarithm of the durations of pauses and overlaps can be modeled by a Gaussian distribution.² In their analysis, the definition of

turn was ‘implicitly based’ on the Verbmobil transcription conventions³ (Burger 1997). Their definition of a turn states that ‘a turn starts with the first word in the dialogue or with the first word breaking the silence that follows the previous turn’. Furthermore, ‘the silence between two turns of one speaker is always overlaid by an utterance of the [interlocutor]’. The definition of a turn as used in the present study is very similar. (ten Bosch et al. 2004, p. 564)

In their discussion, the authors acknowledge the limitations of this approach, suggesting the need for a ‘functional’ definition of the turn. However, the benefit of this approach is that it does allow very rigorous and objective cross-genre (in this case, the telephone versus face-to-face mode) comparisons to be made. This is because the framework for the analysis is based on a unit that has been clearly defined and lends itself to measurement and to the analytical tools being used. One of their main findings was that pauses were of shorter duration in the telephone mode (see Figure 16.1).

The authors tentatively suggest that the lack of other cues to hold the floor (gaze and gesture, for instance), and the fact that the whole of the attention of the interlocutors is on the talk in hand, may account for this.



***Sample study 2 – Negotiating negotiation:
The collaborative production of resolution in small
claims mediation hearings (Garcia 2000)***

The second study shows the application of conversation analytical approaches to a real-world problem: mediation and negotiation. In particular, the study deals with the need for neutrality on the part of any mediator and the empowerment of the parties involved to reach a consensus for themselves. The CA approach is particularly useful in understanding how participants develop understanding between themselves in the process of interaction and was, therefore, seen as an appropriate paradigm by this researcher in contrast with earlier work on mediation which had tended to focus on outcomes rather than on the processes involved and how participants expressed consensus or resistance.

The analysis was based on fifteen examples taken from a larger videotaped collection of mediation encounters, transcribed using the *Jefferson method* (see Sacks et al. 1978), and closely analysed using CA methods to allow a better understanding of the emergence, or not, of consensus and the power relations holding between the various parties. The analyses showed, in detail, how the trained mediator retains neutrality and the strategies employed by them to empower the individuals involved to create their own resolutions to the issues.

In Excerpt 9, the mediator asks specifically for a price for the camera, rather than requesting ‘a solution’. By soliciting a price for the camera, the mediator is supporting the idea that a possible solution would be for Disputant C (‘Pete’) to purchase the camera.

Excerpt 9

552 M: so: (0.4) so wha:t would it co:st fer pete t' =

553 *purchase* *thuh* *cam**ra*?

554 (3.6)

555 A: i'm willing tuh negotiate that.

(Garcia 2000, p. 332)

In contrast to the first study, the interpretive role of the researcher is presented in relation to close analysis of specific instances of talk in context, rather than objective quantitative results that ‘speak for themselves’. Discussing the benefits of using the CA approach to help produce a better understanding of key issues in this area, Garcia notes that it has tended to lack the interactional perspective and that the approach allows the research to show the specifics of how mediation works rather than dealing with abstractions.

These contrasting studies which end the chapter show something of the rich diversity of potential research on the spoken form and how it lends

itself to a multiplicity of real-world questions as well as being at the heart of some of the most contentious areas of linguistic theory.

Notes

- 1 'Animacy' indicates the level of autonomous life the nouns showed. For example, 'dog' or 'bird' will score more highly on this than 'stone' or 'stick'.
- 2 Gaussian distribution is a term from statistics also known as the normal or the bell curve. It is applied to the tendency for the distribution of data points in many samples – for example, speech rates – to cluster around an average mid point with a small tail on each side of this peak showing higher or lower scores.
- 3 Verbmobil was a large artificial intelligence project in Germany looking at the automatic recognition of speech and translation into other languages.

Resources for further reading

Adolphs, S & Carter, R 2013, *Spoken Corpus Linguistics*, Routledge, New York, NY.

This book provides a useful summary and overview of the issues of building and analysing spoken corpora. It is particularly interesting in that it also incorporates 'multi-modal' aspects to provide a highly innovative framework suggesting ways in which researchers may begin to incorporate gesture and spoken language simultaneously in their analysis.

Chafe, W & Danielewicz, J 1987, 'Properties of spoken and written language', in Horowitz, R & Samuels, SJ (eds), *Comprehending Oral and Written Language*, Academic Press, San Diego, CA, pp. 83–113.

This remains one of the most accessible explanations of why speaking is different from writing and needs to be researched on its own merits.

Hughes, R 2010, *Teaching and Researching Speaking*, Longman, London.

This book offers an overview of research into spoken language that is particularly aimed at the English-language teaching community or those interested in the interface between teaching and research.

Jones, MJ & Knight, R 2013, *Bloomsbury Companion to Phonetics*, Bloomsbury Publishing, New York, NY.

This handbook covers the major aspects of phonetics that a novice researcher will need to become familiar with and also has some excellent material on new directions such as the perception of speech in social settings.

Sidnell, J & Stivers, T (eds), 2012, *The Handbook of Conversation Analysis*, Wiley-Blackwell, Malden, MA.

This extensive handbook brings together not only experts in the field of CA but also seeks to integrate their insights across into other related disciplines.

References

- Altmann, LJP, Lombardino, LJ & Puranik, C 2008, 'Sentence production in students with dyslexia', *International Journal of Language & Communication Disorders*, vol. 43, no. 1, pp. 55–76.
- Auer, P & Pfänder, S (eds), 2011, *Constructions: Emerging and Emergent* (Vol. 6). de Gruyter Mouton, Berlin.
- Biber, D, Johansson, S, Leech, G, Conrad, S & Finegan, E 1999, *The Longman Grammar of Spoken and Written English*, Longman, London.
- Carter, R & McCarthy, M 2006, *The Cambridge Grammar of English*, Cambridge University Press, Cambridge.
- Chomsky, N 1965, *Aspects of the Theory of Syntax*, Massachusetts Institute of Technology Press, Cambridge, MA.
- Close, J & Aarts, B 2010, 'Current change in the nodal system of English: A case study of must, have to and have got to', in H Sauer & G Waxenberger (eds), *The history of English Verbal and Nominal Constructions*, John Benjamins, Philadelphia, PA, pp. 165–182.
- Couper-Kuhlen, E 2012, 'Turn continuation and clause combinations', *Discourse Processes*, vol. 49, no. 3–4, pp. 273–299.
- Doehler, SP 2010, 'Conceptual changes and methodological challenges: On language and learning from a conversation analytic perspective on SLA', in P Seedhouse, S Walsh, C Jenks (eds), *Conceptualising Learning in Applied Linguistics*, Palgrave Macmillan, London, pp. 105–127.
- Edwards, JA & Lampert, MD (eds), 1993, *Talking Data: Transcription and Coding in Discourse Research*, Lawrence Erlbaum Associates, Hillsdale, NJ.
- Everett, DL 2005, 'Cultural constraints on grammar and cognition in Piraha', *Current Anthropology*, vol. 46, no. 4, pp. 621–646.
- Fox, BA, Thompson, SA, Ford, CE & Couper-Kuhlen, E 2012, 'Conversation analysis and linguistics', in J Sidnell & T Stivers (eds), *The Handbook of Conversation Analysis*, John Wiley & Sons, Ltd, Chichester, pp. 726–740.
- Garcia, AC 2000, 'Negotiating negotiation: The collaborative production of resolution in small claims mediation hearings', *Discourse and Society*, vol. 11, no. 3, pp. 315–343.
- Grundy, P 2013, *Doing Pragmatics*, Routledge, Abingdon.
- Hughes, R 2004, 'Testing the visible: Literate biases in oral language testing', *Journal of Applied Linguistics*, vol. 1, no. 3, pp. 295–309.
- John, P, & Brooks, B 2014, 'Lingua franca and its grammar footprint: Introducing an index for quantifying grammatical diversity in written and spoken language', *Journal of Quantitative Linguistics*, vol. 21, no. 1, pp. 22–35.
- Kilgarriif, A & Grefenstette, G 2003, 'Introduction to the web as corpus', *Computational Linguistics*, vol. 29, no. 3, pp. 333–347.
- Kilgarriif, A, Reddy, S, Pomikálek, J & Avinesh, PVS 2010, 'A corpus factory for many languages', *LREC2010*, pp. 904–10.
- Koiso, H, Horiuchi, Y, Tutiya, S, Ichikawa, A & Ken, Y 1998, 'An analysis of turn-taking and backchannels based on prosodic and syntactic features in Japanese map task dialogs', *Language and Speech*, vol. 41, nos. 3–4, pp. 295–322.
- Labov, W (2006), *The Social Stratification of English in New York city*, Cambridge University Press, New York, NY.

- Larsen-Freeman, D 2007, 'Reflecting on the cognitive – social debate in second language acquisition', *The Modern Language Journal*, vol. 91, no. s1, pp. 773–787.
- Leech, G 2000, 'Grammars of spoken English: New outcomes of corpus-oriented research', *Language Learning*, vol. 50, no. 4, 675–724.
- Levy, ES & Strange, W 2008, 'Perception of French vowels by American English adults with and without French language experience', *Journal of Phonetics*, vol. 36, no. 1, pp. 141–157.
- Magnan, SS 2007, 'Presenting the focus issue', *The Modern Language Journal*, vol. 91, Focus Issue, pp. 733–734.
- Mori, J 2007, 'Border crossings? Exploring the intersection of second language acquisition, conversation analysis, and foreign language pedagogy', *The Modern Language Journal*, vol. 91, no. s1, pp. 849–862.
- Neeleman, A 2013, 'Comments on Pullum', *Mind & Language*, vol. 28, no. 4, pp. 522–531.
- Nielsen, MF & Wagner, J 2007, 'Continuity and diversity in conversation analysis', *Journal of Pragmatics*, vol. 39, no. 3, pp. 441–444.
- Ochs, E & Schefflin, BB 2009, 'Language acquisition and socialization: Three developmental stories and their implications', in A Duranti (ed.), *Linguistic Anthropology: A Reader*, Blackwell, Oxford, pp. 296–328.
- Olson, D & Torrance, N 2001, *The Making of Literate Societies*, Blackwell, Oxford.
- Pearce, WM & Williams, C 2013 'The cultural appropriateness and diagnostic usefulness of standardized language assessments for Indigenous Australian children', *International Journal of Speech-language Pathology*, vol. 15, no. 4, pp. 429–440.
- Sacks, H, Schegloff, EA & Jefferson, G 1978, 'A simplest systematics for the organization of turn-taking of conversation', in Schenkein, J (ed.), *Studies in the Organization of Conversational Interaction*, Academic Press, New York, pp. 7–57.
- Salter, C, Holland, R, Harvey, I & Henwood, K 2007, "I haven't even phoned my doctor yet." The advice giving role of the pharmacist during consultations for medication review with patients aged 80 or more: Qualitative discourse analysis', *British Medical Journal*, vol. 334, no. 7603, p. 1101. doi: 10.1136/bmj.39171.577106.55, published 20 April 2007.
- Svartvik, J. (ed.) 1990, *The London Corpus of Spoken English: Description and Research*, *Lund Studies in English* 82. Lund University Press, Lund.
- Syrett, K & Lidz, J 2011, 'Competence, performance, and the locality of quantifier raising: Evidence from 4-year-old children', *Linguistic Inquiry*, vol. 42, no. 2, pp. 305–337.
- ten Bosch, L, Oostdijk, N & de Ruiter, JP 2004, 'Durational aspects of turn-taking in spontaneous face-to-face and telephone dialogues', in I Habernal & V Matoušek (eds), *Text, Speech and Dialogue*. (Lecture Notes in Computer Science). Springer, Berlin, pp. 563–570.
- ten Have, P 1999, *Doing Conversation Analysis*, Sage Publications, London.