Title
Everyday conversation after right hemisphere damage: A methodological demonstration and some preliminary findings

Running head
RHD and conversation

Authors and affiliation
1. Dr Scott Barnes (corresponding); Department of Linguistics, Macquarie University, Australia.

2. Ms. Sophie Toocaram; Department of Linguistics, Macquarie University, Australia.

3. Prof. Lyndsey Nickels; Department of Cognitive Science, Macquarie University, Australia.

4. A/Prof. Suzanne Beeke; Department of Language and Cognition, University College London, UK

5. Prof. Wendy Best; Department of Language and Cognition, University College London, UK

6. A/Prof. Steven Bloch; Department of Language and Cognition, University College London, UK

Contact details
Department of Linguistics
Macquarie University, North Ryde, NSW, Australia, 2109
Phone: +61 2 9850 7960
Fax: +61 2 9850 9183
Email: scott.barnes@mq.edu.au

Abstract

Right hemisphere damage impairs lexical processing, prosodic processing, and discourse and pragmatics. Clinicians and researchers have observed that conversation is a challenging communicative activity for people with right hemisphere communication disorder, but previous studies have yielded inconsistent, equivocal, and marginal results, with few clear demonstrations of conversational dysfunction. There are also no empirical studies of everyday conversations involving people with right hemisphere damage and their familiar communication partners (e.g., family,

friends). This study explores how a man with conversational problems following right hemisphere stroke formulated responses to communicative acts addressed to him in everyday conversation. It focuses on communicative acts that were "response mobilising", i.e., set out clear expectations about who should speak, and how they should respond. This study employed an empirical descriptive case study design to examine 43 minutes of triadic conversation between the man with right hemisphere damage, his spouse, and a family friend. 61 communicative acts addressed to the man with right hemisphere damage were analysed using conversation analytic techniques. Few instances were found in which the man with right hemisphere damage was insensitive to the communicative contingencies implemented through these communicative acts. However, the instances where he was insensitive to them were salient. The findings of this study indicate that response mobilising communicative acts hold some potential for describing behavioural presentation of right hemisphere communication disorder in conversation.

1. Introduction

1.1 Right hemisphere communication disorder and conversation

Unilateral damage to the right hemisphere of the brain during adulthood impairs cognitive processing that supports communication (e.g., Lehman Blake, 2018). The research and clinical evidence gathered to date indicates that the symptoms and implications of right hemisphere damage are distinctive from aphasia (e.g., Myers, 2001). That is, people with right hemisphere damage—due to, for example stroke—do not present with disruptions to language processing commensurate with aphasia, nor do they experience commensurate communication problems. From this starting point,

many foundational issues for research and clinical practice with right hemisphere communication disorder remain to be resolved (see, e.g., Sherratt & Bryan, 2012; Tompkins, Lei, and Zenika, 2015).[1]

While there is consensus that unilateral right hemisphere damage can affect aspects of lexical processing, prosodic processing, and discourse and pragmatics (e.g., Lehman Blake, 2018; Tompkins et al., 2015), inconsistent findings and heterogenous participant performance have hampered efforts to arrive at consensus on the essential behavioural characteristics of right hemisphere communication disorder. This is particularly the case for symptoms relating to discourse and pragmatics. Group studies indicate that monologic and conversational tasks can be challenging for people who suffer right hemisphere damage (e.g., Ferré et al., 2012; Parola et al., 2016; see Mackenzie and Brady, 2008, for a summary), as do anecdotal clinical reports (e.g., Myers, 1999). However, participant performance during these tasks has been recurrently difficult to distinguish from controls (Lehman Blake, 2018, p. 48-54; Weed, 2011), and patterns of deficit have been troublesome to interpret. The lack of detailed behavioural criteria for how right hemisphere communication disorder affects routine communication undermines efforts to precisely establish prevalence, distinguish between the theories of underlying processing deficits, and design comprehensive, theoretically and empirically informed clinical assessment and intervention options.

Clinicians and researchers have suggested that conversation is a particularly challenging communicative activity for people with right hemisphere communication

[1] One basic issue is the most apt label for this condition, and range of candidates have been put forward (e.g., pragmatic aphasia, apragmatism, pragnosia) (see Myers, 2001). In clinical practice with communication disorders, it is often classified amongst "cognitive communication disorders" resulting from a variety of aetiologies. We have elected to use "right hemisphere communication disorder" because it is both aetiology specific and descriptive.

disorder. The findings of Ferré et al. (2012), for instance, indicate that conversational deficits are the common symptom of impairment in this population (see also Mackenzie and Brady, 2008). However, there is only a small body of research that directly and empirically measures how people with right hemisphere damage participate in conversation (e.g., Brady, Armstrong, & Mackenzie, 2006; Brady, Mackenzie, & Armstrong, 2003; Chantraine, Joanette, & Ska, 1998; Hird & Kirsner, 2002, 2003; Kennedy, Strand, Burton, & Pearson, 1994; Kennedy, 2000; Schegloff, 2003; Wolf, Van Lancker Sidtis, & Sidtis, 2014).[2] These studies have employed a range of sampling procedures, including, for example, "topic-structured clinical conversation" with a speech pathologist (Brady et al., 2006, p. 295), a "referential communication task" with a research consociate (Chantraine et al., 1998), "get-to-know-you" conversations with a speech pathologist (e.g., Kennedy, 2000), and interview-type conversations with "minimal encouragement" (Wolf et al., 2014, p. 601). As one might expect for exploratory research, these studies have addressed a range of phenomena, including measures of topic coherence and management (Brady et al., 2003), topic "scenes" (Kennedy, 2002), prosody and breath units (Hird & Kirsner, 2003), turns and turn-taking (Chantraine et al., 1998; Kennedy et al., 1994), verbal repetition (Wolf et al., 2014), as well as multiple, broader measures focused on overall linguistic productivity (e.g., Brady et al., 2006).

A notable feature of this literature is the absence of studies in which people with right hemisphere damage are speaking with their familiar conversation partners (e.g., family, friends) in the course of everyday life (Barnes & Armstrong, 2010). In part, this

[2] Ferré et al. (2012), and a number of others (e.g., Mackenzie & Brady, 2004), evaluate conversation using indirect measures (e.g., rating scales). There is also a wider body of research exploring how people with right hemisphere stroke engage in "offline", judgement-based tasks, which are argued to be relevant for conversation. For a recent, well-executed example, see Baldo, Kacinik, Moncrief, Beghin and Dronkers (2016).

reflects the methodologies adopted in prior studies, which have necessitated controlled sampling of conversation. Nonetheless, there are a number of reasons why sampling unconstrained, everyday conversation with familiar conversation partners is likely to be valuable for determining the nature of right hemisphere communication disorder.

First, as per the wider literature on communication and right hemisphere damage, studies employing controlled conversation sampling have yielded inconsistent, equivocal, and marginal results (Barnes & Armstrong, 2010; Lehman Blake, 2017; Lehman Blake, 2018, p. 53; Mackenzie & Brady, 2008). That is, despite problems with discourse and pragmatics being an (apparently) essential feature of right hemisphere communication disorder, this body of research offers surprisingly few clear demonstrations of conversational dysfunction. At the very least, this suggests that alternative conversational sampling techniques should be utilised with a view to better understanding the reasons for the equivocal findings so far. A stronger, more theoretically motivated argument would be that everyday conversation is the primary medium through which people live their lives, and the "natural ecological niche for language" (Schegloff, 2006, p. 70). As such, one might expect that symptoms of right hemisphere communication disorder are sensitive to its pressures and opportunities (see Barnes and Armstrong, 2010)

Second, there is a large body of robust research from the field of conversation analysis exploring the structure of everyday conversation (e.g., Sidnell & Stivers, 2013). This has yet to be employed in studies of right hemisphere damage and conversation. In fact, the empirical (and, sometimes, theoretical) basis for the measures used in prior studies of conversation in right hemisphere communication disorder has been weak or under-elaborated (cf. Barnes & Bloch, 2019). Conversation-analytic research demonstrates that important structural aspects of conversation—

particularly, turn-taking organisation, sequence organisation, and repair organisation—are highly regular across languages and cultures (e.g., Blythe, Gardner, Mushin, & Stirling, 2018; Dingmanse et al., 2014; Gardner, 2010; Gardner & Mushin, 2013; Stivers et al., 2009; Stivers & Rossano, 2010). These findings—some of which will be discussed further in the sections to follow—can therefore provide a sound basis for generating more salient evidence of the behavioural symptoms of right hemisphere communication disorder.

Third, to date, exploration of right hemisphere communication disorder and conversation has proceeded in a rather piecemeal fashion, employing a wide variety of theories, measures, and sampling strategies. The ostensible universality of important aspects of everyday conversation offers avenues for programmatic study of conversation and right hemisphere communication disorder (cf. Weed, 2011, p. 881). By steadily accumulating evidence on core problems of coordination and meaning intrinsic to everyday conversation, researchers can methodically determine the types of interactional practices that are (and aren't) subject to dysfunction. This has clear potential benefits for theoretical accounts of right hemisphere communication disorder, and would support the design of further experimental research addressing conversation. Finally, and more practically, studying conversations involving familiar communication partners in everyday contexts has the benefit of elucidating the nature and extent of the *disability* caused by right hemisphere communication disorder, which is similarly essential for improving its clinical management.

In the sections that follow we suggest a starting point for empirical, programmatically-oriented research on right hemisphere communication disorder and everyday conversation. In particular, we focus on "response mobilisation" (Stivers & Rossano, 2010), i.e., the ways that speakers indicate who should respond, and what they should say (or do) through their response.

1.2 Response mobilisation in conversation

Spontaneous interactions pose various problems of coordination. Once people have entered into mutual engagement, they must recurrently coordinate who will act, when, and in what way. In highly ritualised contexts (e.g., a debate, a marriage ceremony), opportunities to act are, to some extent, predetermined. For most interactions, however, such constraints are not in place, and people must dynamically and collaboratively regulate their participation. Coordination and regulation of opportunities to participate in everyday conversation occurs via two primary, and typically complementary, systems: 1) turn-taking organisation; and 2) sequence organisation. Together, they represent core "tools" available to speakers for response mobilisation in conversation.

The turn-taking system for conversation consists of normative expectations for designing and interpreting talk. More specifically, it provides sets of practices for *constructing* turns and *allocating* turns (see Sacks, Schegloff, and Jefferson, 1978). With regard to turn allocation, the turn-taking system contrasts selection of the next speaker by the party[3] producing a turn, and self-selection by the recipient(s) of a turn. These options are not symmetrically available. That is, the current speaker has the first opportunity to nominate a next speaker, and can do so at any point in their turn. The nominated party is then normatively expected to begin speaking when an opportunity for speakership transition arises. We shall term this option a "current speaker selects

[3] "Party" has a technical meaning as it relates to the turn-taking system. It refers, abstractly, to the context-bound configurations of people involved a conversation. Sometimes, parties and people will be equivalent, but in others a single party may be composed of more than one person (see Lerner, 2003). One implication of this is that the roles of "current speaker" and "next speaker" may be occupied by more than one person even though the system allocates them to a single party.

next speaker technique" (Sacks et al., 1978). If this option is not exercised, the recipient(s) of the current turn may self-select (Sacks et al., 1978).

Current speakers select next speakers via multiple, converging practices. Amongst the strongest linguistic resources for this task are forms of address, such as personal names and pronouns. These are routinely combined with other linguistic and embodied practices that elaborate and constrain who should properly speak next. For example, a turn that includes the use of a personal name, interrogative syntax, rising terminal intonation, and gaze directed to a specific party is very likely to be taken as explicitly selecting a next speaker (see Blythe et al., 2018). As we noted above, this party will then be expected to (promptly) commence speaking, and produce a turn of their own. Beyond speakership, however, this aspect of the turn-taking system does not provide for how the selected party should address the prior turn, i.e., *what* they should say in response. So, even if a party determines that they are being selected as next speaker, establishing what they should do next requires the application of further, complementary normative expectations.

People design their conduct in conversation so that others can understand it as having transparent reasons. These reasons are communicative *actions*, i.e., contextualised, goal-directed communicative objectives, e.g., questioning, greeting, complaining, requesting (see Enfield and Sidnell, 2017) Actions arrange sets of relevancies for their recipients to navigate as they respond. For example, some initiating actions set in place strong normative expectations about the kinds of responsive actions that should, properly, follow them, e.g., a point to a tub of butter implicates transfer of the butter as a response. If these expectations are not met (i.e., if the implicated responsive action does not promptly follow), then speakers typically elect to pursue its production (e.g., reproducing and/or modifying it), and/or recipients typically give reasons for its absence (e.g., lack of ability or knowledge). For

actions accomplished via turns-at-talk, this normative expectation is the basis of sequence organisation, and is known as "conditional relevance" (see Schegloff, 2007). Conditional relevance governs the relationship between adjacency pairs. Adjacency pairs consist of two turns; one turn carrying out an initiating action—a first pair part—and another turn carrying out an according responsive action—a second pair part. First pair parts implicate specific kinds of second pair parts produced by another party, e.g., questions normatively implicate answers, greetings implicate a return greeting. That is, they project that a party other than the current speaker will take up the floor and produce a responsive action, but they needn't *explicitly* select any particular person to act.

On many, perhaps most, occasions, speakers who apply a current speaker selects next speaker technique also simultaneously make certain responsive actions conditionally relevant. For instance, a current speaker may preface a *yes/no* question with a personal name. This both explicitly selects a next speaker and implicates an answering response in a particular linguistic format (Raymond, 2003). Together, these normative pressures are strongly "response mobilising" (Stivers & Rossano, 2010), i.e., they pressure a selected party to promptly provide a responsive action. However, there is potential for turn-taking-based and action/sequence-based normative expectations to diverge. For instance, a person other than the selected next speaker may offer a second pair part (Stivers & Robinson, 2006); as, for example, when a carer answers a question directed towards an adult with a disability. Alternatively, the selected next speaker may take the floor, but variously avoid (or resist) the implications of the preceding action; as for example, when a politician restates a policy rather than answering the specific question posed by an interviewer. There is also potential for ambiguity as to who, if anyone, a current speaker is nominating to speak next; particularly in interactions involving more than two people.

One possible reason for this is that a current speaker may lean on "tacit" strategies for selecting a next speaker (Lerner, 2003). That is, instead of using a personal name or pronoun or definitive gaze, they may rely on the qualities of an action (e.g., its status as a first pair part, the topics it addresses), the linguistic realisation of a turn (e.g., use of interrogative morphosyntax), and embodied practices (e.g., voice projection, body positioning) to invite recipient recognition of their selection (Blythe et al., 2018). Who should act next may also be muddied by actions that have less specific responsive implications (see Stivers and Rossano, 2010), and changeable embodied orientation (e.g., alternation of gaze and/or head positioning) on the part of the current speaker.

In summary, people must recurrently determine who should act next in conversation, and what they should do. This can be robustly accomplished using response mobilising tools; particularly, explicit next speaker selection by the current speaker, and initiating actions that set in place strong normative expectations for responsive actions. A summary of response mobilising tools is presented in Table 1.

((Insert Table 1 around here))

1.3 Response mobilisation and right hemisphere communication disorder

Anecdotal reports suggest that people with right hemisphere communication disorder can be tangential, inappropriate, and verbose in conversation (Mackenzie & Brady, 2008, p. 236), and there are some indications of ill-fitted contributions to conversation in the existing empirical literature (e.g., Kennedy, 2000; Hird & Kirsner, 2003). One possible explanation for these apparent symptoms is failure to comply with the normative expectations implemented via response mobilising tools. Not responding when selected as next speaker or producing an ill-fitting response to an initiating action are highly (albeit variously) disruptive to conversation (see, e.g.,

Schegloff, 2007, p. 19-21), and may be specific behaviours implicated in conversational dysfunction. In addition, these well-defined practices can offer an anchoring point for programmatic exploration of right hemisphere communication disorder and conversation. Therefore, the normative expectations implemented via response mobilising tools represent a promising site for exploring conversational dysfunction in right hemisphere communication disorder.

1.4 The present study

There is currently no empirical evidence on how people with right hemisphere damage participate in everyday conversation with familiar communication partners, and there is limited information on the specific basis for reports of conversational dysfunction in right hemisphere communication disorder. As such, the present study explores the following research question: *how do people with right hemisphere damage address response mobilising tools directed to them in everyday conversation with familiar communication partners?* As well as offering preliminary empirical findings, the present study is intended as a methodological demonstration. The ultimate objective of this demonstration—as highlighted in the sections above—is to lay the ground for programmatic investigation of right hemisphere communication disorder and everyday conversation, focusing on response mobilisation.

2. Method

2.1 Design

This study employed an empirical descriptive methodology, drawing on descriptive non-experimental single case procedures (e.g., Yin, 2014) and conversation analysis (see, e.g., Sidnell and Stivers, 2013). It received ethical approval

from the Macquarie University Human Research Ethics Committee (reference: 5201700298), and was conducted in accordance with this approval.[4]

2.2 Participants

Three people were recruited to participate: 1) a man who had experienced a single right hemisphere stroke; 2) his female spouse; and, 3) a female family friend. Participants will be referred to using the following pseudonyms: 1) "Bill"; 2) "Adrienne"; and, 3) "Carli". Bill and Adrienne responded to a research advertisement disseminated via local community stroke groups and speech pathology networks. At the time of participation, Bill was 73 years of age. He reported that he was right handed, monolingual, and that he had adequate hearing and vision. Bill's highest level of education was a PhD, and he had spent most of his career working as an academic. Medical reports indicate that he experienced a right hemisphere haemorrhagic stroke five years earlier. In the months following this stroke, Bill presented with left-sided hemiparesis, and unilateral left-sided neglect. He reported receiving rehabilitation via neuropsychology, physiotherapy, and occupational therapy during the first year of his recovery. Precise information about the site of lesion was not currently available. At the time of participation, Bill reported few significant motor impairments, and was independent with most tasks of daily living. He had not returned to working since his stroke.

((Insert Table 2 around here))

[4] It should be noted that participants explicitly consented to their images being used in publications related to the study. They have been included in the present report because aspects of the analyses presented require depiction of their embodied orientation.

2.3 Materials and procedures

2.3.1 Profile testing

The Montreal Protocol for the Evaluation of Communication (English version; MEC Protocol; Joanette et al., 2015) was administered to assess Bill's presenting communication symptoms. Table 2 details Bill's performance. In summary, he experienced difficulty with the *Conversational Discourse*, *Emotional Prosody (Repetition and Production)*, and *Narrative Discourse (Re-telling)* tasks. His profile is most consistent with the "Cluster 3" profile for right hemisphere communication disorder reported in Ferré et al. (2012), which is primarily characterised by conversational deficits. In addition, the MEC Protocol Communication Screening Questionnaire was carried out with Adrienne (i.e., Bill's spouse). She indicated that his communication had changed since his stroke, and that these changes had persisted to the time of participation. Corroborating the results of the MEC Protocol, she reported that his difficulties manifested in conversation. Specifically, Adrienne responded affirmatively to items asking whether Bill "*changes topic, loses track of the conversation*", "*makes inappropriate, unexpected comments*", and "*repeats the same ideas*". The Apple Cancellation Test (Humphreys, Bickerton, Samson, & Riddoch, 2012) was also administered with Bill to explore whether his previous unilateral left-sided neglect had resolved. He scored 42/50 (M=36.92, SD=14.94; Bickerton et al., 2015), and his error patterns were not indicative of substantial persisting unilateral left-sided neglect.

((Insert Figures 1 and 2 around here))

2.3.2 Conversation recording

The participants were recorded having a conversation in Bill and Adrienne's home. They were all seated at a dining table, and were having lunch. The researcher arranged the recording equipment, and left for around 45 minutes, during which time the participants spoke and had lunch. Participants were not given any instructions about topics of conversation or activities to be undertaken during the recording, other than to talk as they usually would.

Two video cameras were used document the participants' conversation. This aimed to ensure that participants' embodied orientation (e.g., body position, eye gaze) was comprehensively captured. The participants' configuration and the camera positions are depicted in Figure 1. A Panasonic AG-UX90 4K Camcorder was positioned at the opposite end of the table to the participants. A GoPro HERO5 was positioned at the same end to the participants, but captured them from the side of the table, over Carli's shoulder. Participants were also fitted with individual lapel microphones (Sennheiser MK2-4) and wireless transmitters (Sennheiser SK100 G3-G). These audio signals were recorded using a Zoom H6 Handy 6-Track Recorder. Three wireless receivers (Sennheiser EK100 G3-B) were attached to its XLR inputs. All recordings were then synchronised using the PluralEyes software plugin for Adobe Premiere Pro. This meant that both camera angles could brought into alignment with the Zoom H6 audio recordings collected via the lapel microphones, and each other. It also allowed for the generation of media files variously integrating different video and audio sources, as required (e.g., a Panasonic angle overlaid with Bill's lapel microphone audio; a GoPro angle with all three lapel microphones' audio replacing its native audio).

2.4 Data corpus and data analysis

All devices recorded for approximately 46 minutes. Slight variations between devices arose depending on the order in which their recording was commenced and discontinued. Around three minutes and 30 seconds of the recordings were not transcribed or analysed. This included a short period at the beginning of the recording when the researcher was packing up before leaving, a period during the recording when one participant took a phone call, and a period at the end of the recording when the researcher returned. The remaining 42 minutes 30 seconds of the recording were subjected to comprehensive transcription and analysis. Standard conversation-analytic conventions for transcription were employed, capturing the timing and sequencing of talk (e.g., its ordering, overlap, silence), literal content (e.g., words and non-lexical vocalisations), and aspects of speech delivery (e.g., prosody and intonation) (see, e.g., Hepburn and Bolden, 2017; and Appendix A). In addition, some segments of the interaction were transcribed for participant gaze, as required for analysis. All transcripts and analytic coding were initially completed by the second author following around seven hours of training from the first author. These were then repeatedly checked by the first author, who developed definitive versions of transcripts and analytic collections. Formal measures of reliability were not carried out, but core aspects of conversation-analytic transcription have demonstrated sound reliability elsewhere (Roberts & Robinson, 2004).

Recordings and transcripts were analysed using conversation-analytic methods, focusing on response mobilising actions, i.e., initiating actions that implement strong normative responsive expectations relating to action and speakership. For ease of reference, a response mobilising action will be referred to as an "A1", and its according responsive action will be referred to as an "A2".

The analytic procedures of conversation analysis seek to capture moment-by-moment sense-making in interaction. They are premised on the fact that people finely

design their interactional conduct to dynamically maintain communication situations (e.g., Goodwin, 2018). Methodologically, this means that conversation analysts must generate their analytic claims via descriptions of observable behaviours, and the "online" displays of understanding that people produce for one another in the course of interacting. For example, in order to characterise the communicative objectives accomplished by the utterance "he's your brother, isn't he?", a conversation analyst would (at the very least) examine the response produced by the targeted recipient of the utterance. A response like "yes, he is" suggests that the recipient took it as a declarative question (i.e., a "K- assertion", see Heritage, 2013, and below), whereas a response like "don't I know it!" is indicative of another analysis altogether (e.g., a tease, or complaint).

Conversation analysts progressively develop descriptions of individual instances of context-bound sense-making into analytic accounts that capture common aspects of the targeted phenomena (cf. Schegloff, 1993). These analytic accounts do not aim to convey average aspects of the phenomena, but to demonstrate factors that are meaningfully present in each and every instance. Well-developed analytic accounts—such as those for turn-taking organisation, sequence organisation, and repair organisation (see Schegloff, 2006)—can then be used as analytic resources in their own right when exploring novel data (cf. Schegloff, 1987). In the present study, then, individual response mobilising actions were analysed by exploring how participants made sense of them, focusing on the factors that—as detailed above (see Table 1)—previous studies have indicated modulate response mobilisation.

((Insert Table 2 around here))

Response mobilising actions and their features in the present data corpus were documented and collated using the ELAN linguistic annotation software (e.g., Lausberg & Sloetjes, 2009) and Microsoft Excel. Response mobilising actions were described in relation to their broad action type (e.g., question, recruitment, other-initiation of repair; see Table 2), aspects of turn design (e.g., syntactic format, terminal intonation, presence of address terms), their sequential uptake (e.g., latency between A1 and A2, conformity with responsive expectations), and co-occurring embodied conduct (e.g., gaze behaviour of speaker and recipient). 61 instances in which Bill was the targeted recipient of an A1 were then summarily categorised across three parameters, which principally relate to turn-taking and sequence organisation. These parameters are: 1) whether an A1 received an A2; 2) whether there was a delay between the completion of an A1 and the commencement of an A2; and, 3) whether an A2 "aligned" with its A1, i.e., supported the communicative objectives set out via the response mobilising action (see Schegloff, 2007). A2s were categorised as absent if Bill did not offer unequivocal evidence of an embodied (e.g., nodding) or vocal response in the moments following the completion of the A1. Following Stivers et al. (2009), A2s were categorised as delayed if they commenced later than 400 milliseconds (instrumentally timed using ELAN) after the completion of the A1.[5] Finally, A2s were categorised as disaligning if they failed to conform with the responsive expectations set in place by the A1. These expectations related to both action (e.g., a question that receives a non-answering response, such as *I don't know*) and form (e.g., a *when*-question that does not receive a suitable time reference). In sum, this analytic process

[5] Stivers et al. (2009) examined question and answer pairs in a diverse sample of languages. The overall mean offset time was 208 milliseconds, with the mean for English being 236 milliseconds. For all languages, answering and confirming responses were faster than non-answering and disconfirming responses. Non-answering responses in English had a mean offset time of around 650 milliseconds, and disconfirming responses had a mean offset time around 400 milliseconds. This second, more conservative threshold was selected for the present study with a view to minimising false negatives.

yielded two broad groupings of responses: one grouping of candidate "typical" responses, in which A2s were present, prompt, and aligning; and one grouping of candidate "atypical" responses, in which A2s were absent, or delayed and/or disaligning. Transcripts for both groupings are available in full at: https://osf.io/bmrz6/

3. Results

3.1 Candidate grouping of responses

Of the 61 A1s included in the present analysis, 27 were assigned to the candidate typical responses grouping, while 34 were assigned to the candidate atypical responses grouping. Extracts 1, 2, and 3 provide examples of A1s that Bill met with prompt and aligning A2s. As such, they did not offer obvious evidence that Bill experienced difficulty analysing the implications of the response mobilising tools employed in these instances.[6] We shall now turn our attention to the candidate atypical responses grouping, and the sub-groupings therein, i.e., no response, delayed response, disaligning response, and delayed and disaligning response. Again, we should emphasise that the grouping of responses is not straightforwardly a claim about conversational dysfunction (or its absence). In particular, exploration of the atypical responses collection to follow demonstrates how resisting the normative pressures of response mobilising practices can support specific communicative outcomes, and be generated via the situated complexities of interaction.

((Insert Extracts 1-3 around here))

[6] Again, interested readers are encouraged to inspect the complete sets of candidate typical responses (and atypical responses) at the project website.

3.2 Atypical grouping 1: No response

There were seven instances where Bill did not respond to an A1 (20% of atypical grouping responses; 11% of all responses). In each case, there were more and less transparent reasons for the absence of a response. In two cases, the A1 occurred in overlap with other talk, making it variously troublesome to respond. In the remaining five cases, despite the speaker using response mobilising tools, there was a degree of ambiguity as to which *person* should act next. This was attributable to changes in the embodied orientation of the A1 speaker, and/or aspects of the design of the action itself. We will now examine a question Carli initially directed towards Bill, but Adrienne eventually answered.

((Insert Extract 4 around here))

((Insert Fig 3 around here))

In Extract 4, Carli asks a *wh* question that fails to secure a response from Bill. The question addresses the topic he has been speaking to (for quite some time) on the history of Satsuma pottery. At lines 13-14, Bill lists some of the wares produced in Satsuma. He is arguably likely to add another noun following the word *utilitarian*, at which time Carli begins to speak. She withdraws her gaze from Bill as she commences her turn, looking down to the table in front of her, and adjusting her water glass (Fig 3, 4.1). A 0.5 second silence follows possible completion of her question, and she continues to look towards the table (Fig 3, 4.2). Bill then opens his mouth slightly (making an audible lip-smack) and takes a short in-breath. This could signal the beginning of a response (see Schegloff, 1996); although, in the moments before, he has seemingly been clearing his mouth, which may also account for this behaviour. Carli then attends to the absence of a response, and begins to reformulate her question. As

she does so, Carli looks up from the table to Bill, who gazes at her silently and motionlessly, with his mouth now almost closed (Fig 3, 4.3). She then turns towards Adrienne (Fig 3, 4.4), who quickly takes up the floor, and begins to answer.

While Carli's embodied conduct (i.e., her gaze, head position, and engagement with the glass) in Extract 4 worked against mobilising a response from Bill, the design of her question may have also contributed. Although Bill was the immediately prior speaker, and Carli's question addressed the topic he had been discussing, and about which he had been treated as having expert knowledge, it did not include any address terms specifically selecting him as next speaker (i.e., *Bill*, or *you*).[7] In addition, earlier in the conversation, Bill had been speaking about glazes applied to these ceramics. This may have encouraged him to hear Carli as referring to the materials used to make the decorations, i.e., a matter already (at least in part) discussed. Adrienne came to hear the question as referring to the nature of the decorations on the ceramics. Carli did not object to Adrienne's uptake, suggesting that this was an adequate reading of her turn. In summary, then, Carli's withdrawal of gaze, the lack of address terms, and the (mild) ambiguity of her question likely inhibited Bill from responding. In the absence of clear progress towards responding from Bill, Carli redirected her gaze towards Adrienne, who answered promptly.

3.3 Atypical grouping 2: Delayed response

The largest sub-collection was delayed responses, with 14 instances included (41% of atypical grouping responses; 23% of all responses). There were several factors that contributed to delayed responses. First, on some occasions, Bill was seemingly

[7] Adrienne's eventual response demonstrates that she is also knowledgeable about this particular matter. So, it is possible that Carli initially designed her question and embodied conduct with a view to *either* Bill or Adrienne responding.

eating and/or manipulating food in his mouth. Although people can (and certainly do!) respond with food in their mouth/while eating, it can be interruptive; both in the sense that it may practically interfere with articulation, and in that it may be treated as a satisfactory reason for not speaking promptly. Second, in five cases, Bill's A2 was preceded by a vocal response from another party, which dislocated his response beyond the 400 millisecond threshold. In the remaining nine cases, the situated configurations of interactants' embodied conduct, the design and action of the A1, and the environment provided by prior talk variously combined to inhibit a prompt A2. We will now explore two of the nine delayed responses that were influenced by these kinds of situated specifics.

((Insert Extract 5 around here))

((Insert Fig 4 around here))

In Extract 5, Adrienne addresses a *wh* question to Bill, and a very long delay ensues before he answers (cf. Stivers et al., 2009). Again, this question relates to Satsuma pottery; namely, the geographical location of Satsuma. There are a number of factors that contribute to the 1.4 second delay (see line 24). Prior to Extract 5, Carli had been questioning Bill about the history of Satsuma pottery. At lines 14-18, he offers some assertions about the relationship between *cities like Kyoto* and other parties that were *exporting to America and Europe*. Carli's newsmarking response (i.e. *oh really*) projects further talk on these matters (see Gardner, 2001), and Bill produces what appears to be the beginning of yet another assertion at line 21. However, Adrienne exploits Bill's mild tardiness with developing this turn, asking him *so where is Satsuma*. The positioning of her question in the midst of Bill's incipient turn is one possibly contributing factor to his delayed response, but the design of her question

may also have proven problematic for Bill. That is, the scope of *where* was not specifically indicated, and he has already mentioned *southern Japan* at line 15-16. Perhaps most importantly, though, it appears that Adrienne's embodied conduct contributed to Bill's delayed answer. For the duration of her question, she has her eyes closed (Fig 4, 5.1), which continues throughout 1 second of the 1.4 second silence (Fig 4, 5.2-5.3).[8] Bill gazes at Adrienne during this silence, and is silently manipulating food in his mouth. After 0.4 seconds of silence with Adrienne's eyes open, he commences and produces a fitted answer, i.e., one that aligns with the action and linguistic format of Adrienne's A1.

((Insert Extract 6 around here))

((Insert Fig 5 around here))

In Extract 6, Carli directs a *yes/no* question to Bill, to which she also appends a personal name address term (see line 27). Despite these strong response mobilising practices, Bill's A2 is delayed. Just prior to the extract, Adrienne has left the table to take a phone call from her young grandson, who was calling to thank her for some *banana bread* she had purchased for him as a reward for participating in a swimming lesson. She has been explaining the reasons for the call to Carli, and this culminates in the summary at lines 21-25. Carli responds with an assessment of the child's behaviour, seemingly saying *that's sweet*. However, it is produced quietly, and in overlap with Adrienne. As she produces the word *sweet*, Bill gazes at Carli (Fig 5, 6.1), but begins to turn his head towards Adrienne as Carli segues from *sweet* and into the

[8] The motivation for closing her eyes is not clear. One possible, albeit speculative explanation is that she was anticipating overlap with Bill's turn, and closing her eyes somehow addressed the problems this could cause (cf. Schegloff, 2000). Bill had also been chewing on food as he was talking between lines 14 and 18. Adrienne's eye closing may therefore have been giving him time to clear his mouth.

beginning of her question (Fig 5, 6.2). After the production of the word *get*, he looks back towards Carli (Fig 5, 6.3-6.4). This suggests that he has taken himself as a possible targeted recipient of her turn; perhaps as a result of the direction of her voice (see Blythe et al., 2018). Although it emerges from some of the particulars of Adrienne's story, Carli's question shifts the focus away from it, and towards whether Bill *get(s) thanked*. Both Bill and Adrienne respond emphatically (and in quick succession) after 0.6 seconds of silence, indicating that he does. However, Bill's expansion of his answer and Carli's subsequent laughter suggest that this question was designed to be a kind of non-serious tease, generated incidentally from the telling.[9] In this case, then, Bill's delayed response to this A1 was attributable to Carli's rather abrupt transition from Adrienne's telling, his incipient orientation towards Adrienne, and some ambiguity as to the overall import of her question.

3.4 Atypical groupings 3 and 4: Disaligning response

There were nine instances in which Bill disaligned with an A1 (27% of atypical grouping responses, and 15% of all responses), and four instances in which Bill's response was both disaligning and delayed (12% of atypical grouping responses, and 6% of all responses). Seven of the disaligning responses in these groupings were dispreferred actions (e.g., disagreements, rejections, teases), but were otherwise consistent with the A1. Another four of the disaligning responsive actions were variously ill-fitted to the linguistic pressures set in place via the A1. An example of this is presented in Extract 7. Finally, the remaining two instances involved Bill successfully identifying himself as being selected to act, and promptly doing so, but

[9] Carli raises her eyebrows and adopts a rather blank expression as she commences this turn, which is also suggestive of the non-serious nature of her action.

producing an A2 that substantially interrupted the course of action implemented by the A1. One of these instances is presented in Extract 8.

((Insert Extract 7 around here))

((Insert Fig 6 around here))

In Extract 7, Carli asks Bill a question, again regarding Satsuma pottery, but this time about his own personal collection. As the extract begins, Carli and Adrienne are discussing a dressing that Adrienne put on the salad they have been eating. At the same time, Bill transfers some of this salad to his plate, and then commences eating it. During the silence at line 23, Carli picks up a piece of salad from the same plate, while Bill gazes down towards his plate, and puts food into his mouth using a fork (Fig 6, 7.1). As Carli commences her question, neither Bill nor Carli are looking at one another; Bill is manipulating food at his mouth and looking down, while Carli is looking to his left, with a piece of salad poised in front of her mouth (Fig 6, 7.2). This may have contributed to her decision to append an additional address term to the question (i.e., *Bill*), alongside the potential ambiguity of *you* (i.e., as referring to either Bill or Adrienne). Bill is chewing for the duration of Carli's question, but begins to lean back and place down his fork after the word *Bill* (Fig 6, 7.3). That is, despite the 0.5 second delay before he commences his vocal response, Bill displays some sensitivity to the relevance of responding immediately after the apparent completion of the turn. The *well* preface suggests that his response may not conform to the expectations of the question (see Schegloff and Lerner, 2009).[10] In this case, Carli's question anticipates

[10] The next component of his answer (i.e., *which I haven't mentioned before*) may also evidence some orientation to the ill-fitting nature of his answer in progress, while demonstrating its overall relevance.

an answer that includes a number reference or other quantity nominal. Instead, Bill develops what turns out to be an assertion about having a *tea set*, and a long silence follows at 30. During this silence, both Bill and Carli are engaged with eating; Bill chewing, and Carli holding some food with her hand and her lips (Fig 6, 7.4). After the first second, Carli takes a long blink, and tilts her head to the side (Fig 7, 7.5). While this appears related to the food she has been manipulating, prioritising eating in this fashion may be driven by the expectation that Bill will provide further, actionally- and linguistically-fitted responsive elements. Nonetheless, Bill's A2 in this extract fails to conform with the responsive expectations set in place via Carli's question. He takes the floor, and offers topically-relevant information, but does not directly answer her question.

((Insert Extract 8 around here))

((Insert Fig 7 around here))

Finally, in Extract 8 Adrienne asks Bill to pass her a plate on which there are some wrap sandwiches (and some tongs). The plate is positioned out of her reach, but nearby him. Bill does not do so, and instead resumes explaining Satsuma pottery to Carli. As Extract 8 begins, Bill and Adrienne are telling Carli about the origins of majolica glazes; a topic that was set off by Carli relaying a claim about Korean pottery she had heard from a friend. This was, itself, set off by Bill's explanations about the history of Satsuma. At line 8, Carli then segues to another topic related to Korea, reporting that her friend had also told her that the *American Christmas tree comes from Korea*. Bill asserts that he *thought it came from Germany*, which Carli counters by saying *Korea* at line 17. This commences a period of mutual laughter. Adrienne's attempts to have Bill pass her the plate of sandwiches begin at line 28 and culminate

at 30-31. Adrienne's first summons at line 28 (i.e., *darling*) does not receive a vocal or embodied response from Bill despite her arm being extended towards him (Fig 7, 8.1). She abandons what we might speculate is the beginning of a request (i.e., *c-*) and drops her hand down to the table. She then produces another summons at 30, this time employing a personal name. Bill immediately turns his head towards her (Fig 7, 8.2), and she proceeds with the request. Her arm is extended once again, pointing to the object of her request (Fig 7, 8.2). Bill looks downwards, towards the plate, as does Carli, who adjusts her glass (Fig 7, 8.3). Instead of providing an aligning response (i.e., fulfilling the request by passing the plate), however, Bill closes his eyes and says *anyway* (Fig 7, 8.4). At the same time, Carli quickly points to the plate, effectively indicating what Adrienne is requesting. Bill then says *I'll finish this story* while looking towards Carli (Fig 7, 8.5), who promptly recognises and supports the resumption of this previous line of talk. In the silence that follows at line 36, Bill manipulates food in his mouth, while Adrienne takes back up her cutlery, and attends to her own plate, abandoning the request (Fig 7, 8.6). Carli positions herself to grasp the requested plate, which she eventually passes to Adrienne at line 38 (Fig 7, 8.7) as Bill takes the conversational floor to recommence explaining the history of Satsuma pottery.

In summary, in Extract 8, Bill recognises that he has been selected as the next party to act by Adrienne's requesting A1, promptly taking the floor at line 32. However, the responsive action he employs is substantially ill-fitted. With his talk at 32 and 34, Bill prioritises resuming his explanation over fulfilling Adrienne's request. Moreover, he addresses his response to Carli rather than Adrienne. In doing so, he fails to comply with the normative expectations implemented by Adrienne's response mobilising action.

4. Discussion

This study explored how a person with conversational difficulties following right hemisphere damage dealt with the implications of response mobilising tools in everyday conversation. It aimed to generate preliminary evidence of the ways that right hemisphere communication disorder can manifest in everyday communication activities. Extracts 4-8 provide demonstrations of instances in which Bill failed to comply with the normative expectations implemented by various response mobilising tools. In most of these extracts—and across the candidate atypical grouping more broadly—there were relatively transparent reasons for his absent, delayed, and disaligning responses to A1s. In particular, aspects of the sequential positioning of A1s, the design of the A1s, and/or the embodied orientation of A1 speakers worked against providing a prompt or aligning response. Taken together with Extracts 1-3—and the 61 response mobilising actions assembled for the present study—it is clear that, in general, Bill was able to successfully analyse the implications of response mobilising tools directed towards him in everyday conversation. However, the present study has also offered some potential indications of communication disorder caused by right hemisphere damage. In Extracts 7 and 8, Bill does not comply with the normative expectations implemented via response mobilising tools. In Extract 7, there are few apparent grounds for the way that Bill responded to Carli. Typical speakers use clausal responses to *wh* questions to index problems with appropriateness or design, e.g., faulty presuppositions, or an irrelevant *wh* focus (Fox and Thompson, 2010). Bill does not obviously indicate anything problematic about Carli's turn, nor does he end up providing the quantity-focused answer solicited. Extract 8 is more striking in the degree of ill-fittedness of Bill's responsive action. There is a large body of evidence from typical, everyday interactions demonstrating how people respond to requests for items in their immediate environment (see, e.g., Kendrick and Drew, 2016; Rauniomaa and Keisanen, 2012). Fulfilment of such requests is overwhelming carried

out immediately, or recipients demonstrate progress towards fulfilment. In circumstances where such requests are delayed or rejected, a recipient of a request will provide reasons for doing so.[11] Bill did provide a reason (albeit indirectly), but one would typically expect something more proximal (e.g., physical unavailability). That is, resuming his *story* needn't have prevented him from passing the plate. It is also interesting to note that neither Adrienne nor Carli questioned his reason for not fulfilling the request, nor did they pursue it further. Perhaps this indicates that they, themselves, understood his response to be related to his communication disorder, and so they therefore allowed this misfire to pass rather than topicalise it (cf. Barnes & Ferguson, 2015).

The findings of the present study accord with previous studies of conversation and right hemisphere damage in that many of Bill's responses are fitted, and/or appropriately sensitive to the implications of response mobilising tools. That is, the data collected did not offer evidence of recurrent departures from the ways that non-brain-injured people handle response mobilising tools. This suggests that, as per previous findings, core aspects of the conversational practices used by people with right hemisphere damage are largely consistent with typical speakers, with some infrequently observed differences (e.g., Hird & Kirsner, 2003; Kennedy, 2000; Wolf et al., 2014).

It is tempting to speculate as to why, theoretically, the symptoms of right hemisphere communication disorder should manifest so inconsistently. Moreover, it is tempting to view the problematic communicative patterns present in Extracts 7 and 8 through the lens of theoretical accounts positing deficits in inferencing, discourse representations, theory of mind, *inter alia*, as the basis for dysfunction in language

[11] This may vary, to some extent, between cultures. See, for example, Blythe (in press) on requests that are met with no response in Murrinhpatha, an Australian Aboriginal language.

use (see, e.g., Sherratt and Bryan, 2012; Tompkins et al., 2015; Weed, 2011). Rather than positioning the present findings with reference to theories of impairments, we instead suggest that it is more productive to view them as an early step towards determining the specific communicative environments in which symptoms of right hemisphere communication disorder become apparent in everyday conversation. Close description of the practices used by people with right hemisphere damage in specific communicative contexts—in the present case, when addressing response mobilising tools—can provide a programmatic way of exploring how right hemisphere damage affects everyday conversation. Replication of the present methodology has the potential to specify the recurrent features of communicative contexts in which people with right hemisphere damage do and do not experience difficulty responding. For example, it may be important that both the A1s in Extracts 7 and 8 were disjunctive with the immediately prior talk.[12] Should this pattern be replicated in future studies, it would provide direction for designing empirically-motivated experiments that can test theories of right hemisphere impairments affecting conversation. For instance, it could offer specific parameters for designing elicitation paradigms and/or stimuli to generate problematic and unproblematic conversational acts (cf., e.g., Roberts, Margutti, & Takano, 2011). The findings (and methods) of the present study also demonstrate that spontaneous conversation is substantially complex. Researchers must take this complexity seriously in order to get at both the behavioural indices of right hemisphere communication disorder, and to arrive at theoretical accounts of

[12] This only scratches the surface of the particulars that may be relevant for Bill's disaligning responses. In Extract 8, Bill's previous explanation of the history of Satsuma (not shown) was still in progress when Carli caused a shift in topic. As well, Bill did not orient to the preparatory gestures adopted by Adrienne to foreshadow her incipient request (Keisanen & Rauinomaa 2012). These sorts of manifold pressures could well be consequential for eliciting atypical responses from people with right hemisphere communication disorders.

impairments that are consistent with the reality of everyday conversation (see, e.g., Barnes and Bloch, 2019).

Despite Bill's recurrent success with addressing response mobilising tools, the findings of the present study suggest that response mobilisation may hold some potential as a focus for clinical practice with right hemisphere communication disorder. Clinical assessment and intervention for communication disorders is premised on valid and reliable measurement of communication behaviours. Although Bill's anomalous failures to comply with the implications of response mobilising tools were infrequent in the conversation sampled, they were highly salient. In addition, the actions and practices associated with response mobilisation are reasonably straightforward to identify (e.g., questions, interrogative syntax, rising terminal intonation; see Table 1), and, as noted above, there is a large body of evidence on their organisation in typical interactions. Response mobilisation is therefore likely amenable to the kind of robust measurement required for clinical assessment and intervention. Of course, its utility—or more specifically, validity—will turn on whether future studies indicate that other people with right hemisphere damage also experience salient, perhaps highly atypical difficulties addressing response mobilising tools in everyday conversation, even if they are only occasional. Based on the findings of the present study, people with right hemisphere communication disorder may not, on average, be less sensitive to response mobilising tools than typical speakers. Instead, their clinical—possibly diagnostic—value may lie in operationalising the description of infrequently occurring, but highly atypical conversational moments caused by right hemisphere communication disorder.

One important limitation of the present study is its exclusive focus on communicative acts that set in place firm normative constraints. In a sense, response mobilising tools might be considered as providing a maximally supportive

communicative environment, with clear expectations about the responses implicated. Given that many people with right hemisphere communication disorder likely present with subtle problems in everyday conversation (Lehman Blake, 2017, p. 244), moments of ambiguity in conversation (i.e., when people employ communicative practices that are *minimally* response mobilising) may prove more recurrently troublesome.[13] It is plausible that, when navigating such environments, people with right hemisphere communication disorders could experience difficulty choosing between possible next actions (cf. Lehman Blake & Lesniewicz, 2005), making these moments revealing of conversational deficits in a way that response mobilising environments are not, or are less frequently. Future studies may therefore explore (and contrast) both maximally normatively constraining communicative contexts and minimally constraining ones.

Finally, we should explicitly note that response mobilisation is only one possible avenue for programmatic study of right hemisphere communication disorder and conversation. Other aspects of turn-taking organisation, sequence organisation, and repair organisation all offer strong potential grounding points. The data-driven nature of conversation analysis means that this endeavour is likely to be resource intensive, and to develop incrementally. One might argue that this is the price of studying complex phenomena rigorously and comprehensively. However, programmatic study could be facilitated by replication of methodologies between research groups, data sharing, and practices that simplify annotation and/or transcription.[14] In addition, we anticipate that, as this research progressively

[13] See Stivers and Rossano (2010) on actions and practices that are less response mobilising, and Gardner (2001) on the response *mm* as being indicative of "zero projection".
[14] For instance, the ELAN software has a useful silence recogniser function. In the case of response mobilisation, this has the potential to facilitate the transcription and identification of delays between response mobilising actions and their responses.

determines how (and whether) right hemisphere damage affects foundational aspects of everyday conversation, it will provide a basis for: 1) more targeted sampling and observational analysis of conversation (as per our suggestion about minimally response mobilising actions); and, 2) as outlined above, experimental research targeting particular features of conversation.

5. Conclusion

This study has offered an exploration of how a person with conversational problems following right hemisphere stroke addressed response mobilising tools in conversation. It is the first to document a person with right hemisphere communication disorder speaking with familiar communication partners in their everyday life. Future studies replicating the present methodology will be worthwhile for specifying the communicative contexts in which people with right hemisphere damage encounter conversational difficulties, and may offer important directions for the development of theories of impairments, and aligning clinical resources.

Disclosure statement

No potential conflicts of interest were reported by the authors.

Acknowledgments

The authors would like to thank the participants for their time and generosity. This research was supported by a Macquarie University Research Development Grant.

References

Barnes, S., & Armstrong, E. (2010). Conversation after right hemisphere brain damage: Motivations for applying conversation analysis. *Clinical Linguistics & Phonetics, 24*, 55-69.

Barnes, S., & Bloch, S. (2019). Why is measuring communication difficult? A critical review of current speech pathology concepts and measures. *Clinical Linguistics & Phonetics*, *33*, 219-236.

Barnes, S., & Ferguson, A. (2015). Conversation partner responses to problematic talk produced by people with aphasia: some alternatives to initiating, completing, or pursuing repair. *Aphasiology, 29*, 315-336.

Baldo, J. V., Kacinik, N. A., Moncrief, A., Beghin, F., & Dronkers, N. F. (2016). You may now kiss the bride: Interpretation of social situations by individuals with right or left hemisphere injury. *Neuropsychologia, 80*, 133-141.

Bickerton, W.-L., et al. (2015). The BCoS Cognitive Profile Screen: Utility and predictive value. *Neuropsychology, 29*, 638-648.

Blythe, J. (in press). Recruitments in Murrinhpatha and the preference organisation of their possible responses. In S. Floyd, G. Rossi, & N. J. Enfield (Eds.), *Getting others to do things: A pragmatic typology of recruitments* (pp. 1-49). Language Science Press.

Blythe, J., Gardner, R., Mushin, I., & Stirling, L. (2018). Tools of engagement: Selecting a next speaker in Australian Aboriginal multiparty conversations. *Research on Language and Social Interaction, 51*, 145-170.

Brady, M., Armstrong, L., & Mackenzie, C. (2006). An examination over time of language and discourse production abilities following right hemisphere brain damage. *Journal of Neurolinguistics, 19*, 291-310.

Brady, M., Mackenzie, C., Armstrong, L., & (2003). Topic use following right hemisphere brain damage during three semi-structured conversational discourse samples. *Aphasiology, 17*, 881-904.

Chantraine, Y., Joanette, Y., & Ska, B. (1998). Conversational abilities in patients with right hemisphere damage. *Journal of Neurolinguistics, 11*, 21-32.

Dingemanse, M., Blythe, J., & Dirksmeyer, T. (2014). Formats for other-initiation of repair across languages: An exercise in pragmatic typology. *Studies in Language, 38*, 5-43.

Enfield, N., & Sidnell, J. (2017). *The concept of action*. Cambridge: Cambridge University Press.

Ferré, P., Fonseca, R. P., Ska, B., & Joanette, Y. (2012). Communicative clusters after a right-hemisphere stroke: Are there universal clinical profiles? *Folia Phoniatrica et Logopaedica, 64*, 199-207.

Gardner, R. (2001). *When listeners talk: Response tokens and listener stance*. Amsterdam: John Benjamins Publishing Co.

Gardner, R. (2010). Question and answer sequences in Garrwa talk. *Australian Journal of Linguistics, 30*, 423-445.

Gardner, R., & Mushin, I. (2015). Expanded transition spaces: the case of Garrwa. *Frontiers in Psychology, 6*(251).

Goodwin, C. (2018). *Co-operative action*. Cambridge, UK: Cambridge University Press.

Hepburn, A., & Bolden, G. B. (2017). *Transcribing for social research*. London, UK: Sage.

Heritage, J. (2013). Action formation and its epistemic (and other) backgrounds. *Discourse Studies, 15*, 551-578.

Hird, K., & Kirsner, K. (2003). The effect of right cerebral hemisphere damage on collaborative planning in conversation: An analysis of intentional structure. *Clinical Linguistics & Phonetics, 17*, 309-315.

Humphreys, G. W., Bickerton, W., Samson, D., & Riddoch, M. J. (2012). *BCoS: Brain behaviour analysis*. Hove, UK: Psychology Press.

Joanette, Y., et al. (2015). *Montreal Protocol for the Evaluation of Communication (MEC)*. Sydney, Australia: ASSBI Resources.

Kennedy, M. R. T., Strand, E. A., Burton, W., & Peterson, C. (1994). Analysis of first-encounter conversations of right-hemisphere-damaged adults. *Clinical Aphasiology, 22*, 67-80.

Keisanen, T., & Rauniomaa, M. (2012). The organization of participation and contingency in prebeginnings of request sequences. *Research on Language and Social Interaction, 45*, 323-351.

Kendrick, K. H., & Drew, P. (2016). Recruitment: Offers, requests, and the organisation of assistance in interaction. *Research on Language and Social Interaction, 49*, 1-19.

Kennedy, M. R. T. (2000). Topic scenes in conversations with adults with right-hemisphere brain damage. *American Journal of Speech-Language Pathology, 9*, 72-86.

Lausberg, H., & Sloetjes, H. (2009). Coding gestural behavior with the NEUROGES-ELAN system. *Behavior Research Methods, Instruments, & Computers, 41*, 841-849.

Lehman Blake, M. (2017). Right hemisphere pragmatic disorders. In L. Cummings (Ed.), *Research in clinical pragmatics* (pp. 243-266). Cham: Springer International.

Lehman Blake, M. (2018). *The right hemisphere and disorders of cognition and communication: Theory and clinical practice*. San Diego, CA: Plural Publishing.

Lehman Blake, M., & Lesniewicz, K. (2005). Contextual bias and predictive inferencing in adults with and without right hemisphere brain damage, *Aphasiology, 19*, 423-434.

Lerner, G. H. (2003). Selecting next speaker: The context-sensitive operation of a context-free organization. *Language in Society, 32*, 177-201.

Mackenzie, C., & Brady, M. (2008). Communication difficulties following right-hemisphere stroke: Applying evidence to clinical management. *Evidence-Based Communication Assessment and Intervention, 2*, 235-247.

Mackenzie, C., & Brady, M. (2004). Communication ability in non-right handers following right hemisphere stroke. *Journal of Neurolinguistics, 17*, 301-313.

Myers, P. S. (1999). *Right hemisphere damage: Disorders of communication and cognition*. San Diego, CA: Singular.

Myers, P. S. (2001). Toward a definition of RHD syndrome. *Aphasiology, 15*, 913-918.

Parola, G., Gabbatore, I., Bosco, F. M., Bara, B. G., Gindri, P., & Sacco, K. (2016). Assessment of pragmatic impairment in right hemisphere damage. *Journal of Neurolinguistics, 39*, 10-25.

Rauniomaa, M., & Keisanen, T. (2012). Two multimodal formats for responding to requests. *Journal of Pragmatics, 44*, 829-842.

Raymond, G. (2003). Grammar and social organization: Yes/no interrogatives and the structure of responding. *American Sociological Review, 68*, 939-967.

Roberts, F., Margutti, P., & Takano, S. (2011). Judgments concerning the valence of inter-turn silence across speakers of American English, Italian, and Japanese. *Discourse Processes, 48*, 331-354.

Roberts, F., & Robinson, J. D. (2004). Interobserver agreement on first-stage conversation analytic transcription. *Human Communication Research, 30*, 376-410.

Sacks, H. H., Schegloff, E.A., & Jefferson, G. (1978). A simplest systematics for the organisation of turn-taking for conversation. In J. Schenkein (Ed.), *Studies in the organisation of conversational interaction* (pp. 7-57). New York: Academic Press.

Schegloff, E. A. (1987). Analyzing single episodes of interaction: An exercise in conversation analysis. *Social Psychology Quarterly, 50*, 101-114.

Schegloff, E. A. (1993). Reflections on quantification in the study of conversation. *Research on Language & Social Interaction, 26*, 99-128.

Schegloff, E. A. (1996). Turn organization: One intersection of grammar and interaction. In E. Ochs, E. A. Schegloff, & S. A. Thompson (Eds.), *Interaction and grammar* (pp. 52-133). Cambridge: Cambridge University Press.

Schegloff, E. A. (2000). Overlapping talk and the organization of turn-taking for conversation. *Language in Society, 29*, 1-63.

Schegloff, E. A. (2003). Conversation analysis and communication disorders. In C. Goodwin (Ed.), *Conversation and brain damage* (pp. 21-55). New York: Oxford University Press.

Schegloff, E. A. (2006). Interaction: The infrastructure for social institutions, the natural ecological niche for language and the arena in which culture is enacted. In N. J. Enfield & S. C. Levinson (Eds.), *Roots of human sociality: Culture, cognition and interaction* (pp. 70-96). London: Berg.

Schegloff, E. A. (2007). *Sequence organization in interaction: A primer in conversation analysis*. Cambridge: Cambridge University Press.

Schegloff, E. A., & Lerner, G. H. (2009). 'Beginning to respond: *Well*-prefaced responses to *wh*-questions. *Research on Language & Social Interaction, 42*, 91-115.

Sherratt, S., & Bryan, K. (2012). Discourse production after right brain damage: Gaining a comprehensive picture using a multi-level processing model. *Journal of Neurolinguistics, 25*, 213-239.

Sidnell, J., & Stivers, T. (Eds.). (2013). *The handbook of conversation analysis*. Chichester, UK: Wiley-Blackwell.

Stivers, T., & Robinson, J. D. (2006). A preference for progressivity in interaction. *Language in Society, 35*, 367-392.

Stivers, T., & Rossano, F. (2010). Mobilizing response. *Research on Language & Social Interaction, 43*, 3-31.

Stivers, T., et al. (2009). Universals and cultural variation in turn-taking in conversation. *Proceedings of the National Academy of Sciences, 106,* 10587-92.

Tompkins, C. A., Lei, C-M., & Zezinka, A. (2015). The nature and implications of right hemisphere language disorders. In A. E. Hillis (Ed.), *The handbook of adult language disorders (2nd ed)* (pp. 491-517). New York, US: Psychology Press.

Weed, E. (2011). What's left to learn about right hemisphere damage and pragmatic impairment? *Aphasiology, 25*, 872-889.

Wolf, R., Sidtis, D. V. L., & Sidtis, J. J. (2014). The ear craves the familiar: Pragmatic repetition in left and right cerebral damage. *Aphasiology, 28*, 596-615.

Yin, R. K. (2014). *Case study research design and methods (5th ed.)*. Thousand Oaks, CA: Sage.