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Conversation after right hemisphere brain damage: Motivations for applying conversation analysis

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Abstract
Despite the well documented pragmatic deficits that can arise subsequent to Right Hemisphere Brain Damage (RHBD), few researchers have directly studied everyday conversations involving people with RHBD. In recent years, researchers have begun applying Conversation Analysis (CA) to the everyday talk of people with aphasia. This research programme has provided novel insights into the complex inter-relationship between impairment, language use, and interactional organization. This paper will argue that the detailed, inductive approach of CA is well suited to investigating pragmatic communication disorders resulting from RHBD, and will help to elaborate previous findings about RHBD and conversation. In particular, this paper will review and discuss previous investigations of conversation after RHBD, and put forward arguments relating to how CA might be applied to talk-in-interaction involving people with RHBD.

Keywords: *conversation analysis, language measurement, aphasia, pragmatics, adult language*

Introduction

Right Hemisphere Brain Damage (RHBD) can result in deficits of cognition, perception, attention, affect, and communication (see Myers, 1999; Lehman Blake, 2005, for a broad introduction). Communication disorders subsequent to RHBD have been reported to affect lexico-semantic processing, prosody, inferencing, humour, discourse organization, and pragmatics (Myers, 1999; Côté, Payer, Giroux, and Joanette, 2007). A great deal of effort has been dedicated to investigating discourse and pragmatics in particular, and this has led some researchers to put forward diagnostic labels including 'pragmatic aphasia' and 'apragmatism' in aid of capturing the scope and type of deficits involved with RHBD (Myers, 2001). As the basic site of human sociality and language use (Schegloff, 1989), one would expect examination of everyday talk-in-interaction (i.e. free, naturally occurring conversation between routine communication partners) to be essential in building an account of a pragmatic communication disorder. Although encouraged by Brady, Armstrong, and Mackenzie

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(2005), very few (if any) studies are available that provide direct and detailed analysis of everyday talk after RHBD.

In recent years, a number of researchers within and outside the field of communication disorders have applied Conversation Analysis (CA) to the talk of people with aphasia. These investigations have begun to explore how language is adapted to the contingencies of interacting in real life, and in real time, and have yielded novel insights regarding turn construction (e.g. Wilkinson, Beeke, and Maxim, 2003; Beeke, Wilkinson, and Maxim, 2007), conversation repair (e.g. Ferguson, 1994; Lindsay and Wilkinson, 1999), and interactive co-construction (e.g. Goodwin, 1995; Heeschen and Schegloff, 1999). This body of work has highlighted how impairment articulates with the social world and, in doing so, brought language impairment, language use, and interactional organization into simultaneous analytic view. The fine-grained, qualitative analyses that have been used to elucidate these interrelationships have yet to be applied to conversation after RHBD. Given the notionally pragmatic (and somewhat enigmatic) nature of communication disorders associated with RHBD, the scarcity of CA-oriented research is surprising.

This paper will review and discuss previous research examining conversation after RHBD, and highlight the potential contribution of CA to assembling an account of conversation and pragmatic communication disorders subsequent to RHBD. In particular, the pressure to progress ongoing talk and interactive co-construction will be put forward as variables that may affect how conversation topic is organized after RHBD, and will be discussed in the context of findings about their effect on aphasic and other talk.

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Previous investigations of conversation after RHBD

Background

Research examining discourse and pragmatics after RHBD has suggested that people with RHBD have difficulty making appropriate and relevant contributions to conversation, maintaining topical coherence, understanding metaphor, understanding humour, making inferences, and appropriately conveying information, amongst numerous other clinical observations (e.g. see Sherratt and Penn, 1990; Myers, 1999; Stemmer, 1999; Lehman Blake, 2005). Although much of this research has focused on narrative and procedural discourse (Kennedy, 2000), a number of researchers have intentionally focused on conversation (e.g. Kaplan, Brownwell, Jacobs, and Gardener, 1990; Rehak, Kaplan, and Gardener, 1992; Kennedy, Strand, Burton, and Peterson, 1994; Chantraine, Joanette, and Ska, 1998; Kennedy, 2000; Vanhalle, Lemieux, Joubert, Goulet, Ska, and Joanette, 2000; Brady, Mackenzie, and Armstrong, 2003; Hird and Kirsner, 2003). Some of these studies have used fictional, non-interactive stimuli (e.g. conversational vignettes) divorced from actual instances of interaction (e.g. Kaplan et al., 1990; Rehak et al., 1992), while those that have directly examined conversation have drawn their data from interactions between people with RHBD and either an experimenter or an unfamiliar or semi-familiar conversation partner. Investigations that directly examine interaction will be the focus of the present review.

Findings

As a whole, one of the most interesting features of this body of research is that conversation after RHBD does not seem to straightforwardly differ from interactions between unimpaired people. That is, despite clinicians and family members identifying various conversational

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skills as negatively affected by RHBD (e.g. Mackenzie, Brady, Begg, and Lees, 2001) many previous studies have revealed only subtle differences between the performance of people with RHBD and unimpaired control participants. For example, Kennedy et al. (1994) and Kennedy (2000) engaged people with RHBD in interactions with unfamiliar clinicians and graduate students. Kennedy et al. (1994) sought to establish how people with RHBD manage turn taking and topics during first encounter interactions. Their results indicated that, as a group, people with RHBD did not significantly differ from their conversation partners in topic management, but had more turns, contributed fewer words per turn, and made fewer requests for information. Kennedy (2000) also investigated how people with RHBD employ topical material typical of get-to-know-you encounters. Overall, people with RHBD did not significantly differ from non-brain-injured participants in their introduction of topics scenes, but they contributed fewer topics during the maintenance phase of the conversation, and more during the termination phase (Kennedy, 2000). Similarly, Brady et al. (2003) engaged controls and people with RHBD in structured conversations with the aim of analysing topical coherence and maintenance. During these interactions, a researcher elicited discussion on a variety of routine topics (family, health, etc.) but, like Kennedy et al. (1994) and Kennedy (2000), Brady et al.'s (2003) measures related to topic failed to reveal clear differences between people with RHBD and controls. However, controls were found to use 'fillers' (i.e. primarily, discourse particles) and repetition far more frequently than people with RHBD.

These findings therefore suggest that elements of interactional competence must be retained after RHBD (Brady et al., 2005). For example, Mackenzie, Begg, Lees, and Brady (1999) used a series of severity rating scales to compare the conversational performance of elderly and non-elderly people with RHBD to equivalent control groups. Interestingly, they reported that ratings of 'non-verbal' conversational behaviours (intonation, eye contact, and facial expression) were the only ones significantly worse than controls. Also, Vanhalle et al. (2000) found that people with RHBD were able to understand indirect speech acts as well as controls during a more naturalistic task, but performed less well when the task was more contrived, and required multiple-choice judgements. These results are in direct contrast to previous work in this area, which has implied that difficulties with experimental-type tasks involving non-literal utterances will reflect performance during actual interaction (see Vanhalle et al., 2000, for a review). Schegloff (1999; 2003a) also specifically explored aspects of pragmatic competence in his examination of short stretches of interaction between a research assistant and a man who had undergone a commisurotomy (which presents with a similar behavioural profile to RHBD). Schegloff (2003a) analysed the informal talk interspersed between formal assessment tasks, and found that the brain-injured man appropriately attended to and participated in short turn taking sequences with the researcher. That people with RHBD can still talk in turns or respond to their name might seem somewhat trivial upon first consideration but, as Schegloff (1999; 2003a) notes, conversation is an active, moment-to-moment *achievement* that should not be taken for granted. Additionally, understanding the kinds of pragmatic competencies that are retained after RHBD is likely important for explicating the competencies that are not.

Many of these studies have also reported notable heterogeneity between people with RHBD, which is not uncommon for this population (e.g. Weed, 2008). For example, the results of Chantraine et al. (1998) were extremely heterogenous. Using a referential communication task in which each dyad was required to manipulate unfamiliar geometric shapes, Chantraine et al. (1998) found that some people with RHBD displayed difficulty negotiating reference; some displayed difficulty with 'qualitative aspects', such as turn taking; while

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others out-performed their non-impaired partners in terms of communicative efficiency. How methodological variables (e.g. small sample sizes, varying sites of lesion, the inherent variability of interactional tasks, etc.) contributed to the heterogeneity observed in this and other studies requires further investigation.

In contrast, Hird and Kirsner (2003) and Van Lancker Sidtis and Postman (2006) have identified clearer differences between people with and without RHBD. Hird and Kirsner (2003) found that, during semi-structured interactions with a researcher, people with RHBD were less likely than controls to use intonational cues to signal topic changes. In addition, people with RHBD tended to introduce fewer topics than controls, provided less opportunities for topics to be expanded, and were more reliant on the researcher for topic initiation and maintenance (Hird and Kirsner, 2003). Van Lancker Sidtis and Postman (2006) also revealed that people with RHBD used fewer formulaic expressions (e.g. idioms, conventional expressions, discourse particles) than people with left-hemisphere damage and controls during interactions with a researcher. Intriguingly, like Brady et al. (2003), their investigation also found that 'pause fillers' (e.g. 'uh', 'um') were scarce in the speech of people with RHBD.

Theoretical and methodological considerations

Given space limitations, it is beyond the scope of this paper to contrast CA with the individual theoretical frameworks adopted in each study discussed. However, it should be noted that previous research has overwhelmingly adopted a top-down, theory-driven approach to investigation, in contrast to the bottom-up, inductive approach preferred by CA. Two further principles that are central to CA as an analytic methodology will also inform the review to follow. First, the organization of interaction is sensitive to the specific circumstances in which it occurs (Sacks, Schegloff, and Jefferson, 1974); for example, who is talking (e.g. familiars, workmates, strangers, etc.), what they are talking about (e.g. inviting someone to dinner, telling a story, arguing, etc.), and why they are talking (everyday conversation, an interview, a church service, etc.). This principle shall underpin a discussion of conversation partner and task selection during previous investigations. The second principle is that talk-in-interaction is sequentially organized, with each turn simultaneously reflecting and renewing the context in which it occurs (Sacks et al., 1974; Schegloff, 2007). As such, abstraction of interactional phenomena from their respective sequences during analysis can be a fraught undertaking. This principle shall underpin a discussion about issues relating to quantification and interactive co-construction when analysing talk-in-interaction.

Conversation partner(s) and task

The conversation partners selected for people with RHBD in previous research have been people with whom they share (or could potentially share) a professional and/or distant social relationship. By choosing unfamiliar or semi-familiar conversation partners, researchers have biased investigation towards a certain kind of interaction; and one that is likely quantitatively and qualitatively different from talk-in-interaction between intimates, for example. As Brady et al. (2003) suggest, this type of interaction might not necessarily be uncommon for people with RHBD, and could be one they routinely participate in at medical appointments, or at social functions, etc. Moreover, investigating this kind of interaction is important because it is routinely used during clinical assessment for RHBD. While these arguments certainly have merit, the features of 'RHBD clinical/unfamiliar interaction' will be better elucidated by

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developing an account of 'RHBD everyday/familiar interaction' with which it can be compared and contrasted. As such, the linguistic and interactional patterns utilized during conversations with a clinician/researcher/unfamiliar need to be investigated in-their-own-right for RHBD (see Lindsay and Wilkinson, 1999; Laakso, 2003, for example, regarding aphasia; see Togher and Hand, 1998, regarding traumatic brain injury).

These interactions (like their real-world equivalents) have also tended towards transactional objectives, rather than interactional ones.[1] This was overtly observed in Kennedy (2000), in which participants with RHBD attempt to look behind the 'interactional façade' by asking their conversation partners what they wanted to 'know', or what the research was aiming to uncover. Hence, as Kennedy (2000) herself notes, at least some of the interactional conduct of people with RHBD was actively oriented to the experimental, transactional dimension of the task. The broad consideration here is that the purpose of an interaction, along with conversation partner choice, affects the resources available for use during that interaction. For example, a conversation with a health professional typically constrains speakership (i.e. who will talk, when, and for how long), the possible topics available, and the kinds and extent of shared knowledge that can be used for the production and interpretation of talk. These issues are particularly pertinent given that the neurological and behavioural changes that occur after brain-injury may well reflect situated adaptation, i.e. adaptation to the demands of the individual's daily environment (Wilkinson et al., 2003). As Schegloff (2003a) argues, the discourse that is observed clinically (or experimentally) may constitute a 'second order' resource set, with the 'first order' resource set[2] located in one's *Lebenswelt* (literally, life world) (p. 36). As such, examining and describing how the first order resource set is organized and deployed in naturally occurring conversation is likely essential to building an account of communication disorders secondary to RHBD.

Quantification

Much of this research has also put quantitative analyses at the forefront of attempts to discriminate pathological from non-pathological conversational performance. While this is understandable given the imperatives of and constraints on research and clinical practice, the application of quantitative analyses to conversation can be problematic if they are not combined with sufficiently rigourous qualitative analyses (Lesser, 2003). For example, the use of a token like 'mhm' is sequentially sensitive, in that what 'mhm' functions to do in one circumstance is not necessarily what it is doing in another, despite surface (i.e. quantitative) resemblance. Specifically addressing quantification of conversation, Schegloff (1993) also comments that the occurrence of a behaviour (in his terms, the 'numerator') should not be the sole focus of quantification, but also instances at which it was relevant for the behaviour to occur (the 'denominator'). For example, a clinician asking more questions than a client during a case history interview cannot, by itself, indicate which conversation partner is capable of asking more questions, because the interactional environment is biased towards plentiful question-asking opportunities for the clinician, and few question-asking opportunities for the client. Hence, without an acknowledgement of the 'denominator', quantification may fundamentally mischaracterize the 'universe' under investigation (see Schegloff, 1993, for further detailed discussion).

This potential for mischaracterization can arise when sampling stretches of talk for analysis. For example, when considering Hird and Kirsner's (2003) finding that people with RHBD used fewer topic-related intonational cues than controls, the question arises as to the relative equivalence of the conversational actions and sequences undertaken by participants, controls,

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and the researcher during the 6-minute excerpts that were analysed. That is, one might query the equivalence of what the interactants were actually doing during these excerpts (e.g. telling a story, describing their family, asking about their conversation partner's family, etc.). As well, it is likely insufficient to say that intonational cues were used less by people with RHBD; it must be (qualitatively and quantitatively) demonstrated that they had the same interactional opportunity as controls to enact changes to discourse structure. Hird and Kirsner's (2003) additional finding that topics were largely managed by the researcher also adds to the sense that quantification, in this case, may have left unelaborated real and consequential aspects of interactional organization.

The aim of this discussion, however, is not to disavow quantification, but to highlight methods that may refine and develop current conceptions of communication disorders subsequent to RHBD. In fact, most of the investigations described above point to the potential for quantitative and qualitative analyses to be usefully combined. For example, Brady et al.'s (2003) and Van Lancker Sidtis and Postmans' (2006) findings that people with RHBD used few 'fillers'[3] seems to be a case-in-point. This quantitative asymmetry, combined with detailed qualitative analyses, could provide insight into the local interactional significance of 'producing less fillers'; or, in the case of Kennedy et al., the local interactional significance of 'having fewer words per turn' or 'introducing more topics during a termination phase', etc. In particular, how and whether they are oriented to by those involved in the interaction would provide evidence to support their relevance as 'interactional events'; that is, illustrate their 'online' consequences for parties to the interaction. Hence, the quantitative distributions identified in post-hoc analyses would benefit from qualitative contextualization.

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Co-constructing disorder

As well, given that talk-in-interaction is the product of coordinated, joint action (e.g. Schegloff, 2007), unimpaired conversation partners must also be implicated in the development of

1	L:	Nice try
2		(0.2)
3	L:	Nice try.
4	D:	What
5	L:	My six, your two
6	D:	So?
7		(0.5)
8	L:	En:: so you took it
9	D:	So?
10	L:	You shouldn've.
11		(0.2)
12	D:	So?
13	L:	't should be on this deck, not that.
14	D:	So?
15		(0.8)
16	L:	Okay I pass I c'n afford to lose those cards.
17		(0.8)
18	L:	I'm winning anyhow.

Extract 1. (Schegloff, 2003a, p. 38–39 – simplified)[4].
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interactional sequences that could be considered pathological. This observation forms the basis of Schegloff's (2003a) analysis of Extract 1 (presented below), drawn from talk between a brain-injured man (L) and a research assistant (D) while they were playing a card game.

Preceding line 1, D had deliberately cheated, and taken cards that L was entitled to in aid of eliciting a direct request. Seeing this, L uttered 'nice try'; a kind of assessment that assigns intentionality (typically in failure-type circumstances; Schegloff, 2003a) and something of an indirect request (from a Speech Act perspective). This represents a conversationally preferred method of action in this context (Schegloff, 2003a), but instead of crediting the appropriacy of this turn, D continued to search for a direct request (e.g. give me my card back) in response to L's repetition and elaboration of why he said 'nice try'.[5] By ignoring these incrementally upgraded actions, D forced L to abandon the pursuit of his cards, which, in turn, D could have attributed to an impaired ability to formulate requests (Schegloff, 2003a). An account of seemingly pathological interactional behaviour that does not include the actions of conversation partners will therefore be, to some extent, incomplete.

Applying CA to conversation after RHBD

On- and off-topicality

Difficulty maintaining topical coherence in discourse has been widely reported as a feature of communication disorders following RHBD (see Brady et al., 2003, for a review). However, as the discussion above has highlighted, most previous investigations of RHBD, topic, and conversation have captured few, and predominately subtle differences between people with RHBD and controls. One reason for this is that the notion of topic-in-conversation (hereafter, topic) is far from straightforward, and has proven extremely challenging for researchers and theorists working with non-disordered talk (Atkinson and Heritage, 1984, p. 165; Goodwin and Goodwin, 1990). A relevant corollary for the present discussion is that what can be considered 'off-topic-talk' is likely to suffer from a similar fuzziness. As well, there seems an intuitive diversity to the kinds of off-topic turns produced by people with RHBD (which Brady et al., 2003 explicitly explore). Take, for example, the following extracts from Kennedy (2000) and Schegloff (2003a), respectively (see Extracts 2 and 3).

In Extracts 2 and 3, both of the brain-injured people have raised topics that appear to be (from an analyst's perspective, at least) incongruent with the directly preceding turns, and could be deemed inappropriate for the interactional context in which they occurred

1		Partner	We'll, I wish we had more time, I'd love to hear more about your
2			travels
3	→	Participant	Yeah, I'd like to have a drink ((alcohol had been brought up previously))
4		Partner	But I think ____ is expecting us and I think she has something she
5			wants you to work on—so, it's been nice chatting with you, we will
6			have to talk again
7		Participant	It's been nice talking with you, ____, very nice.

Extract 2. (Kennedy, 2000, p. 86).

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1		D:	'kay who–whom do you:: spend most of your time with
2			at home?
3		L:	Myself.
4			(2.4)
5	→	L:	Bu' ⌈boy do I have fun!
			⌊((begins conventional gesture for masturbation))
6		L:	⌈((laughter))
7		D:	⌊((laugher))
8			(5.0)

Extract 3. (Schegloff, 2003a, pp. 48–49, simplified).
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(i.e. a semi-structured interaction between unfamiliar people). However, the off-topic turn at line 3 in Extract 2 could be considered more interactionally acceptable had the person with RHBD followed their 'yeah' with a misplacement marker like 'anyway' (Schegloff and Sacks, 1973), and/or followed their comment with a laugh or an account (e.g. 'being in hospital would drive anyone to drink!'). In contrast, it is difficult to conceive of alterations to the shape of the turn at line 5 in Extract 3 that would result in a better fit between the content and the interactional context. Clearly, empirical investigation is required to develop an understanding of the specific characteristics of off-topic turns produced by people with RHBD. This, in turn, can then be used to begin formulating a more general account (if and where appropriate).

Despite the problems associated with analytically capturing the complexities of topic talk, we can note, however, that it is still achieved via, and subject to, 'generic' considerations for talk-in-interaction. Progressivity and interactive co-construction are two such generic considerations, whose influence on interactions involving people with aphasia and people with traumatic brain injury (TBI) have been the basis of unique insights into their linguistic and interactional competence. The section to follow will highlight some of these findings, and discuss the potential effect of progressivity and interactive co-construction on the off-topic turns[6] of people with RHBD.

Progressivity

When talking in turns, there is an omnipresent pressure for interactional units to progress towards completion. This pressure is referred to as 'progressivity', and can be broadly characterized as the directional movement of an interactional unit (be it a turn construction unit (TCU),[7] turn, or story) towards possible completion (Schegloff, 2007). Lerner (1996) draws a contrast between two types of progressivity operational in TCUs: serial progressivity and sequential progressivity. Serial progressivity entails that each element of a TCU should be linearly successive to the previous element, while sequential progressivity entails that each element of a TCU should be hierarchically successive to the previous element. That is, there is an expectation that each word in a TCU should be followed by another word until a place of possible completion is reached (serial), and that each word should share a succeeding syntactic relationship with the previous word (sequential) (Lerner, 1996).

The drive of progressivity has been demonstrated to influence the turn construction practices of people with both fluent and non-fluent aphasia (Wilkinson, 2006). For example,

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Wilkinson et al. (2003) and Beeke, Wilkinson, and Maxim (2003a; 2007b) argue that the turn construction method of 'fronting' (akin to topic-comment structure; see line 4 in Extract 4), especially when combined with 'general meaning terms' (e.g. it, thing, do), provides an interactional alternative to conventional subject-verb-object (SVO) constructions. It is therefore suggested that fronting facilitates progressivity because attempting to produce a lexically and syntactically complete SVO turn is likely to be disrupted by linguistic impairment, and lead to the initiation of repair. Repair displaces all other conversational activity (Schegloff, Jefferson, and Sacks, 1977) and, particularly during aphasic conversation, extended repair sequences can significantly inhibit the movement of interactional units (turns, topics, stories, etc.) to possible completion (Wilkinson et al., 2003).

The influence of progressivity is also evident in the collaborative repair practices utilized during interactions involving people with aphasia. Milroy and Perkins (1992), Ferguson (1994), Laakso and Klippi (1999), Oelschlaeger and Damico (2003), and Perkins (2003) have outlined how conversation partners gain entry to the turn spaces of people with aphasia in aid of bringing their turns to possible completion, and facilitating the continuation of conversational business. These researchers have also observed that entry into the turn spaces of people with aphasia is not always imposed upon them, but that conversation partners are actively invited by people with aphasia to interpose and, mostly, readily and quickly accept this invitation (e.g. Ferguson, 1994; Laakso and Klippi, 1999).

That all conversational participants actively orient to progressivity provides an initial sense that the interactional practices adopted by people with aphasia and their conversation partners are in fact specifically designed to facilitate progressivity, i.e. they are carefully *adapted* to talking in turns in real life and real time (Wilkinson et al., 2003; Wilkinson, 2006). For example, Beeke et al. (2003b) and Heeschen and Schegloff (2003) have argued that conventional syntactic forms (often accessible during testing) are less viable for non-fluent speakers in conversation because the extended time required to access these forms will significantly inhibit progressivity. Juxtaposed with this observation, the recurrence of certain agrammatic turn construction formats (Beeke et al., 2007b), and the fact that agrammatic turns often enlist the participation and in-tact linguistic competence of conversation partners (Heeschen and Schegloff, 1999; 2003), suggest that the conversational syntax of people with non-fluent aphasia is not only systematically organized, but distinctly adapted to everyday conversation (Beeke et al., 2007b).

Given its influence during interactions involving people with aphasia, progressivity is also likely to affect the interactional practices of people with RHBD and their conversation partners. For example, it is possible that the off-topic turns of people with RHBD may, in part, be more than the product of pathological cognitive-linguistic processing, but a form of (functional) adaptation to talking in turns. In the case of agrammatism, non-fluent aphasic speakers can adapt their utterances to conversation both linguistically (by sacrificing sequential progressivity for serial progressivity) and interactionally (by implicitly projecting and inviting the involvement of their conversation partners). In the case of RHBD, once selected as the next speaker, a person with RHBD may sacrifice the relationship of their turn to the preceding turn(s) in aid of commencing their turn in a timely fashion, and bringing to it possible completion. Rephrased, it could be that the preference for progressivity pressures speakers with RHBD to produce turns at talk that have not been uniquely formulated for the local interactional context, just as it pressures non-fluent aphasic speakers to produce turns that have not been subjected to typical grammatical processes.

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1		K:	The: (0.3) tr↑affic is quite light on the roads ⌈today which =
2		D:	⌊Oh ° that's good°
3		K:	= surprised me. Of ⌈course ( )
4	→	D:	⌊(But) those kids, (0.6) they're taken.
5		K:	Yeah
6			(0.4)
7		D:	°Dread°
8			(0.7)
9	→	K:	And of course the Easter show is on now.
10		D:	Yes mm.
11		K:	So: (1.5) u- u so many people take advantage of the buses you
12			(0.5) can go down um (0.5) tch Newcastle park?
13		D:	Oh yes

Extract 4. (Barnes [P1_10_04] - simplified).[8]

However, it should also be noted that off-topic turns are not interactional conduct that only brain-injured speakers employ. Take, for example, in Extract 4, a conversation between a speaker with aphasia (D) and one of her familiar communication partners (K).

When faced with producing talk in a timely fashion after the pause in line 8, K has steered the talk towards a topic that she would like to pursue, and away from the topic that D proffered at line 4. While Extract 4 would benefit from a more detailed treatment, we can note that 'traffic' may represent a transitory topic (like 'weather') (Sacks, 1992, p. 205), and that D's introduction of more substantial material to be topicalized is appropriate in this sequential environment. Further, we can also note that K's minimal uptake of D's topic may have been because she was unaware of the story suggested, or because she thought the topic was unsavoury, or because she simply wanted to introduce talk about the 'Easter show'. However, most importantly for the purposes of the present discussion, it serves to illustrate how off-topic-ness can be deployed in aid of ensuring that interaction continues to progress when confronted with a circumstance in which progression (in this case, with D's topic) could potentially be problematic[9] (e.g. Maynard, 1980). As well, Extract 4 also highlights the distinctly local nature of off-topic turns, both in terms of their content and the surrounding sequential context. How the off-topicality depicted here differs from off-topicality during interactions involving people with RHBD will, as suggested above, require empirical study.

Interactive co-construction

Interactive co-construction has been highlighted as a possible influence on some aphasic symptoms. As was briefly outlined above, Heeschen and Schegloff (1999; 2003) argue that agrammatic turns are particularly effective at recruiting the participation of conversation partners. In relation to fluent aphasia, Laakso (2003) also suggests that the atypically long turns at talk diagnostically associated with Wernicke's aphasia can be a product of aphasic speakers' attempts to self repair, and conversation partners withholding of participation in the repair process. Hence, the verbosity associated with Wernicke's aphasia might be considered the product of linguistic impairment, the organization of repair-for-conversation, and the behaviour of conversation partners, rather than a uni-dimensional, underlying impairment.

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The relationship between interactive co-construction and topic has begun to be explored in relation to traumatic brain injury (TBI), with both Body and Parker (2005) and Frankel and Penn (2007) illustrating how topic repetition can be supported by unimpaired conversation partners. For example, Body and Parker (2005) demonstrate how the wife of a man with TBI provided the interactional space for extended discussion of a particular topic. In response to his repeated introduction of a set of preferred topics related to chrysanthemums, the wife of the man with TBI recurrently supported this topic with minimal continuers (e.g. 'mhm', 'yeah'), thereby yielding the interactional floor, and projecting more-to-come in her husband's ongoing telling (Body and Parker, 2005).

Similarly, off-topic turns during everyday interactions involving people with RHBD are likely supported by their conversation partners, who may unintentionally ratify and assist in developing inappropriately introduced topics. How to address an off-topic turn represents a sequential problem for an unimpaired conversation partner, both in terms of how the turn is treated in light of the preceding turn sequence, and what their response will structurally project in the turn to follow. For example, by initiating a repair sequence in response to an off-topic turn (e.g. 'what are you talking about?'), the recipient of the off-topic turn is providing a space for the content of this turn to be re-introduced, and potentially expanded (e.g. 'I was talking about X, and . . .'). Alternatively, by accepting the off-topic turn, this may signal that its introduction is unproblematic, and clear the way for further talk on this topic. For example, D's acceptance of K's off-topic turn in Extract 4 allows K to steer talk towards that topic and, to some extent, conceal that her turn at line 9 was ever off-topic at all.

While the arguments above will require strong grounding in actual instances of interaction, they serve to suggest that a symptom like off-topicality, which is diagnostically associated with RHBD communication disorder, is largely indivisible from its interactional context. More specifically, in everyday conversation on- and off-topicality are active achievements in which all parties involved in the interaction are implicated. In addition, if the neurological and behavioural changes after brain injury do in fact represent a process of situated adaptation (Wilkinson et al., 2003), the conduct of routine conversation partners is likely to affect the shape and recurrence of typical and atypical interactional patterns used by people with RHBD. The interactional patterns that have been documented in aphasic (and other 'atypical') talk are not intentional, in the sense that they were purposefully planned by people with aphasia, conversation partners, or therapists. Instead, these practices likely represent optional resources that have collaboratively emerged from and during everyday talk-in-interaction over time (Wilkinson, Gower, Beeke, and Maxim, 2007). For these reasons (amongst others), the interactional practices adopted by the familiar conversation partners of people with RHBD require detailed study in order to begin developing an understanding of the nexus between (cognitive-linguistic) impairment, language use, and interactional organization after RHBD.

Clinical implications

Investigation of the issues outlined above will have significant import for assessment and intervention with communication disorders subsequent to RHBD. CA has facilitated the development of a handful of tools for assessment and intervention with aphasia (see Beeke, Maxim, and Wilkinson, 2007a, for a review). One of their particular strengths is ensuring that familiar communication partners and people with aphasia are together the focus of

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assessment and intervention, with explicit reflection on the mechanics of conversation and their own conversational behaviours being the primary means through which change is facilitated. However, aphasia and RHBD are not equivalent, and raising the awareness of people with RHBD about their own conversational behaviour will undoubtedly pose some unique challenges.

Another advantage of using CA to assess and treat acquired communication disorders is that interventions can be tailored more directly to the real-world activities that they are seeking to facilitate. That is, symptoms of impairment are not decoupled from their consequences in interaction. For example, one particularly interesting set of findings from the CA literature concerns the role of idiomatic expressions in assessing and closing topics (e.g. Holt and Drew, 2005). Given the well documented difficulties that people with RHBD can have with understanding and using idiomatic expressions (e.g. Myers, 1999, p. 118–121; Van Lancker Sidtis and Postman, 2006), and the discussion of RHBD and topic above, investigation of everyday talk might illustrate how failing to recognize the meaning of an idiomatic expression can lead a person with RHBD to persist with a topic despite their partner's moves to close it down. With this information, a clinician could then design an intervention programme that specifically addresses how 'closing a topic' might be better managed by the person with RHBD and their familiar communication partners.

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Conclusion

This paper has argued that detailed qualitative investigation of everyday talk-in-interaction after RHBD would be valuable in contextualizing the findings of previous research. Given the pragmatic deficits associated with RHBD, the nature of talk-in-interaction (i.e. locally, sequentially, and interactively constructed), and CA's data-driven, inductive approach to investigation, it appears that CA represents a methodology that would offer high sensitivity and specificity to communication disorders after RHBD. In particular, future investigations may be enhanced by consideration of how the interactional environment can affect the conduct adopted by people with RHBD. Further investigation across a variety of interactional contexts will facilitate the development of a more complete, and ecologically valid understanding of communication disorders after RHBD.

In light of their impact upon other (typical and atypical) talk, it has been argued that progressivity and interactive co-construction might exert a powerful influence on the off-topic turns of people with RHBD. It should be noted, however, that by identifying progressivity, co-construction, and off-topic turns as potentially interesting avenues for investigation, this paper is seeking to spark interest in the latent potential offered by CA as an analytic tool for RHBD; not to rigidly prescribe the terms of future investigations, or preempt their possible findings. Progressivity and co-construction, in particular, were selected for discussion because of their generic import for talk-in-interaction; that is, their import for parties who are actually *talking-in-interaction*. Like any rigorous CA-oriented research, future investigation of conversation after RHBD should proceed on the terms furnished by the talk itself, and follow the analysis to wherever the data leads.

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Notes

1. Although a contrast has been drawn here, the scope of the terms 'transaction' and 'interaction' is somewhat unclear. This is especially so in everyday talk, where sequences of turns are often not clearly supporting 'information transfer' more, less or equally than 'social affiliation'.
2. A reviewer insightfully observed that this distinction likely has neurological and/or cognitive correlates, and that this is an arena to which CA is not directly sensitive. How the kinds of analyses that CA generates can be 'married' with current models of brain/mind functioning is an inordinately complex and fascinating issue; and one that researchers working with communication disorders might be uniquely placed to investigate (see Schegloff, 2003a; b). In the context of the present discussion, it is argued that CA's potential contribution will initially take the form of data-driven elaborations of how the conduct of people with RHBD can be viewed in light of various local interactional contingencies.
3. This term does not do justice the interactional functions of these objects. As well, Brady et al.'s (2003) grouping of objects like 'uh' and 'um' with objects like 'y'know', and some of Van Lancker Sidtis and Postman's (2006) categorizations of formulaic expressions appear susceptible to the arguments presented about quantification in this paper.
4. See Beeke et al. (2007b) or Schegloff (2007) for transcription conventions.
5. By deny access to the actions embodied in these turns, the research assistant could arguably be displaying more of a pragmatic deficit than his 'impaired' partner.
6. It should be noted, however, that detailed, inductive investigation of the sort proposed in this paper will be well served by an open approach to analysis. That is, in the context of topic, it should not be assumed that the occurrence of off-topic turns is necessarily pathological.
7. A TCU can be defined as the linguistic and paralinguistic materials that could potentially comprise a turn-at-talk, and can be as simple as a single lexical unit, sound or gesture, or as complex as a main clause with subordinate clauses (Schegloff, 1996).
8. This extract is drawn from a previously unpublished set of recordings held by the first author.
9. The argument put forward here is essentially akin to the arguments put forward by Maynard (1980) in relation to topic change but, whereas Maynard (1980) focuses on resolving problems related to speakership, the present paper focuses on the broader notion of progressivity.

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