ILLUMINATING COLLABORATIVE TALK IN HEALTHCARE INTERACTIONS WITH PEOPLE WITH APHASIA: THREE LINGUISTIC APPROACHES

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Abstract: The works collated here provide evidence of the benefits of viewing communication with people with aphasia (PWA) as a joint interactional process and of applying linguistic methodologies to the study of discourse and interaction in aphasia. They specifically point to the need to reconceptualize familiarization and speaking for behaviors in healthcare and allied healthcare fields with the objective of enhancing PWA's communicative access. Study 1 gave voice to PWA about their experiences, goals and objectives, and interactions with healthcare professionals. It also investigated collaboration in triadic interactions in which the person with aphasia has a post onset time of 10 or more years through the use of Croteau *et al.*'s (2007) procedure to analyze contributions and participation in interview settings. Findings suggest that deficit-oriented measures of contributions may obscure how certain communicative behaviors can actually enhance or maintain the participation of PWA, at least in experienced pairs. Study 2 investigated the use of collaborative forms of talk between healthcare students and PWA, through a conversation analytic approach, with a focus on information exchange. Findings show that students were able to engage in collaborative behaviors even without formal training. However, occasions in which turns were left incomplete, no candidate understandings were provided, or no joint production or repair sequences were initiated led to issues with progressivity, missed opportunities to check understanding, and possibly even loss of information. Through an analysis of presuppositions and implicatures, Study 3 explored how the members of a care team in a skilled nursing home perceive communication with PWA. Findings suggest that institutional culture shapes the general goals of practice and thus may uniformly mold the way providers perceive facilitators and barriers of those goals. Perceptions and opinions on training and interprofessional collaboration, on the other hand, did not appear as uniform within the team. Conclusions about some of the barriers to communicative access in healthcare settings are framed within discussion of reasons for limited engagement in collaborative forms of talk by providers. Suggestions are given on how these results and the linguistic methodologies which helped uncover them can be used to rethink concepts and practices.

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CHAPTER I

INTRODUCTION

The works collated here provide evidence of the benefits of viewing communication with people with aphasia (PWA)—and all communication, for that matter—as a joint interactional process. They specifically point to the need to reconceptualize familiarization and speaking for behaviors in healthcare and allied healthcare fields with the objective of enhancing PWA's communicative access. The following sections overview the background and motivations for the works and provide a discussion of the nature and importance of the methodologies that were used in the studies.

1. Collaborative Talk in Aphasia[1]

Collaborative talk is not a new focus in aphasia research, especially since the field has started moving away from testing in laboratory settings for language deficits (focus on impairment) towards an understanding of functional language in natural conversations

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[1] Aphasia is a language impairment which results from brain injury and affects the production and/or comprehension of language. The most common cause of aphasia is ischemic or hemorrhagic stroke, but other causes include traumatic brain injury, brain tumors, brain surgery, brain infections, and neurological diseases. According to the National Aphasia Association, two million Americans are affected by aphasia, with 180,000 to 225,000 people acquiring the disorder each year (National Aphasia Association [NAA], 2019).

(focus on disability). In fact, numerous studies have been published about the conversational resources used by PWA and their communication partners to collaborate in talk, studies that have demonstrated how useful these resources are for interaction.

For example, Oelschlaeger and Damico (1998a) found that some communication partners engage in joint production sequences – sequences in which the listener collaborates to complete the turn in progress in the form of a pre-emptive completion of the turn (Sacks *et al.,* 1974; Lerner, 1991; Sacks, 1995). These joint productions can have a variety of functions: they can aid the person with aphasia to produce their turns, they can help establish affiliation, they can allow co-participants to share the conversational responsibilities and establish the perception of the communicative competence of the person with aphasia. They also found that some PWA use repetition in conversation for displays of uncertainty, agreement, alignment, and acknowledgment (Oelschlaeger & Damico, 1998b). Repetitions are possible based on the utterances of the unimpeded speakers and can influence the subsequent organization of the conversation when the unimpeded co-participants orient to such displays. When co-participants orient to such repetitions, they can serve to establish the conversational proficiency of the speaker with aphasia, they can help to overcome specific language barriers, and they can serve as opportunities for re-audiotorization (Oelschlaeger & Damico, 1998b, pp. 983-985).

In his extensive work on gestures, Goodwin also showed how “the accomplishment of meaning through gesture is a thoroughly social process, one that requires the intricate collaboration of others” (Goodwin, 2000, p. 88); when this collaboration is successful, gestures can help the person with aphasia produce relevant turns as well as negotiate their meaning. In addition, other research has shown that PWA can use gestures to both convey comprehensible semantic content and increase the comprehensibility of their speech (Hogrefe *et al*., 2013; Rose *et al*., 2017). Extensive work has also been conducted on repair sequences. While non-aphasic repair is usually short and achieved through self-repair (Schegloff, 1979), repair sequences in interactions with PWA can often be much longer and often unsuccessful; and, usually, repair completion is harder to achieve through the preferred method of self-repair (Wilkinson, 2007). However, when repair sequences become collaborative, they often provide opportunities for faster repair completion and for sharing the communicative burden. Collaboration in repair sequences can take the form of series of guesses or 'hint and guess' sequences[2] (Goodwin *et al*., 2002; Wilkinson, 1995; Laakso & Klippi, 1999; Oelschlaeger & Damico, 2003) or of candidate completions or candidate understandings (Heeschen & Schegloff, 2003; Laakso, 2003).

Lastly, a few other collaborative behaviors have been found to aid in communication with PWA. These include congruent overlap, acknowledgment tokens, and accommodation to nonstandard methods of interaction (Simmons-Mackie & Kagan, 1999), as well as receipting, accounting, and "other responses" (Barnes & Ferguson, 2014).

The majority of these studies, however, has heavily focused on dyads and little is known about collaborative talk in triadic interactions. Yet, as Croteau and colleagues (2004) state, such dyads may frequently "find themselves with another speaker in conversation with neighbors, acquaintances, strangers, professionals, or service providers" (p. 292). In particular, few participants with post onset times of 10 or more years are ever included in such studies. PWA with longer post onset times may be more experienced in communicating

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[2] 'Hint and guess' sequences are sequences in which the unimpeded conversational partners engage in word searches by using cues from the person with aphasia's interactional signals, such as gaze, to adjust their participation in the sequence (Laakso & Klippi, 1999).

after many years of living with aphasia and may have more established conversational routines with their caregivers. Research on triadic interactions with PWA with longer post onset times may provide insights into what strategies develop over time and how the sharing of the communicative burden is negotiated after many years.

2. Collaborative Talk in Healthcare Interactions

Something quite different occurs in interaction between health care professionals (HCP) and PWA. Researchers have found that HCP make infrequent attempts to engage patients with communication disorders in conversation (Cameron *et al.*, 2017; Olofsson *et al.*, 2005; Parr, 2007). When they do, they spend a limited amount of time discussing problems, answering questions, as well as goal setting with patients (Kuipers *et al.*, 2004; Bartlett *et al.*, 2008; Tomkins *et al.*, 2013; Hersh, 2015; Berg *et al.*, 2017). For example, Knight and colleagues (2006) found that HCPs in a stroke unit spent one third of the time providing information to patients with aphasia that they spent providing information to patients without aphasia. HCP have also been found to engage in task-focused talk where the possibilities for communication outside care routines is severely limited (Gordon *et al.*, 2009; Saldert *et al.*, 2018). Further, conversation analysis of interactions between providers and patients has shown that providers engage in conversational behaviors such as asking numerous yes/no questions (Hersh *et al.*, 2016; Cameron *et al.*, 2017, Saldert *et al.*, 2018), leaving patients' contributions unattended or unacknowledged (Gordon *et al.*, 2008), and quickly abandoning efforts of repair (Hersh *et al.*, 2016; Saldert *et al.*, 2018).

The body of the literature that has analyzed healthcare interactions is rich and has been the foundation for the development of a variety of conversation partner training (CPT) programs[3], which have proven to be successful in some regards (see Turner & Whitworth, 2006). However, many intervention studies have focused on the confidence levels and overall knowledge of HCP (Cameron *et al.*, 2017), awareness (Horton *et al.*, 2015; van Rijssen *et al.*, 2019), and improved understanding of access and inclusion (Simmons-Mackie *et al.*, 2007); few, if any, have focused on whether training programs modify conversational behaviors. Those that did, found little evidence of their effectiveness in interaction (Legg *et al.*, 2005).

While improved knowledge, awareness, and understanding are crucial to ameliorate communication between PWA and HCP, what may help in developing training programs which engender more effective changes is research on how collaborative forms of talk are used in medical interactions and the system level barriers that may hinder their uses in interaction. In depth analysis of the consequences of unattended and unacknowledged turns for the interactional flow, the exchange of information, and the ability to check mutual understanding can prove useful to shape training that can provide a variety of strategies to avoid miscommunication and misunderstandings.

3. Barriers to Collaborative Talk in Healthcare Interactions

It is also important to bear in mind that individual/dyadic training may only get us so far. As Simmons-Mackie and colleagues (2007) have noted, “the ultimate outcome goal is improved communicative access and participation in the larger realm of *society or systems*. Without support from systems and social institutions, long-term sustainable changes in

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[3] These programs include grounded theory-based ones, such as *Supported Conversation for Adults with Aphasia* (SCA™) (Kagan, 1998) and *Communication Partners* (Lyon *et al.*, 1997), the *Conversation Coaching* method (Hopper *et al.*, 2002), and Conversation Analysis motivated therapy, such as Interaction therapy (Wilkinson, 1995) and *Supporting Partners of People with Aphasia in Relationships and Conversation* (SPPARC) (Lock *et al.*, 2001).

communicative access are unlikely" (p. 41). And system changes implicate both the individual and the organization (Kitson *et al.*, 2008).

It is known that a variety of factors influence the communicative behaviors often found in medical interactions. Firstly, institutional interactions are often task-focused and instrumental and can involve a limited range of interactional practices (Drew & Heritage, 1992). These asymmetries are also embodied in a differential allocation of turn types among the participants, where interactions are organized in question-answer sequences, in which specialists ask questions and patients answer them (Heritage 2005; Heritage & Maynard, 2006a; Heritage & Maynard, 2006b; Heritage & Robinson, 2006). These characteristics and practices tend to limit the scope of patient responses and "the exercise of patient initiative" (Stivers & Heritage, 2001, p. 178). Secondly, the literature has often highlighted that there is a lack of training available to healthcare professionals (Hersh *et al.*, 2016; Cameron *et al.*, 2017, Saldert *et al.*, 2018; van Rijssen *et al.*, 2019), especially on conversational strategies and tools, augmentative and alternative communication, and the overall notion that it is important to acknowledge and reveal the competence of PWA (Kagan, 1998).

However, what is less clear is how institutional cultures influence and shape how healthcare teams think about and perceive communication with PWA. Research in this area is crucial to creating training programs which address wider issues in and across systems; not only because the care of patients is often in the hands of a team of professionals working together, but also because understanding what occurs within a broader system is fundamental to ensuring that "communication support is […] supported by and included in organizational policy and practice" (Simmons-Mackie, 2013, p. 21). Insight into these institutional influences may also help in understanding why individual training programs often do not lead to changes in interaction.

4. Three Studies

In an effort to start addressing the aforementioned gaps, this work collates the findings of three studies. Study 1 (Chapter II) gave voice to PWA about their experiences, underscoring the variation in their goals and objectives and their interactions with healthcare professionals. It also investigated variation in contributions and participation in triadic interactions in which the person with aphasia had a post onset time of 10 or more years. Study 2 (Chapter III) investigated the use of collaborative forms of talk by healthcare and allied healthcare students in interaction with a person with aphasia. In particular, it analyzed how the use of collaborative talk impacts information exchange. And Study 3 (Chapter IV) explored how the members of a care team in a skilled nursing home perceive communication with PWA in order to better understand the extent to which the perceptions of the team were systematic in the facility and, thus, the extent of institutional influence on perceptions.

5. Linguistic Methodology

One of the main contributions of this dissertation is the application of linguistic approaches to the study of discourse and interaction in aphasia. These approaches are conversation analysis (CA), interactional sociolinguistics (IS), and pragmatics. This section briefly introduces and discusses these approaches and their value for the analysis of interactions in the field of communication disorders.

5.1 The Problem with Language as a Product

As a start, I wanted to move away from a more traditional analysis of discourse of communication disorders, which consider language as the *product* of individual speakers putting thoughts into verbal form. This production of language is typically elicited through tests under experimental conditions[4]. The work here, instead, takes a functionalist approach to the analysis of discourse. The sections below will explain how certain features of conversation can be leveraged by people with communication disorders to participate in conversation despite a lack of linguistic resources. When language use is tested through more traditional experiments, these features are not available or are severely limited. This limitation can conceal the true extent of the communicative abilities of people with communication disorders. The overarching approach used here aims to look exactly at these features to gain insights into how they are exploited and how this exploitation can be enhanced by both impaired and unimpaired speakers.

5.2 Naturally Occurring Interactive Talk: Language as a Process

As a point of departure, this work looks at naturally occurring interactive talk. Naturally occurring talk is that which occurs in natural interactions rather than in experimental settings. Interactive talk is talk that is considered to be an "interactional and collaboratively co-constructed achievement" (Wilkinson, 2008, p. 95) which "involves active

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[4] These experimental conditions/discourse tasks include readings such as *The Grandfather Passage* (Darley, Aronson, & Brown, 1975) and *The Rainbow Passage* (Fairbanks, 1960); semi-spontaneous discourse tasks such as picture sequence narratives (e.g. *Broken Window,* Menn *et al*., 1998), storytelling (e.g. *Cinderella*, Grimes, 2005) and procedural discourse activities (e.g. *Peanut Butter and Jelly Sandwich* prompt, Chandler, 1901 as referenced in Lau, 2013). Occasionally, they include fully spontaneous speech activities, but the goal is frequently to elicit as much language as possible from PWA without much interaction with the examiner.

participation and coordination of moves by two or more participants in the joint production of talk" (Gumperz, 1984, p. 278). Within the approach used here, then, language is not a *product* but an interactional *process* used to jointly negotiate meaning within the interactional context; language use is analyzed to explore whether and how this negotiation is achieved.

Thus, analyses of talk-in-interaction of the sort which have been used in this work rely on methodologies which allow us to search for and interpret "joint interactional mechanisms rather than primarily indicators of communicative impairment" (Müller, Guendouzi, & Wilson, 2008, p. 8). In fact, a focus on indicators of communicative impairment precludes our ability to explore the ways in which people with communication disorders can leverage the co-constructional aspect of talk-in-interaction. By relying on their co-participants to assist them in communicating, impaired speakers can often participate much more fully in conversation than what those indicators – and the tests used to identify them – may suggest.

The following paragraphs describe the specific approaches used here and some of the elements of analysis they entail. The descriptions provided here are not meant as exhaustive overviews of the approaches but as summaries of those tenets and elements which are most important and pertinent to the studies in this work. Moreover, not all of the elements of analysis under the purview of these approaches are employed here; rather, the works here employed those elements which emerged from the data itself.

It is also important to note that these approaches are not completely distinct. They overlap in important ways and share common tenets. Thus, they were not used here to strictly differentiate analyses, but rather to build a rich framework in which these analyses could operate.

5.3 Approaches and Elements of Analysis

5.3.1 Conversation Analysis (CA)

CA, a sub-discipline of ethnomethodological sociology, focuses on those procedures "by which speakers use their turns at talk to produce social actions and recipients display an understanding and response to these actions in subsequent turns" (Wilkinson, 2008, p. 93). In order to do so, CA-based work analyzes conversation at the micro-level: the organization of turns, turn-taking, sequences (e.g. adjacency pairs), repairs, and structures. Through the analysis of these organizations, CA can uncover the courses of social actions (e.g. asking, answering, disagreeing, requesting, noticing, promising, etc.; see Schegloff, 2007) that are implemented through them. The analyst, then, can track the sequences of turns in terms of "where they came from, what is being done through them, and where they might be going" (Schegloff, 2007, p. 3). Turns at talk, within this perspective, are seen to be constructed and interpreted in relation to immediately preceding turns and also to be projecting subsequent conversational actions; in other words, every action is context shaped and context renewing (Goodwin & Heritage, 1990).

Like its co-constructional aspect (see Section 2), the sequential nature of talk-in-interaction can also be used as a resource in conversation with people with communication disorders. As Wilkinson (2008) points out, people with communication disorders can leverage the sequential nature of talk-in-interaction to construct their turns "since they may, to a greater or lesser extent, be able to compensate for their lack of linguistic resources by designing their utterances to exploit the contextual resources available, in particular the sequential context provided by preceding talk" (p. 94). It is also important to note that within this framework, there are no intrinsically ill-formed structures: the success of this exploitation emerges entirely out of the unfolding interaction (Atkinson & Heritage, 1984; Wilkinson, 2008). This is one of the main reasons CA is extremely valuable as an approach to the study of interactions involving people with communication disorders, especially in the interest of moving away from deficit-oriented interpretations of disordered talk.

5.3.2 Interactional Sociolinguistics (IS)

IS is another branch of linguistics from which elements of analysis have been employed in this work. IS is a broad interdisciplinary approach to the study of interaction with a focus on analyzing the dialectic between linguistic signs and social knowledge in discourse. This field is primarily based on work by Gumperz and Hymes who developed a general theory of verbal communication.

IS shares with CA the notion that social actions are interactively organized and that naturally-occurring conversation is the best locus of analysis. However, while in CA meaning and predictions are made based on the line of interpretation suggested by on-going talk, in IS this line of interpretation is also measured against *any* prior interactive experience. This process is called conversational inference. In this sense, a main assumption in IS is that "social and cultural knowledge, including communicative knowledge, is reproduced, confirmed, and modified in interactions" (Günthner, 2008, p. 54).

Co-participants, then, are seen to contextualize information and meaning and make them interpretable to other co-participants through what Gumperz (1982) termed contextualization cues. These cues include prosodic and paralinguistic features, familiar formulaic expressions and conversational routines, and identifiable conventions for organizing and sequencing information. As Günthner (2008) explains, “in order to interpret the utterances of their counterpart adequately, interactants have to recognize the present communicative situation and the embedded contextualization cues as an instance of typified schemata and relate them to their stored sociocultural knowledge” (p. 56). Some of the cues that emerged in the data in this work include discourse markers, backchanneling, and sentence completions.

These contextualization cues and the sociocultural knowledge they rely on to contextualize information and meaning provide yet another tool that can be utilized by people with communication disorders. When other linguistic resources might be unavailable, certain cues can be used to leverage the sociocultural knowledge of interlocutors to help with meaning-making. By the same token, unimpaired speakers can leverage the same cues to better interpret the utterances of impaired speakers.

5.3.3 Pragmatics

Lastly, the present study drew upon some analytical elements from the field of pragmatics, which deals with language use and the contexts in which it is used. Of most relevance here is the notion of indirectness, notion which has been approached from a variety of perspectives – Grice’s theory of conversational implicature and cooperative principles (1975), Ervin Goffman's theory of face (1967), Brown and Levinson’s politeness theory (1978), Searle’s account of indirect speech acts (1979), and others.

Indirectness entails what can be perceived by most conversationalists: that "what a speaker intends to communicate is characteristically far richer than what she directly expresses" (Horn, 2004, p. 3). One can think of figurative speech (e.g. irony, metaphor) as an example[5]. For Grice (1975), who first studied this phenomenon, the connection between what we express and what we intend to say lies in implicatures. He theorized that to derive meaning from language, and thus communicate effectively, speakers and listeners would have to act cooperatively (the Cooperative Principle). In addition, they would have to be informative, truthful, relevant, and clear – these correspond to the Gricean maxims of quantity, quality, relevance, and manner.

The way a speaker can implicate something that is not implied by what they say and still manage to convey it lies within these maxims. It works roughly like this: a hearer presumes that the speaker is following these maxims. However, "if taking the utterance at face value is incompatible with this presumption, the hearer, still relying on this presumption, must find some plausible candidate for what else the speaker could have meant" (Bach, 2012, p. 59). This work to find some plausible candidate is the basic idea behind implicatures.

What follows from this work is the question of *why* we say things indirectly. Drawing upon the work of Goffman, who first introduced the concept of face[6], Brown and Levinson (1987), argued that one of the reasons why natural conversations rarely proceed in such a way as to meet all Grice's maxims is because of politeness[7], which they claim to be "a major

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[5] Non-figurative forms of implicature also exist (e.g. relevance, quantity, ignorance, and metalinguistic implicatures) and are just as important.

[6] Goffman (1967) defined face as "the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact" (p. 213).

[7] Lakoff (1989) defines politeness as "a means of minimizing confrontation in discourse - both the possibility of confrontation occurring at all, and the possibility that a confrontation will be perceived as threatening" (p. 102).

source of deviation from such rational efficiency, and is communicated precisely by that deviation" (p. 95). They point out, however, that such departure is still possible because of the maxims – they are just operating at a deeper level. In order to establish the source of departure, listeners must still do inferential work and find an implicature.

The concept of indirectness, the Gricean maxims, and the concept of face and politeness routines, are used here in two main ways. First, they are used to analyze how unimpaired speakers co-construct narratives with people with aphasia, their contributions in conversation, and the work they may do in terms of face. In fact, some of the results will show that viewing certain communicative behaviors, previously interpreted as simply supportive to production, in light of pragmatic theory helps uncover much more complex and deeper functions. Second, they are used to analyze the attitudes to and perceptions of communication with PWA of providers by uncovering presuppositions and implicatures in their statements on the topic.

6. Roadmap

Each of the following three chapters is a study. Study 1 is presented in Chapter II, Study 2 in Chapter III, and Study 3 in Chapter IV. Each chapter consists of a brief introduction, a background section, a methodology section, and a results and discussion section. Lastly, each study contains a conclusion section related to the specific study. An overall conclusion, which discusses the findings from the three studies together and presents the implications—both methodological and clinical—of the current work, is presented in Chapter V.

CHAPTER II

STUDY 1

Content and Form: Communication Experiences of PWA and Collaborative Talk in Triadic Interactions

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1. Introduction

Study 1 had two primary aims. The first was to report, in detail and in their own words, the journey of two PWA with communication, their goals, and their experiences with HCP. The second aim was to investigate understudied triadic interactions in which one person has aphasia. The study used Croteau *et al.*'s (2007) procedure as well as discourse analysis to analyze participation and contributions in interview settings in order to better understand how PWA and their interlocutors participate in conversation in these social contexts. In particular, the study explored participation and contributions in conversation with PWA who have longer post onset times and thus may have more experience in communicating and who are not usually included in studies of this kind.

2. Background

2.1 Qualitative Interviews with PWA

The literature that investigates the perspective of PWA through the use of qualitative interviews has been recently expanding. Some studies have interviewed patients in regards to their quality of life (Cruice *et al.*, 2008), life satisfaction (Parr, 1994), and social participation (Dalemans *et al.,* 2009). Some have focused on illness stories (Pluta *et al.*, 2015), while others have looked at key factors to living successfully with aphasia (Grohn *et al.*, 2014). Some have taken the approach of analyzing the types of narratives and metaphors that PWA use to describe such experiences (Mitchell *et al.*, 2011). A few studies have focused on interactions with healthcare professionals, interviewing patients and caregivers about adverse events and discharge issues in hospitals (Hersh, 2009; Hemsely *et al.*, 2013), participation in goal setting in language rehabilitation (Berg *et al.,* 2017), and health-care satisfaction (Tomkins, *et al.,* 2013). Lastly, some have focused on the roles of the caregivers in health interactions (Hemsely *et al.*, 2008; Johansson *et al.,* 2012; Burns *et al.*, 2015).

We have learned a great deal about the experiences of PWA from such studies and, in particular, about their interactions with HCP. Of most relevance here are two studies on goals and satisfaction. A 2011 study with 50 PWA summarized some of the most common goals across PWA, which included wanting to communicate opinions not just basic needs, to receive information about aphasia, stroke, and available services, to partake in more speech therapy, to reach greater autonomy, to be treated with dignity and respect, and to engage in social, leisure, and work activities (Worrall *et al.*, 2011, p. 309).

These results were echoed by a 2013 study on the health-care satisfaction of PWA, which reported on a number of factors which influence the satisfaction and dissatisfaction of PWA with their care and include: (1) anxiety, stress and fear in communication, (2) dignity and respect received, (3) engaged and independent decision-making, (4) trust, support, and understanding on the part of the HCP, and (5) information provision (Tomkins *et al.*, 2013).

What seems to be often lacking in such studies, however, is giving direct voice to the participants. While there are some studies that report a few direct quotes from participants, the general trend is to categorize the experience or analyze the interviews thematically. This process is certainly necessary at times and can help provide directions for training, clinical intervention, and policy change. For example, in Worrall and colleagues' (2011) study, the goals reported by participants in the interviews were condensed into categories in order to be able to code the goals according to the ICF, the coding scheme of the International Classification of Functioning, Disability and Health (World Health Organization [WHO], 2001) and make recommendations to healthcare professionals on how to better orient to such objectives. But there remains a need to more fully give space to the direct experiences of PWA, in the interest of understanding how varied they can be, the ways in which PWA discuss these experiences, and to maintain the balance between categorization and individual variation.

2.2 Participation and Contributions in Triadic Interactions

In line with the interest of focusing on individual variation, the second aim of the study was to explore the participation and contributions of PWA in triadic interactions, in order to better understand different types of collaboration in these contexts. In particular, the study investigated whether findings from previous studies would apply to interactions involving PWA with much longer onset times (10 or more years) who may be more experienced in communicating after many years of living with aphasia and who are often excluded from studies of this kind.

Interest in dyadic interaction is long-standing in aphasia research, but we know less about triadic interactions as only a few studies have focused on these contexts. Earlier research highlighted how certain communicative behaviors of the conversational partners were detrimental to the participation of PWA. These behaviors included competitive storytelling, answering questions directed at the person with aphasia, and the reissuing of questions in ways that would refute the responses of the person with aphasia (Manzo *et al.,* 1995). Some of these behaviors were categorized as “speaking for” behaviors, defined by Croteau and colleagues (2004) as conversational turns “in which there was addition of new information provided by the spouse when the interviewer had addressed a question to the person with aphasia” (p. 297). They found that the behavior was frequent, though serving different functions: some were comments to integrate the conversations, some comments were directly related to the questions being asked, some were suggestions of what to say. In general, these studies pointed out that these communicative behaviors in triadic conversation lessened the participation of the person with aphasia (Manzo *et al.,* 1995; Croteau *et al.,* 2004; Croteau & Le Dorze, 2006).

In a 2007 study, however, Croteau and colleagues found that only about half of the contributions of partners were speaking for behaviors and that only this type of contribution was followed by a decrease in the participation of the person with aphasia to the conversational activity. In fact, the authors noted that partners often contributed "in a manner that appears beneficial to the flow of conversation" (p. 798) and that even speaking for behaviors are not necessarily negative behaviors – rather, they can be adaptive and used to save face.

In addition, Simmons-Mackie and colleagues (2004) pointed out that while speaking for behaviors can be found in sequences in which the unimpaired speaker acts as a spokesperson, in repair sequences, or in butting in sequences, these are "*instances* of co-construction, but that the 'speaking for another' framework moves beyond such instances to an overriding pattern" (p. 122). This framework can actually be successfully manipulated by the person with aphasia to shift the animator role to the nonaphasic partner so that the "nonaphasic partner becomes the animator of the message authored by the person with aphasia" (Simmons-Mackie *et al.,* 2004, p. 116). The authors nonetheless warn that assuming too great a share of the communicative burden may cross the "fine interactive line and extremely important distinction between facilitating the expression of ideas and taking control of the conversation away from the person with aphasia'' (Simmons-Mackie *et al.,* 2004, p. 123).

More research is necessary to better understand the sharing of the communicative burden, especially in triadic interactions. In addition, there is a lack of research on these behaviors in triadic interactions involving PWA with much longer onset times (10 or more years) who may be more experienced in communicating after many years of living with aphasia and may have more established conversational routines with their caregivers. In order to start addressing these questions, this study investigated the communicative behaviors of two pairs of nonaphasic-aphasic speakers in the interview context.

Overall, the study was guided by the following research questions:

1. How varied are the experiences of PWA with communication, rehabilitation, and healthcare?
2. What are the conversational behaviors of PWA and their caregivers in triadic interactions in which the person with aphasia has a post onset time of more than 10 years?

3. Methods

3.1 Participants

Participants were recruited through a local support group. Inclusion criteria were (1) diagnosed acquired expressive and/or receptive aphasia, (2) no severe concomitant disorders (e.g. greater than mild hearing loss, severe dysarthria, etc.), and (3) availability for research procedures. Five PWA agreed to participate in the study. However, due to the closing of the interview location and later suspension of all previously IRB approved in-person interactions in response to the COVID-19 outbreak of 2020, it was possible to interview only two participants for this study. Both participants gave permission to reveal their identities and use their real names. Their characteristics are presented in Table 1. Caregivers are referred to only with nouns indicating their relationship to the person with aphasia (i.e. brother, husband).

Table 1

Participant Characteristics

Name	***(Previous) Occupation***	***Stroke Type***	***Aphasia Type***	***Years Post Onset***	***Partner***
Jeanne	Actuary department of an insurance company	Ischemic	Broca	10	Brother
Claire	n/a	Hemorrhagic	Mixed	11	Husband

3.2 Interviews

The interviews were conducted at a university clinic and were audio and video recorded. Each interview lasted around 45 minutes. The interview protocol was planned so as to support communication with the participants and included giving ample time to respond, using multimodal communication, clarifying patient responses, and allowing caretakers to partake in answering (see Luck & Rose, 2007). The first set of questions centered around the stroke experience and aphasia diagnosis; participants were asked about the initial stages post-stroke and their recovery journey. The second set of questions concerned their experiences with communication, their communication goals, and the role of family and friends. Lastly, participants were asked about communicating with HCP throughout their recovery.

3.3 Data Analysis

The audio-video recorded interactions were viewed entirely a few times to gain familiarity with the content. The interactions were then transcribed in full (see Appendix

1 for transcription conventions), though only relevant symbols were employed and only in those instances in which they were significant to the analysis, so as to simplify the reading of the passages. The interviews were divided into four main parts: the initial stages post-stroke, communication experiences, support of caretakers, and interactions with HCP. Reporting of these experiences was done mainly through the words of the participants, with the integration of a rich description of the data. Then, the way the pairs co-constructed the narratives in the interview setting was analyzed. This was accomplished by combining Croteau *et al.*'s (2004) and Croteau *et al.*'s (2007) procedure for analyzing participation and contributions.

3.3.1 Analysis Procedure (Croteau *et al.*, 2004, 2007)

Croteau *et al.*'s (2007) procedure divides the contributions of speaking partners of PWA in triadic interactions into three categories: speaking for behaviors, repairs, and support. The latter two categories are divided into a subset of behaviors. The procedure also involves analyzing whether these behaviors are solicited or unsolicited in conversation and what the reaction of the person with aphasia is. Lastly, the tool also involves collecting information on the nine turns following the contribution to qualify the participation of the person with aphasia in comparison to the nonaphasic speaker participation. Table 2 summarizes the categories of the procedure. For detailed definitions, please refer to Appendix 3 or Croteau *et al.* (2007).

Table 2

Categories to Evaluate the Contributions of PWA and Speaking Partners in Triadic Interactions (from Croteau et al., 2007)

			Solicitation[a]		**Reaction**[b]				**Participation**[c]
		Quantity	S	U	EA	NEA	R	AR	Ma, Mi, E, U
Speaking for	Speaking for								
Repair	Revisions								
	Assistance in word finding								
	Hypothesis verification								
	Correction								
	Redirecting to the topic								
	Repair of the interviewer’s turn								
Support	Elicitation of verbal production								
	Support to continue								
	Acknowledgment of difficulties								

Notes:
[a] “S” = Solicited, “U” = Unsolicited
[b] “EA” = Explicit approval; “NEA” = Non-explicit approval; “R” = Rejection; “AR” = Ambivalent rejection
[c] “Ma” = Major; “Mi” = Minor; “E” = Equal; “U” = Undetermined

Many other possible contributions to conversation are not included in Croteau’s *et al*. (2007) categories. Indeed, some of the findings will highlight that categorization such as these are centered on support to verbal production (i.e. hint, prompts, of questions which aid the person with aphasia to speak, or advice on how to proceed speaking) and, consequently, deficit-oriented. In effect, analysis of behaviors in support to verbal production as behaviors in support to verbal production is in itself reductive: some may do face-saving work, some may do co-constructional work, and some may be used to support narration more than, or instead of, production.

4. Results & Discussion

4.1 Jeanne's Story

When Jeanne woke up from her stroke, she could not remember who she was, let alone who her brother was. But one thing she remembered clearly: her stuffed frogs. Of course, she was not able to reveal this to others, but her brother suspected that they would bring her comfort, knowing that she had always loved them. So, he brought her collection to the hospital. It turned out to be invaluable.

(1)

J: we used to (.) when we were home before my stroke (.) we used to throw them at each other. ((my brother)) brought a whole bunch of them to the hospital, and when I would get mad at somebody ((imitating throwing and laughter)) and ((my brother)) said that he told them how he could say how I was doing for the day based on me throwing the animals. ((laughter))

B: and another thing she learned to communicate (.) when she first went to neurospecialty (.) again she still couldn't speak or anything she had been in the hospital for a month in a coma (.) I told the nurse if Jeanne needs to go to the bathroom badly (.) she is going to take off her clothes and she is going to throw her stuffed animals (.) then you'll know (.) and that's exactly what she did. the nurses came and thanked me later because she couldn't say it.

J: and when I would get upset and they weren't paying attention, ((imitating throwing and laughter))

The stuffed animals also offered the physical therapist a way to test her motor functions and to induce Jeanne to move during the very early stages, as she enjoyed that familiar activity. Much of her initial rehabilitation, language and physical, was due to the intimate knowledge Jeanne’s brother had of her personality. But there were still plenty of psychological and communication challenges Jeanne had to face while in the hospital.

For example, Jeanne recounts episodes in which she was made to feel *lower*[8] by the hospital staff, who would not allow her to try and take care of some things by herself, like ordering food or doing laundry.

(2)

R: do you feel like your confidence changed after the stroke? your self-confidence?

J: actually, I think now it is better. in the beginning after the stroke I felt I'm not able to do anything. and some of that was me, because I was feeling sorry for myself in the beginning and I’ll admit that (.) but some of it was them, because I think they handled things wrong. like for example, when we would go for lunch and everybody was supposed to wait on line until to say what they wanted from the choices and then go and sit down. me and two other people one who was blind one who also was in a wheelchair we would go to the tables and they'll bring lunch to us (0.3) well, that didn't make us feel special (.) that made us feel lower. or each week they ((the other patients)) will have to do their own laundry and put it away (.) I didn't (.) they did my laundry for me they put it in the drawers they decided where everything went.

Finally fed up with her lack of independence, Jeanne made the decision to try and dress herself, another task she had always been given help to accomplish.

(3)

J: I really had my old confidence back when I was determined I was going to dress myself. I was tired of having ((my brother)) dress me. I would have the clothes right off the bed where I could reach.

B: I set up something for her. she had the hospital bed and right off the side I had a hanging rack with some of her clothes and other stuff piled up. so she had everything.

J: so one night (.) I probably didn't sleep at all because I have no idea of how long it took me (.) at least two hours (.) I dressed myself (.) when he came in I was already dressed.

B: it was incredible (.) I was very proud of what I saw.

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[8] Here and in the rest of the work, italicized words in main paragraph text are those used by the participants.

When the interviewer asks her to tell me more about her experience communicating with medical professionals, she proffered the following anecdote about one of her nurses:

(4)

J: once a speech pathologist put up in my room that I had aphasia and what they ((the nurses)) needed to do to communicate with me (.) now bear in my mind that back then my speech was very limited (.) she told them no interruptions, to talk slowly, to talk clearly, and to <u>wait</u> and give me time to answer (.) one of the nurses said I can't understand what she wants and she doesn't-won't listen (.) well (.) she said that and (.) the speech pathologist said did you do-follow my instructions? (.) oh! I thought that was just for visitors (.) I didn't know *we* had to do it. (.) and I remember the speech pathologist (.) she went ((imitation: stares at the ceiling with eyes rolled up)) and then she said (.) well (.) she isn't only have aphasia for visitors!

For Jeanne, who had been adamant about her participation in interactions and whose brother had been trying since the very beginning to help her communicate independently, issues in the communication with HCP were evident. Some of the nurses made little effort to come up with a communication system that would enhance Jeanne's ability to express her opinions about her care or her well-being. For example, they would often ask her to rate her pain level on a numeric scale, which can be very challenging for PWA. They would not give her the opportunity to decide which clothes to wear for the day, how to be positioned in the bed, or when and if to get out of the bed. She stated that when some of the nurses addressed these points, they would do so in the form of instructions rather than questions, telling her, for example, *it's time to get up now*.

There was little co-constructional collaboration in interaction, with the nurses controlling the topic of conversation and feeling frustrated when they believed she wasn't listening (*she doesn't-won't listen*). Even when she discussed her current visits to her doctor, which she says are much better now that she has regained much of her communication abilities, she reported that sometimes nurses will ask her rapid-fire questions without giving her the time to process what is said and to articulate her answer, ask her scale-based questions, which she still has trouble with, or ask yes/no questions, which Jeanne *hates,* because *when it's come down to that I'm having a problem.*

4.2 *Participation and Contributions: Jeanne and Her Brother*

In first stages post-stroke, Jeanne explained in the interview, she tried to say different words, but quickly noticed that when the first one came out, she would feel a compulsion to keep repeating that word. She was fully aware that the repetition was occurring, but, she stated, *it seems that what I could do and what I wanted to do weren't the same thing*. Jeanne then stated that, after she left the neurospecialty unit, it took her another five or six years before being able to overcome most of her communicative challenges. During the interview, Jeanne paused often but was able to talk for extended periods of time with few self-repairs, as shown in (1), (2), and (4). She made very little use of gesture and did not use any alternative or augmentative communication methods.

During the interview, a pattern of co-construction emerged between her and her brother. Jeanne's brother often used "speaking for" behaviors to add information to the conversation. In (1), after a complete conversational turn from Jeanne, marked by a falling intonation and laughter, Jeanne's brother uses the conjunction *and* to add information about the time in hospital and talk about his prospective on the event. Interestingly, Jeanne uses *and* as well to continue with her contribution once her brother completes his turn. In (5), Jeanne's brother marks his contribution with *and* again during a discussion of the challenges of talking on the phone.

(5)

R: is there one area of communication that you find more difficult?
J: the phone is horrible (.) and there's two reasons for that (.) and one of them is because my speech, especially on the phone is halted (.) everything (.) I can't speak as well (.) it's very halted. and because you want to make sure that what you say is clear (.) if I do that on the phone often I'll speak softer and slower (.) well sometimes if you talk slow then you get the are you still there? (.) and of course then my mind becomes a blank.
R: so there is an aspect that-where (.) you feel pressured?
J: yes.
B: **and**[9] as soon as she feels pressured in trying to speak. it's like everything just goes blank.
J: some of them b-b-b-b-b *((imitating fast talk; laughter))*

Jeanne states that her speech is very *halted* on the phone and that she speaks *softer and slower*, to which people often react by saying, "are you still there?", phrase that makes her mind go *blank*. When the interviewer asks her if this occurs because she feels pressured, she replies *yes* with falling intonation. After this brief answer, her brother add his perspective about how quickly the pressure can makes Jeanne's mind *go blank*. Jeanne non-explicitly approves of this contribution and adds that some people speak quite fast on the phone – another challenge.

In (6), when asked about what the best way to communicate with her is, Jeanne reports that she likes when people *speak slowly, carefully*. Here, her brother uses a question directed at Jeanne to probe her for another piece of information that relates to the original question.

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[9] Here and in the rest of the work, bolded items in excerpts and examples indicate those items most salient to the analysis.

(6)

R: and if you were to tell someone the best way to communicate with you what instructions with you give that person?
J: speak slowly (.) carefully.
B: **and what was the other part that you found important especially in the beginning?**
J: speak to me. yes.

This type of contribution is not categorized in Croteau's *et al.* (2007) support contributions, which, as mentioned, are centered on support to verbal production. However, Jeanne's brother uses this strategy a couple of times throughout the interview. Noticeably, both times he introduces his question with *and*, just like the majority of his other types of contributions. This seems to help him avoid running the risk of appearing to indicate that Jeanne had forgotten to say something.

When discussing whether Jeanne ever withdraws from social occasions, hobbies, or communication in general, she reports that being around a lot of noises can be quite tiring.

(7)

R: do you ever feel like you withdraw from social occasions or communicating with people or hobbies?
J: yes.
R: is it often?
J: no and it's gotten better. but sometimes being around a lot of people a lot of noise, (1.0)
R: it gets tiring?
J: easily.
B: **and** going back to the original problem she had with the massive blood clot (.) it created **[an echo chamber.]**
J: **[an echo chamber.] and** that was-that was what one of the doctors said that I had (.) it got to the point in the beginning, that even two people talking not even to me to each other on the other side of the room would echo in my head.
B: **and** when the neurospecialist would work with Jeanne in neurospecialty in the beginning they had to be at a table separate.

they tried doing it where there was six other people and there was just too much noise. and Jeanne she was totally spaced out.

J: **and** it was to the point where whatever noise was being said (.) so, Jane over there was saying oh this is a great day. and somebody was saying (.) I had a great pizza. (0.3) and all that would mix up in my brain and become constantly this-the same words again and again and again and again.

B: **and** at the center (.) in the gymnasium they would have the exercise classes and like that and they generally played music with them (.) when we would go in the beginning especially we spoke to them and they shut it down completely because even at the lowest volume she would have to leave the room.

After a brief answer from Jeanne (*yes*), her brother adds that this is due to the fact that the blood clot had created an echo chamber in her brain, again using *and* to expand on Jeanne's brief answer. They say the words *echo chamber* in unison, as a sort of joint production. Jeanne then builds upon her brother's observation using *and* herself and stating that even two people talking to each other in her proximity would cause her discomfort because of the echo. Her brother then adds more to the story, again using *and*, to say that they even had to move away from people during sessions with her doctor. This continues for two more turns, with more and more elements added to the narrative. In this portion of the interview, Jeanne and her brother create a narrative together, adding details upon details and building on what the other states previously. There are no interruptions and no revisions of what the other has said. There are no repair behaviors, including corrections or redirections. Though the original question posed by the interviewer is directed at Jeanne, her brother joins the production of the narrative with "speaking for" behaviors, or "conversational turn[s] in which there [is] an addition of new information provided by the [speaking partner] when the interviewer [has] addressed a question to the person with aphasia" (Croteau *et al.*, 2004, p. 297).

On the two occasions where Jeanne's brother started answering a question before Jeanne could, he would pause immediately and say *go ahead*. An example is shown in (8) during a discussion of one of Jeanne's favorite hobbies, birdwatching, and the way they have set up the house for her to enjoy it from the sliding glass door to their backyard. Here, too, the brother contributes an addition after a complete turn by Jeanne.

(8)
R: bird watching huh (.) do you have to find good (.) good spots?
B: [well,]
J: [no.   ]
B: **go ahead.**
J: ((my brother)) arranged the feeders so that I could see them out the back window. and he'll get the different types of bird food so I can see them right from the back window (.) I say window but it's really a sliding glass door.
B: **and** she has her computer set up right in front that so she can see.

4.3 *Summary*

Overall, Jeanne has experienced, and at times still does, some unsuccessful interactions with HCP. A lack of knowledge of aphasia had led some of her nurses to believe that Jeanne was purposefully not listening to them or that the instructions on how to best communicate with her given by her SLP did not apply to them. Some HCP used strategies that were unsuited to her, such as the use of numeric rating scales, the use of commands rather than dialogue to make decisions about care, and the use of rapid-fire or yes/no (polarity) questions. And some would not adjust their positioning in order to be at eye-level with her while seated in her wheelchair, which would have allowed Jeanne to make use of their facial expressions to better understand what was being said. Psychologically, she felt that she was made to feel unequal to other patients because many tasks, such as ordering food or doing laundry, were done for her by the staff against her will to try and accomplish them independently. She also reports that when she is very stressed and pressured to talk, such as she feels on the phone, her communication skills greatly suffer.

The experiences and goals Jeanne reports align with findings from previous studies. In particular to the goals of wanting to reach greater autonomy and to be treated with dignity (Worrall *et al.*, 2011). They align with themes from health-care satisfaction studies (Tomkins *et al.*, 2013) and respect and the themes of anxiety, stress and fear in communication, dignity and respect received, engaged and independent decision-making, and trust, support, and understanding on the part of the HCP. It seems, however, that for Jeanne the most paramount objective was independence, from which other goals may have stemmed, as well as the anxiety and frustration of have ill-equipped staff taking care of her.

In terms of the co-construction pattern revealed in the interviews, it seemed that Jeanne and her brother were able to seamlessly collaborate in creating the narrative of their experiences, especially when those experiences were shared by the two. They added to each other's turns in successive fashion using conjunctions which marked an addition to rather than a correction of what was previously said. At times, the brother would use questions to probe Jeanne for information which she might have forgotten to talk about or which he felt was important, but always letting her report it. Contributions and participations are shown in Table 3.

While the majority of contributions from the brother were in the form of speaking for behaviors and, specifically, what Croteau *et al.* (2004) term "rapid speaking for" behaviors – those that are produced after 0, 1, 2, or 3 conversational turns of the person with aphasia – and all unsolicited, Jeanne non-explicitly approved all of them. The contributions did not diminish Jeanne’s participation in the latter turns; in fact, her participation was either equal to her brother’s in the following eight turns or was often major, meaning that the number of contributive turns by Jeanne exceeded those produced by her brother.

Table 3

Jeanne and Her Brother: Contributions and Participation

			Solicitation[a]		**Reaction**[b]				**Participation**[c]
		Quantity	S	U	EA	NEA	R	AR	Ma, Mi, E, U
Speaking for	Speaking for	10	0	10	0	10	0	0	Ma (9), E (1)
Repair	Revisions								
	Assistance in word finding								
	Hypothesis verification								
	Correction								
	Redirecting to the topic								
	Repair of the interviewer’s turn								
Support	Elicitation of verbal production								
	Support to continue								
	Acknowledgment of difficulties								

Notes:

[a] “S” = Solicited, “U” = Unsolicited

[b] “EA” = Explicit approval; “NEA” = Non-explicit approval; “R” = Rejection; “AR” = Ambivalent rejection

[c] “Ma” = Major; “Mi” = Minor; “E” = Equal; “U” = Undetermined

4.4 *Claire's Story*

Claire had a hemorrhagic stroke. She was in the hospital for a very short period of time and did not undergo any type of surgery. When she tries to recall her experience of the stroke, she appears to have trouble giving a chronological account and seems to perhaps better recall her stay in ER.

(9)

C: I remember (.) I was trying to figure out why this group of women and men that were uh (0.3) yeah, but I was sitting there with an elderly man. and I felt so sorry for him. and uh I didn't know what else to do. so I took him by his hand. he was like I say quite elderly. and I just held his hand.

When her husband informs the interviewer that she does not, in fact, appear to remember the stroke event itself, she adds that:

(10)

C: I was just uh then I then I saw (.) two guys driving-I mean walking up this uh (0.5) I don't know what you'd call it but (.) it was (.) like two men were (.) coming towards us (.) and uh (.) they uh (.) one was I know that I-I-I had-I had known him in the past as he's an elderly guy and he would he was real funny and (.) I wonder what he was doing there (.) uh and then I wondered, oh my god, I wonder he (.) got the same thing as-as-as (.)
R: as you?
C: yeah. and I never figured that out.

Claire's husband clarifies that Claire suffers from confusion at times. Most of the information gathered about her experience of the stroke event is thus from the perspective of her husband, though he had been away to work on their lake house when the stroke occurred and so is unable to know exactly what happened. He recounts that it had been the neighbors who called an ambulance alarmed by a phone call from Claire during which they had been unable to understand anything she was saying. When he arrived at the hospital, however, Claire had lost most of her ability to speak, only being able to produce the utterance *be ok*. Once they were able to stabilize her, about two weeks after her stroke, Claire started speech therapy at the hospital and continued for about one month.

When discussing her interaction with the HCP, Claire was able to note that *different people would be on call and-and so many would be different so different.* Her husband recalls that she once complained about one of the nurses assigned to her, telling him that she had been *really, really mean*, grabbing her and pushing her to do things that she did not want to do. Claire then commented that *that didn't work for* [her] *at all.*

Claire is also able to talk about an adverse event at the hospital in which she had called for help to use the restroom, but the staff was unable to assist her as they were all working on another patient who had had a severe emergency.

(12)

C: and one night oh God this is horrible. one night I kept asking or putting-pushing the button and saying I need some help, and uh (.) I need to go to the bathroom (.) they wouldn't get-get me. nothing. I mean just (.) and this is what happened to me. oh my gosh (.) they had a little-little uh what do you call it?

H: there was a little portable toilet you can pull up next to the bed.

C: but it was too far to really use it. and I thought, oh god, what am I gonna do? I was just stressing and thinking, oh, I don't know what to do. and so I thought finally thought, okay, it's over a year I'm getting-I'm getting worse and worse (.) so just get over there and use it and then don't worry about it. (.) well I couldn't get it. I couldn't-I couldn't do that.

H: well she couldn’t walk.

C: I-and I was so (.) I was getting worse and worse, mentally (.) when I finally tried to uh stay up right (.) and then not uh pee well it-there it went. and I thought oh, shoot. and I-and it was (.) I had hurt myself so badly. it was just a:h

In more recent interactions with doctors, Claire confirms that it is her husband that talks the most, but that she feels blessed to have his support.

(13)

C:	and thank god I have my wonderful husband and I don't know what I would do without him he's wonderful.

The husband then touches upon the fact that a major reason why he talks on Claire's behalf with doctors is because of time limitations. However, sometimes Claire will be able to communicate to him that she wants to take charge of a particular interaction, though she may still ask her husband to talk about a particular point she is having trouble with.

(14)

H:	you know he's ((the doctor)) got ten minutes, so he doesn't have a lot of time to allow you a lot of time. so he's stressed and he's in a rush so you're stressed because he's stressed because he's in a rush. and it just all kind of seems to be fast. and, and one thing aphasia victims don't do is fast. they do slow. so to try to speed things along (.) now there's times when she'll look at me and she'll say I got this.
C:	*((laugher))*
H:	I just zip it. and then she'll later she'll say, can you tell him about? you know, such and such because she's having trouble with that-that one piece of communication.

When asked what happens to her language when she is stressed, Claire states that she has much more trouble speaking and that morning routines are particularly stressful.

(15)

C:	o:h gosh. well I'm a-it's just-I'm just a mess. just flat as-flat ass awful. like this morning. oh gosh I was doing everything wrong (.) and we (.) were running late and uh (.) and, *((coughs))* like we usually do. *((all laugh))* but (.) where was I?
R:	I was asking you about when you get stressed what happens to your language. was this morning stressful?
C:	yes, <u>yes</u>.
R:	and do you have more trouble speaking when you're very stressed?

C: o:h, yes. yeah.
H: getting ready is one of the most stressful things she does.
R: getting ready.
C: yeah, just readying getty,
H: there's so many little things that you take for granted that have to be done. and if it gets out of sync she'll say well what-what am I supposed to do next? you know. my favorite with her she'll say just out of the blue honey what was I thinking? and I'll say well just sit there I'll go back and get the crystal ball *((all laugh))* and come back here and try to divine something. or it'll be (.) what was it I wanted to say? *((all laugh))* or she'll be-she'll be very lucid but she'll start in the middle *((Claire laughs))* of the thought I've missed all this other stuff.

Claire's husband then talks about an interesting *phenomenon* that happens when Claire talks on the phone with her twin sister, who lives far away. It seems Claire is able to talk to her quite fluently, without hesitation.

(16)
H: well, we have a phenomenon.
C: *((laughter))* what is it?
H: I do not understand it. it totally mystifies me. if she's on the phone to her twin sister in Portland she doesn't have aphasia. it is the absolutely most normal conversation you could ever she's totally in on it. she's totally just talking naturally and and responding. she's extremely lucid. and and the words just flow and there's no hesitation, there's no erring and uh-ing and I can't think of what to say or hesitation.

4.5 *Participation and Contributions: Claire and Her Husband*

Claire's speech is characterized by repetition, false starts, and some occasional spoonerisms, such as *reading getty* in (14). She sometimes loses track of what she is saying, due to some issues with short term memory loss. She appears to also have a slight vocal tremor. However, Claire is often able to speak for extended periods of time (see 9, 10, and 12), recount events chronologically that she recalls well (see 12), and understand quite well what others are saying, participating in laughter when a joke is said and answering questions on topic.

The co-construction pattern that surfaced in the interviews between Claire and her husband involves Claire sometimes asking questions to her husband to help her recall a detail in her story or a word. In (12) when she has trouble remembering the word *portable toilet*, she turns to her husband and asks *what do you call it*. The husband is familiar with the story and is following along with what Claire is saying, so is able to answer her question and help her with the missing information. In this case, after his intervention, he let Claire resume the story-telling.

Claire’s husband also often clarified what she said, especially when her answers are less specific or shorter. For example, in (17), when asked about why Claire has aphasia, she answers that *a lot of things* have *affected* her brain.

(17)

R: so claire, why do you have aphasia?
C: that's a good question ((laughter))
R: ((laughter)) thank you.
C: I have aphasia based on having a lot of things that I had in my in my (.) what? brain (.) and-and that has affected my-my brain.
R: **but** it resulted from a stroke.

After a complete turn by Claire, the husband clarifies that the aphasia resulted from a stroke, using the counter-argument *but* to introduce his turn, perhaps perceiving the information as not sufficient (thus perceiving Grice’s maxim of quantity has been flouted by Claire) or the statement as obscure or ambiguous (thus perceiving the flouting of the maxim of manner).

In (12), he similarly clarifies that Claire could not walk (*well she couldn't walk*) after Claire had stated that she was unable to reach the portable toilet by saying, *I couldn't get it*. Discourse marker *well* is often argued to be a marker of insufficiency that indicates a problem on the content level of the prior utterance (Jucker, 1993, Pomerantz, 1984, Schiffrin, 1985) and thus typically facilitates "comprehension by indicating that extra inferential processing will be required to comprehend an utterance" (Holtgraves, 2000, p. 90). Here, too, the husband is doing face work, trying to align Claire's statements with maxims of quantity and manner.

In these instances, when Claire has a lengthier, often complete, turn, the husband's interventions are short, allowing Claire to resume her storytelling. Instead, when Claire is giving brief answers, the husband will clarify the answers in the same way but will also engage in lengthier turns to add information. In other words, when maxims are violated, or appear to have been violated, he intervenes. For example, in (18) when asked whether she likes phone conversations, Claire replies that she does not really like talking on the phone much with a brief answer (*not much*).

(18)

R: so do you like the phone very much?
C: **not much.**
H: **but** the difference in I see with her is that when she's face to face talking (.) facial expressions or body language come into play and the stress can ebb and flow (.) where on the phone you're not seeing that it's just a voice on the other end. so unless the call gets cantankerous or out of sorts (.) why it's just a normal a norm-and she's always talking to someone she really really likes.

Her husband, then, contributes more details about the fact, introducing his turn again with *but*. Interestingly, he states that face-to-face interactions involve *facial* *expressions or body language* but that these variables may contribute to stress, while having just a voice on the phone makes the conversation more *normal*, unless the phone conversation gets *cantankerous or out of sorts*. He does, however, specify that Claire often talks on the phone with familiar people who *she really really likes*. Perhaps his perspective on the fact that face-to-face interactions appear to be more stressful is based more on the fact that Claire's phone conversation are almost exclusively with people she is very familiar with, rather than because there is a lack of other stressors, such as *facial expressions or body language,* which are usually considered facilitators. Indeed, in (19), when the interviewer asks Claire whether it helps to look at an interlocutor's facial expression, she agrees, even predicting that the interviewer was going to say *their face*, and uttering it in unison.

(19)
R: does it help to look at (.) [their face,] their eyes, and their mouth?
C: [their face.] yes.
R: so it helps you to understand others better?
C: yes (.) it sure does.

4.6 *Summary*

Overall, Claire does not remember much of her stroke, though she remembers some of her interactions with HCP. The variety of nurses was somewhat hard on her, but, most importantly, the stressful lack of time on the part of HCP have, at times, made it more difficult for her to be able to express herself. Stresses on interactions seem to also worsen her speech, especially when she feels pressured by time constraints. Thus, it is usually the husband which takes on a role of communicator during such encounters in order to speed up the process. Nonetheless, she is at times able to plan meetings with her husband ahead of time, letting him know if she feels she can take on the interaction more independently. She can then rely on her husband to fill in any gaps or take over, by asking him to help her with a word or asking him to talk about a certain topic for her, which she does during the interview as well. An important theme in her experience was that of familiarity: talking with people she likes and is very familiar with, such as her twin sister, reportedly make her communication skills stronger.

The experiences and goals Claire recounts in the interview also align with those reported in previous literature. However, unlike Jeanne, her primary issue with satisfaction with care was the trust, support, and understanding on the part of the HCP and the anxiety, stress and fear in communication. While Claire did not discuss goals as much as Jeanne, it appears that while engaged and independent decision-making were certainly important for her, what was more important was reducing her anxiety and having a supportive partner by her side which she could rely upon, among many other things, to help her communicate with others.

In terms of the co-construction pattern, only a few of the contributions from Claire's husband were speaking for behaviors (see Table 4). The majority of contributions were repairs, and particularly revisions and corrections. The length of these contributions varied according to Claire's preceding turns: if Claire was speaking comfortably, any intervention was brief, allowing Claire to resume her talk quite quickly; if Claire was unable to provide more detailed information, or gave only brief answer to a question, then the interventions were longer and more in-depth. The behaviors, while certainly in support of Claire's production, are more correctly defined as attempts at face-saving work and work to be cooperative in conversation.

Table 4

Claire and Her Husband: Contributions and Participation

			Solicitation[a]		Reaction[b]				Participation[c]
		Quantity	S	U	EA	NEA	R	AR	Ma, Mi, E, U
Speaking for	Speaking for	2	0	3	0	3	0	0	E
Repair	Revisions	4	0	5	0	5	0	0	E
	Assistance in word finding	2	2	0	1	1	0	0	E
	Hypothesis verification								
	Correction	4	0	4	0	3	0	1	E
	Redirecting to the topic								
	Repair of the interviewer's turn								
Support	Elicitation of verbal production								
	Support to continue								
	Acknowledgment of difficulties	2	0	2	0	1	0	1	E

Notes:
[a] "S" = Solicited, "U" = Unsolicited
[b] "EA" = Explicit approval; "NEA" = Non-explicit approval; "R" = Rejection; "AR" = Ambivalent rejection
[c] "Ma" = Major; "Mi" = Minor; "E" = Equal; "U" = Undetermined

The behaviors were mostly unsolicited, with the exception of those occasions in which it was Claire who explicitly sought the assistance of her husband, usually through direct questions; these instances were marked as assistance in word findings (see Excerpt 12). There was almost exclusively non-explicit approval of these contributions, with only a couple of occasions in which it was unclear if Claire was approving or not. Lastly, though Claire's participation did not seem enhanced by these contributions, it was never lessened by them – the number of contributive turns by Claire remained equal to the number produced by her husband through at least 8 turns after each of his contributions.

And, though Claire's participation may not have been enhanced with them, they helped with important work in terms of the social aspects of the conversational context.

5. Conclusion

5.1 How varied are the experiences of PWA?

Much of the previous research has investigated experiences similar to those of Jeanne and Claire, and has categorized their goals and objectives (Worrall *et al.,* 2011), as well as their satisfaction or dissatisfaction with care (Tomkins *et al.,* 2013). Studies in social participation have often highlighted the frustration that comes with the feeling of having little to no autonomy (Dalemans *et al.,* 2009), as well as the barriers to higher quality of life when dealing with the symptoms and outcomes of having had a stroke and being diagnosed with aphasia (Cruice *et al.,* 2006).

However, the experiences of Jeanne and Claire are quite different in many aspects. Jeanne remembers most of her initial post-stroke stages, Claire has almost no memory of them. Jeanne had a number of poor encounters with HCP, both in hospital and after, and is keenly aware of the quality of these interactions. Claire had a forceful nurse and was, at times, excluded in the interactions with HCP by the lack of time they had for visits. Jeanne has trouble talking on the phone, though Claire seems to improve on the phone with people she is particularly familiar with. They also differ in what types of communicative strategies they prefer. Jeanne does not appear to make use of gestures, writing, or AACs, but states she communicates better when people speak slowly and clearly to her and position themselves facing her at eye-level. Claire states she relies on facial expressions to better understand what is being said, can read well, but does not use writing at all.

While their goals and objectives are listed in previous research, the findings here reveal how nuanced they are in their hierarchy. While Jeanne was and is intent in regaining as much independence as she can, Claire is focused more on adapting. While Jeanne suffered mostly from anxiety and frustration with independent decision-making and the need for greater autonomy, Claire felt most of her anxiety was directed at her inability to communicate and on the slow process of building with her husband the trust and understanding that is necessary to help her interact.

It is important that we keep focusing on the individual stories, on the goals and objectives each person with aphasia sets out for herself, while we strengthen themes and categories. While the latter are crucial to amend policies, train providers, and reform the way medical institutions, private practices, and the society at large support communicative access for PWA, a focus on individual variation is also fundamental to the tailoring of services and care we provide each person who has been affected, prioritizing what is of most important to the individual and their lives.

5.2 *What are the conversational behaviors in triadic interactions?*

The findings here do not entirely align with previous studies in which communication partners in triadic interactions were found to engage in competitive storytelling, answering questions directed at the person with aphasia, and the reissuing of questions in ways that would refute the responses of the person with aphasia (Manzo *et al.*, 1995). Here, Jeanne and her brother co-constructed the stories together, adding on each other’s turn with increasing details, and Claire and her husband used questions to support Claire’s production, with the husband using various types of repair in the interaction to help clarify Claire’s contributions. Though Jeanne’s brother still helps her remember some details, he uses questions to probe the information, letting her report it independently. Claire’s husband, instead, uses questions to help clarify what Claire has said, and Claire uses them for word searching or to ask for help in keeping track of what she is saying. Claire’s husband used *but* and *well* to connect to what Claire was saying, signaling other-repair, but does so according to how Claire is interacting in each moment of the interview, letting her resume her turn when she is more fluent, or engaging in longer turns when she seems to be having trouble. Jeanne’s brother builds on Jeanne’s turns with *and*, co-constructing longer sequential narratives with her, but only if the experience is shared.

Patterns seen in the two interviews in this study also do not align with the finding that “unsolicited ‘speaking for’ contributions were the only behaviors on the part of the [speaking partner] that were followed by a decrease in conversational participation by the person with aphasia” (Croteau *et al.,* 2007, p. 798). Jeanne’s brother’s contributions, which were almost exclusively unsolicited “speaking for” behaviors, often lead to an increase in Jeanne’s participation, while Claire’s husbands’ few “speaking for” behaviors did not alter Claire’s participation and did important work for social and interactional purposes.

Even Croteau *et al.* (2007) point out that “some ‘speaking for’ behaviors may be adaptive strategies to save face in the interview situation with an unfamiliar interviewer” (p. 309). They indicate that it is a high frequency of them that can have potentially negative impact on participation; they found a mean of 7 speaking for behaviors in their interviews, which lasted on average 60 minutes. In the present study, the interviews lasted an average of 50 minutes and there were 10 speaking for behaviors in one interview and 2 in the other. Even in the interview in which there were more of these behaviors – in fact, they were the only contributions observed, with the exceptions of questions which probed for information – the participation of the person with aphasia was enhanced.

It seems that a longer experience with communication may help reduce the frequency of speaking for behaviors or, interestingly, may shape a way of engaging in speaking for behaviors that do not lessen the participation of the person with aphasia and can, in effect, help with face-saving work and the social elements of conversation. Thanks to a customized communication system, tied to both general and transient abilities, to the co-constructional routines of the communication partners, the ownership of a memory or story, and the interest of the person with aphasia to engage in more or less extended turns, these behaviors may evolve through time to be rather useful or be dispreferred to other types of contributions.

In both cases in the study, no behaviors were to the detriment of the participation of the person with aphasia. It is possible that further investigation of the co-constructional behaviors of pairs in which the person with aphasia has a longer post onset time can help model training materials and guide those pairs who are just starting their journey with aphasia and to better understand the complexities of speaking for behaviors and other types of contributions in these types of triadic interactions.

CHAPTER III

STUDY 2

Collaborative Talk in History Taking Sequences Between Healthcare Students and PWA: Progressivity and Checking For Understanding

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1. Introduction

Study 1 has shown how varied co-constructional patterns can be in pairs of aphasic and nonaphasic familiar speakers and how important different forms of collaborative talk can be to the participation of the person with aphasia in conversation. Unfortunately, collaborative talk does not seem to be as leveraged by providers in dyadic healthcare interactions. While much research has been conducted on the characteristics of these exchanges, not much is known about the use of collaborative forms of talk and especially its impact on information exchange. Study 2 investigated if and how healthcare and allied healthcare students used collaborative forms of talk as conversational resources during history taking sequences.

2. Background

People with language impairments are at a higher risk of receiving inappropriate or inadequate healthcare (Hemsley *et al.,* 2013), with reports indicating they are six times more likely than patients with unimpeded speech to experience adverse events (Bartlett *et al.,* 2008), including inappropriate transfers, discharges, and patient complications (Hemsley *et al*., 2013), as well as dissatisfaction with care. In aphasia research, these issues have been attributed to the limited time professionals spent discussing problems and answering questions (Bartlett *et al.,* 2008), the limited opportunities for patients to understand care (Hersh, 2015, Tomkins *et al*., 2013) and to be involved in goal setting (Kuipers *et al.,* 2004; Berg *et al.,* 2017), as well as the exclusion of spouses from important interactions (Hemsley *et al.,* 2013).

In particular, issues in communication between providers and patients with aphasia have often been found to be tied to the institutional nature of such interactions and a lack of communication training on the part of providers (Cameron *et al.* 2017, Gordon *et al.* 2009, Hersh *et al*. 2016, Saldert *et al.* 2018). When analyzing patient-provider interactions, researchers have found that providers tend to heavily rely on yes/no-questions, often leaving patients' contributions unattended or unacknowledged and quickly abandoning efforts of repair (Cameron *et al.* 2017, Gordon *et al.* 2009, Hersh *et al.* 2016, Saldert *et al.* 2018). These conversational behaviors are often characteristic of institutional interactions, which tend to present asymmetries of participation and "a direct relationship between institutional roles and tasks on the one hand and discursive rights and obligations on the other" (Heritage 2005, p. 237). In fact, institutional interactions are often task-focused and instrumental and can involve a limited range of interactional practices (Drew and Heritage 1992). These asymmetries are also embodied in a differential allocation of turn types among the participants, where interactions are organized in question-answer sequences, in which specialists ask questions and patients answer them (Heritage 2005, 2006). These characteristics and practices tend to limit the scope of patient responses and “the exercise of patient initiative” (Stivers and Heritage 2001, p. 178), which can be further diminished by lack of communication training for the HCP.

What remains unclear, however, is the way in which these factors influence if and how HCP engage in collaborative talk – an extremely useful set of conversational behaviors often observed in interactions between PWA and their loved ones (Barnes and Ferguson 2014; Goodwin 2000; Laakso, 2003; Laakso and Klippi 1999; Oelschlaeger and Damico 1998a; Rose *et al*. 2017; Simmons-Mackie and Kagan, 1999; Wilkinson 2007). Limited use of forms of collaborative talk can be extremely detrimental for participation of PWA in conversation: not only can lack of collaborative talk lead to negative emotions in PWA if, for example, they are unable to produce the target word or phrase despite several attempts, but it can also bring issues of retrieval or production to the forefront of the conversation activity, exposing the patient and disrupting the flow of the interaction (Wilkinson and Wielaert 2012).

In order to investigate if and how collaborative forms of talk are used as a conversational resource in healthcare interactions and their relationship to the acquisition of information from the patient, this study analyzed two simulated healthcare interactions: one between Stephen, a patient with aphasia, and a speech-language pathology student and one between Stephen and a nursing student.

(1) Is joint production used as a conversational resource and what is its function in the interactions?
(2) What occurs when there arises an opportunity to use joint production as a possible conversational resource but another conversational strategy is selected?

3. Methods

3.1 Participants

Two students and one person with aphasia participated in the study. Recruitment was conducted through class presentations and through an aphasia support group. This study focused on students to align with a current general interest in understanding the conversational strategies of health and allied healthcare students (Cameron *et al.* 2015, Horton *et al.* 2016, Legg *et al.* 2005, McMenamin *et al.* 2015). Both a speech-language pathology and a nursing student were included to explore any differences between the two fields. Pseudonyms are used for students, while Stephen consented to having his real name used in the study. All procedures for this study have been approved by the Institutional Review Board at Oklahoma State University.

3.1.1 Stephen

Stephen had an ischemic stroke in the left hemisphere 18 years ago and was diagnosed with aphasia. No recent formal aphasia assessment was available for Stephen, so he was formally assessed for this study with the Western Aphasia Battery-Revised (WAB-R) by a licensed speech-language pathologist. His WAB AQ was 77.6 and his WAB-R Aphasia Classification is conduction aphasia. Stephen's speech is characteristically agrammatic with some slurring, false starts, and repetitions. He often has difficulties in retrieving or producing words and uses gesture frequently. Importantly, Stephen heavily relies on co-constructional help from his interlocutors during the conversational activity.

3.1.2 Mary

Mary is a first-year master's student in Speech-Language Pathology at a large institution. For a little less than a year, she was co-leader of an aphasia support group through the school, the same support group that Stephen attends, though the two had never met before due to scheduling differences. Mary seemed very in-tune with the struggles of this population, both communicative and psychosocial. Some of the strategies that she uses or has knowledge of when interacting with PWA are conversation boards, books, and the general guideline to not finish their sentences. This last strategy seems tied to the features of the type of institutional talk one may expect in speech-language pathology and medical interactions in general, as previously mentioned. Possibly, the rehabilitative objectives of speech therapy can affect the way collaborative aspects of conversation are viewed and employed in therapy.

3.1.3 Kay

Kay is a senior nursing student at the same institution and has completed a rotation in the stroke unit of a major city hospital. She is also working on two research papers on aphasia in collaboration with a speech-language pathology student from another institution. Kay seemed very aware of her role as communication partner for PWA, stating that communication with patients is crucial and that if patients cannot communicate with their nurses and vice versa, ‘they feel like suddenly they have no control over their plan of care […] they might experience unnecessary physical discomfort, because they can’t tell you that something is bothering them […] if they cannot speak, they cannot participate fully in their care.’ When asked about which strategies she may use to make such interactions more effective, Kay said that she tries to position herself at eye-level with the patients, to gauge the level of loudness at which she has to speak according to the reaction of the patient, and to use writing or singing.

3.2 Interactions

The aim of this study was to set up approximations of new patient consultations in which the healthcare students and the patient would engage in history taking sequences, or medical interviews. These interactions are crucial not only for accurate diagnosis but also to build rapport with the patient; among other issues, communicative problems between providers and patients with communication disorders in medical interviews may lead to “health professionals making diagnoses based on only medical perceptions of the problem” (Legg *et al.* 2005, p. 561).

Further, since it was important to investigate how collaborative forms of talk would impact information exchange from patient to provider, Stephen was asked beforehand what main points he was intending to discuss with each of the students. Indeed, it was necessary to know what Stephen was intending to say to the student beforehand in order to understand whether all the information he wanted to communicate to the students had been in fact elicited. Stephen's main communication concerns were his trouble with reading and writing, particularly for his job which requires him to fill out order forms that contain numbers and codes. His main medical concern was the limited mobility in his right hand and, specifically, his difficulties grasping objects, such as cans to drink. He was instructed to communicate these concerns to the students during his mock session with them. He was also instructed to ask about therapy in both sessions. These instructions are shown below:

1. General concern:
    a. Nursing: Explain that you have limited mobility in your hand.
    b. SLP: Explain that you have trouble reading and writing.
2. Specific concern:
    a. Nursing: Explain that you have trouble grasping objects (drinking especially).
    b. SLP: Explain that you have trouble at work with filling out order forms (numbers especially).
3. Ask about therapy.

The students were instructed that they would be playing a professional in their field in session with a new patient and that they would not have known why the patient was coming in. They were also given some points to guide them during their session, but any indication about what conversational strategies they may use (i.e. ask questions, use pen and paper, etc.) were purposely avoided to minimize any influence on their communicative behaviors. Their instructions are shown below:

1. Greet the patient.
2. Determine what the patient is coming in for.
3. Get a brief speech therapy/medical history related to the concern the patient is expressing.
4. Answer any questions the patient has to the best of your knowledge or inform them that you will let them know the answer at a later date.

All sessions were conducted in a clinical setting, were video-recorded, and timed to last about 15 minutes (see Legg *et al.* 2005), though participants could interrupt earlier if they were out of talking points. A few communication pages with pictures representing a variety of medical care terminology, along with paper and pens were available in the room, though no explicit instruction to use these materials, or how to use them, was given to the students.

After each session, the two students were asked a few debriefing questions. They were informed about this debriefing beforehand. Questions included how the students thought the session went in general, what areas they believed they had less or more trouble with, and if they believed Stephen was able to communicate everything they needed and to understand everything the students told him. They were also asked to outline the details of the reason the patient/client had come in.

3.3 Data Analysis

The video-recorded interactions were viewed entirely several times to gain familiarity with the content. The interactions were then transcribed in full (see Appendix 1 for transcription conventions and Appendix 2 for full transcripts of the interactions). A first analysis located all instances in which the students engaged in collaborative forms of talk discussed in previous literature on communication with PWA. These included joint productions, question reformulations, acknowledgment tokens, gesture, and the use of alternative communication methods. The function of these collaborative behaviors was analyzed through conversation analysis of the collaborative talk sequences as well as the turns leading up to and following them. The interactions were also analyzed for progressivity and checking for understanding to track whether information was checked with the patient and whether each topic was exhausted. This latter analysis was possible thanks to previous knowledge of the information that Stephen intended to share with each student.

4. Results

4.1 Collaborative Behaviors

In the session between Stephen and Mary, there were two instances in which Mary engaged in joint production, a type of collaborative sequence in which the listener collaborates to complete the turn in progress in the form of a pre-emptive completion of that turn (Lerner, 1991; Sacks, 1995; Oelschlaeger and Damico 1998a). The first joint production sequence is reported in (1). Stephen is explaining how he is able to interact with his clients, who call him for small repairs in the home.[10]

(1)

1 → Stephen: [text me your name and address] [and then=]
[*((points to map application on cellphone))*] [*((gaze to Mary))*]
2 → Mary: =and then you can put it in the map.
3 Stephen: yes.

Stephen explains that he asks clients to send him a text message with their names and addresses (line 1), while pointing to a map application on his phone which is sitting on the table between him and the student. He then directs his gaze towards Mary. Here, she delivers a syntactically and semantically coherent completion of Stephen's initiation, through a prosodically declarative clause (line 2). This type of turn completion joint production is also characterized by timing (Oelschlaeger and Damico 1998a). There is almost no separation between Stephen's incomplete utterance and Mary's completion of it and latching occurs (lines 1-2). Stephen acknowledges the turn completion production by Mary in line 3; his acknowledgement serves both to signal acceptance and confirmation of her contribution to the co-construction as well as to re-assert his turn (Oelschlaeger and Damico 1998a).

Excerpt (2) is another example of a turn completion joint production between Mary and Stephen. They are discussing Stephen's use of his cellphone to help with issues of recalling spelling.

(2)
1 Mary: so sometimes it's hard (.) to remember the letters and how to spell
2 it all?
3 Stephen: see I can't, *((points to piece of paper and pen on table and then to his head))*

---

[10] Here and in the rest of the work, arrows indicate salient turns.

4		Mary:	okay.
5	→	Stephen:	⌈now ⌉ ⌈I= ⌉ ⌊*((points to mouth and then cellphone))*⌋ ⌊*((gaze to Mary))*⌋
6	→	Mary:	=you can say it in, *((points to cellphone))*
7		Stephen:	yes.

Stephen had previously mentioned that he has trouble writing and the student is summarizing the information about his difficulties (lines 1 and 2). Stephen then states that he *can't* and points to the paper and pens that are laid out on the table and then to his head (line 3). Though Stephen uses gesture here, he does not pause or shift his gaze toward Mary. Stephen then moves on to explaining what he does in order to circumvent the spelling problems in line 5 – he can use the speech-to-text function on his cellphone. This time, Stephen uses gesture, pointing first to his mouth and then to the device, then looks at Mary. Here, Mary engages in turn completion joint production as a conversational strategy, delivering, as in excerpt (1), a syntactically and semantically coherent completion of Stephen's initiation through latching. Stephen again acknowledges the turn completion production by Mary in line 7.

Mary also frequently uses acknowledgment token *okay*, often recognized by interlocutors as both responsive to prior talk as well as projecting to the next matter (Beach 1993). Generally, in institutional talk, *okay* can help providers steer the topic by closing up the sequence and starting a new one (Beach 1995); it can also be followed by an expansion on the same topic (Oloff 2019). Importantly, "by producing such a token as opposed to a full turn at talk, a recipient passes on an opportunity to initiate repair, that is, to indicate a lack of understanding regarding the immediately preceding talk." (Guthrie 1997, p. 400). Mary also uses gesture herself to complete the turn (line 6) – another possible form of collaborative talk in which Mary accommodates to an alternative discourse style, a strategy that “seems to be as much affiliative as it is informative” (Simmons-Mackie and Kagan 1999, p. 815).

Examples of other forms of collaboration are shown in excerpt (3), where Mary and Stephen are talking about Stephen’s job.

(3)

1 Mary: at your job (.) so your job is pretty hands ↑<u>on</u> you don’t have to do
2 a whole lot of (.) rea:ding?
3 Stephen: ↑well (.) yes but see uh (.) youtube uhm (.) suppose the numbers-
4 cell numbers ⌈(.) and put the five or six⌉ ⌈(3.0) ⌉
⌊*((gaze down))* ⌋ ⌊*((gaze to Mary))*⌋
5 ⌈computer five or six,⌉ ⌈(3.0) ⌉
⌊*((gaze down))* ⌋ ⌊*((gaze to Mary))* ⌋
⌊*((hand cupped, fingers move back and forth))*⌋
6 ⌈can’t say it.⌉ ⌈see the mind don’t work uhm (.) uh⌉ ⌈(2.0) ⌉
⌊*((gaze down))*⌋ ⌊*((gaze to Mary))* ⌋ ⌊*((gaze down))*⌋
7 can’t say it. ⌈(.) you buy the parts.⌉
⌊*((gaze to Mary))* ⌋
8 Mary: uh huh
9 Stephen: and (.) and then put (.) word in comments uhm ⌈(3.0) ⌉
⌊*((gaze down))*⌋
10 can’t say it uhm,
11 → Mary: do you think you could write it ↑<u>down</u> (.) what you’re thinking?

Mary and Stephen had been talking about the trouble Stephen still has with reading and writing. While Stephen has some conversational trouble in lines 3-7, Mary nonetheless uses backchannelling (line 8) to signal her participation in what Stephen is saying. After some more trouble in Stephen’s following turn, signaled by pausing, gaze, and the explicit *can’t say it* (line 10), Mary offers him an alternative communication method – writing (line 11).

Kay also uses some forms of collaborative talk in her interactions with Stephen as shown in excerpts (4) and (5). Stephen had previously told Kay he was coming in because of post-stroke paralysis to his right hand, but they had continued on to discuss his stroke first. Kay then returns to the topic of Stephen's hand in (4).

(4)

1 Kay: And I see you (.) you said you were coming in for your hands (.)
2 what exactly:?
3 Stephen: well I want exercise (.) or see long time ago arm ⌈hanging down ⌉
⌊*((hangs arm down))*⌋
4 [but uhm,]
5 → Kay: [oka:y.]
6 Stephen: I want more, (.) *((showing he can't open hand fully))* [to drink,]
7 → Kay: [more func]tional
8 use more range of use.
9 Stephen: see I, *((placing cupped hand on table))* ⌈the pop (.) ⌉
⌊*((indicating the palm))*⌋
10 but I can't, ⌈(3.0) ⌉
⌊*((lifting cupped hand to face in zig-zag motion)) ((gaze to Kay))*⌋
11 hard to,
12 → Kay: ri:ght. right.
13 Stephen: pop and, *((lifting cupped hand to face in a zig-zag motion and hitting one cheek at a time and smiling))*
14 → Kay: a(h) £ohhh£ now is that your dominant hand?
15 Stephen: yes.
16 Kay: that's frustrating isn't it?
17 Stephen: yeah but, *((shrugs shoulders))*
18 Kay: so I'm seeing you must've had a left sided stroke because your (.)
19 right side is the one that's (.) affected.

Kay asks Stephen what exactly he is having trouble with. Stephen replies that he wants to exercise, though also implying that he is doing better now as *a long time ago* his arm was *hanging down* (line 3) and showing Kay he can now move it from that position. He then says *I want more* and pauses slightly so that Kay takes up the opportunity for joint production and adds *more functional use more range of use* (lines 7-8). She also uses *okay* and *right*, often used to display attention, understanding, and interest (Guthrie 1997). In addition she uses smiling and laughter (line 14) after Stephen smiles at his own inability to drink from a can. Laughter has also been described as a viable collaborative conversational strategy, one that "contributes to the re-establishment of social interaction and meaning-making despite linguistic deficits, […] allowing for increased communicative access" (Madden *et al.* 2002).

Lastly, Kay also uses the strategy to reformulate her question to better support Stephen's communication, as shown in excerpt (5). Kay and Stephen are discussing what activities are challenging for Stephen given his trouble with his hand.

(5)

1 Stephen: long long time ago ⌈exercise (.) ⌉
⌊*((mimicking a bicep curl))*⌋
2 see I ⌈can't, ⌉ ⌈lift it. ⌉
⌊*((attempting to lift right arm above shoulder))*⌋ ⌊*((gaze to Kay))*⌋
3 Kay: ri:ght. okay.
4 Stephen: *((lifting left arm above shoulder))*
5 Kay: yeah so ⌈this one's full range of motion.⌉⌈this one is not (.) ⌉
⌊*((points to left arm))* ⌋⌊*((points to right arm))*⌋
6 as full as [this one.] *((gaze to left arm))*
7 Stephen: [yes.]
8 → Kay: what are the activities that are the most difficult for you to do with
9 that hand?
10 → Stephen: one more time?
11 → Kay which activities are the most difficult-that concern you the
12 → most? is it ea:ting? o:r?=
13 Stephen: well,
14 → Kay: =wri:ting?
15 Stephen: personally the <u>rock</u>. ⌈can't lift it. ⌉
⌊*((mimicking lifting an object with arms))*⌋
16 Kay: which rock?
17 Stephen: no no or a big (.) box. can't lift it.
18 Kay: o::h, right. right.

When Kay asks what activities are most difficult for him, Stephen asks Kay to repeat her question (line 10). Kay repeats the question, but offers a forced choice, *is it eating or writing* (lines 12 and 14). Offering specific choices can sometimes help PWA with production: not only does the strategy provide possible target words or phrases, which can be repeated by PWA (see Oelschlaeger & Damico 1988b), but it can also help avoid or reduce issues of retrieval and longer repair sequences.

Collectively, these collaborative forms of talk accomplished a number of things in interaction. First, since the speakers have shared the conversational responsibility, Stephen's communicative load is reduced. In this way, the students have supported and acknowledged Stephen as a competent communicator and prevented possible loss of face (see Oelschlaeger and Damico 1998a). Second, the sequences have allowed minimal departure from progressivity, whose principal threat are initiations of repair. Third, some of the strategies allowed students to endorse Stephen's contribution, build rapport, and provide opportunities to communicate in different ways.

4.2 Issues with Progressivity and Checking For Understanding

Overall, both students engaged in a variety of collaborative forms of talk. However, some issues arose in terms of progressivity and checking for understanding. For example, in excerpt (3), when Mary inquires about Stephen's job, asking whether he is required to read for it, we see multiple attempts on Stephen's part at producing a complete turn. He pauses for up to 3.0 secs, alternates his gaze downward to process and then towards Mary. This shift in gaze appears to be signal for constructional help. In fact, it has been shown that speakers tend to look at listeners to mobilize recipient response (Bavelas *et al.* 2002, Stivers and Robinson 2006, Stivers and Rossano 2010). In other words, "by shifting the gaze […] to the recipient, the speaker transforms the existing participation framework and invites the recipient to produce a completion of the current turn constructional unit" (Bolden 2003, p. 203). In aphasia research specifically, gaze directed to the listener has been found to be a compensatory discourse device used to solicit aid from the listener (Goodwin & Goodwin 1986) and to nonverbally shift the turn to the speaking partner (Simmons-Mackie & Damico 1996). He also adds gesture – his hand is cupped and his fingers are moving rhythmically back and forth as if requesting something (line 5) – as well as repeating three times that he can't say it (lines 6, 7, 10). Mary does not engage in a repair or joint production sequence with Stephen here.

Since Stephen's turns are left incomplete, the progressivity of the talk is hindered. Importantly, Mary does not have a chance to check for understanding, despite some indication that there were issues with Mary's initial question. First, in the interaction itself, Stephen uses the prototypical disagreement form *well*, *yes but* before proceeding with his turn. Discourse marker *well* is often argued to be a marker of insufficiency that indicates a problem on the content level of the prior utterance (Jucker 1993, Pomerantz 1984, Schiffrin 1985) and thus typically facilitates "comprehension by indicating that extra inferential processing will be required to comprehend an utterance" (Holtgraves 2000, p. 90). The token agreement *yes, but* construction (see Brown and Levinson 1987) further signals that though a small concession is made, *yes*, it is overridden by a counter-argument, *but*. Second, the extended attempt on the part of Stephen to produce his turn in this well-prefaced repair case greatly hinders the progressivity of his delivery. But this hindrance is in service of increasing the likelihood that he can rectify the insufficiency of Mary's prior turn (see Raymond 2016).

When Mary proposes an alternative communication method, the focus of the conversation shifts. Stephen does not continue his attempts at reporting the central point of his visit, the one Stephen had decided to discuss with her prior to his interaction with

Mary: his trouble with reading and writing, particularly for his job which requires him to fill out work order forms that contain numbers and codes. He, instead, tries to explain to Mary that he uses a speech-to-text function on his phone, using writing only as an example of this, as reported in (6).

(6)

1 Mary: do you think you could write it ↑down (.) ⌈what you're thinking?⌉
⌊*((pulls out paper and pen))*⌋
2 Stephen: well (.) s-s-suppose icebox. and, (3.0) uhm ice. maker.
3 Mary: mhmm so you're gonna fix an ice box? an ice maker?
4 Stephen: yes but see I can't write ehm (2.0) but now, *((opens app on phone))*
5 ⌈ice. maker. ⌉
6 ⌊*((speaking into phone))*⌋ *((shows phone to Mary)) ((copies word onto paper))*
7 Mary: ⌈ok ↑yeah. ⌉
⌊*((looks at piece of paper))*⌋

Stephen explains that he has issues with spelling, *see I can't write* (line 4). He then explains that he can use an application on his phone. He can speak the word *ice maker* into his cellphone, which then produces the spelling of the word on the screen. Stephen then copies the word from the phone screen on to a piece of paper Mary has provided (line 6). This interaction continues with (2).

While Mary is able to understand and summarize Stephen's point that sometimes it's hard to remember the letters and how to spell it all, they never go back to discussing what type of reading or writing Stephen has to do at his job that causes him problems; they also never discuss issues with numbers again. Thus, Stephen did not fully communicate the specifics of his difficulties in reading and writing for job-related purposes. This was one of the points that Stephen had planned to communicate to Mary during his session with her. In addition, Mary never provides candidate understandings, thus limiting the amount of opportunities in which the interlocutors can confirm their understanding of what is being communicated.

In the debriefing session, when she was asked what particular challenges Stephen had discussed with her, Mary stated that she was clear on his trouble with reading and writing, but added: “but reading and writing what?” Though she claimed that she “pretty much always knew what he meant,” she was unable to focus in on the job-related issues Stephen faces – that is, completing computerized orders, especially when they contain numbers. This may have been a critical piece of information to obtain from Stephen, which may have helped with an initial assessment, albeit broad, of his specific needs, and certainly something that Stephen had intended to communicate.

In interaction with Kay, excerpt (4), Stephen attempts to clarify that the specific use he is referring to is with drinking from a soda can (pop), demonstrating to Kay that when he grasps an object he has trouble directing it correctly to his mouth, rather zig-zagging and missing. This point is crucial to Stephen and it is one of the points he had planned to discuss in this session beforehand.

Here, Stephen pauses for 3.0 secs, gestures, and directs his gaze to Kay (line 10). With no participation from Kay, Stephen then adds *hard to* with a slight rising intonation (line 11). Kay acknowledges what Stephen is saying with *right right* (line 12) but does not offer any candidate understanding. In fact, Stephen attempts to explain his trouble again, repeating the gesture of bringing the can up to his mouth in an unsteady fashion and hitting his cheeks. He is still directing his gaze toward Kay. Kay acknowledges his gesture with *ah oh* and laughter, but still does not provide a candidate understanding.

Instead, she shifts to a new question, *now is that your dominant hand?* (line 14), that takes the conversation in a new direction (lines 15-19) – they will move on to talk about the stroke event.

Though Kay uses acknowledgment tokens, information which Kay might have gathered from the interaction is never checked with Stephen. In fact, she never makes it explicit that she made an interpretation about Stephen's trouble drinking from a soda can or offer a candidate understanding to ask confirmation for it (see Laakso 2003). At this point, it is unclear whether Kay fully understood what Stephen was intending to communication, but we get some indication later in the conversation that that may not be the case. Stephen and Kay, in fact, discuss his hand trouble once more later in the conversation, as reported in excerpt (5).

This portion of the interaction contains two important details. First, in lines 8 and 11, Kay asks Stephen what activities he finds most difficult because of the partial hand paralysis. This question is telling, because Stephen had already attempted to explain his trouble drinking from a can previously. Either Kay is asking for other troublesome activities or issue with collaboration and checking in the earlier portion of the interaction has led to this information being lost. Second, Stephen is able to tell Kay, with complete turns, such as *the rock can't lift it* or *big box can't lift it*, that another activity is difficult for him: lifting heavy objects (lines 15 and 17).

These two points are relevant when considering Kay's comments during the post roleplay debriefing session. When asked if she had gathered enough information about Stephen's main concern, she was able to correctly identify the partial hand paralysis as the main one, and when asked about what trouble Stephen has with his hand, she stated that she could tell that there was some rigidity and tremors based on observation. However, when asked about what activities Stephen had discussed were difficult for him, for which he would like to increase his functional use of the hand, she could only mention “lifting things.” Her comments are telling because the information that she could recall was solely that which was given by Stephen independently through complete turns in (5). The exchange in (4) regarding Stephen’s inability to drink from a can – the point Stephen had planned to discuss a priori – seemed to have been lost, or at least, since it went unchecked, Kay may have been unsure of its accuracy or relevance.

5. Discussion

The aim of the study was to explore if and how providers use collaborative forms of talk in healthcare interactions; in particular, if they are used as a resource in history taking sequences between healthcare students and PWA. The analysis shows that the students made use of a variety of collaborative forms of talk, including joint productions, acknowledgement tokens, reframing of questions, gesture, and engagement with alternative communication methods. These strategies helped share the conversational burden, support Stephen as a competent communicator, allow for minimal departure from progressivity, and establish rapport.

However, some issues arose with progressivity and lack of checking for understanding. In fact, students often left Stephen’s turns incomplete and did not engage in repair or joint production sequences. These communicative behaviors may have led to some information being unchecked or lost. Interestingly, in both sessions, these issues arose around the information Stephen had intended to communicate beforehand and which he considered most crucial: his need to improve reading and writing to complete work orders and his need to gain more functionality in his right hand to drink.

It is possible that the influencing factors mentioned in the introduction could have led to these issues. For example, there may be lack of training in specific conversational strategies. Here, Kay may not have known that she had the option to engage with Stephen's signals for constructional help, such as pauses, gaze, gestures, through repair sequences or joint productions or other collaborative turn sequences. Mary may have been unable to collaborate in other occasions in which information seemed insufficient. Lack of training may also lead to being unaware of the importance of checking one's understanding of what PWA have expressed; checking allows PWA to confirm or refine what their interlocutors have gathered in interaction and the unimpeded interlocutors to make certain they have understood correctly what was reported to them by the person with aphasia.

The influence of the institutional nature and expectations of such interactions may have also played an important role, in more than one way. First, health professionals may be worried about speaking for the patient with aphasia. Indeed, both students shared that they often wait "a while" if a patient or client is having trouble and without defining the sort of contribution they make after this time has passed. This behavior may, at times, lead providers to leave turns incomplete or avoid engaging in more involved collaborative sequences (Ramsberger and Menn 2003, Simmons-Mackie *et al.* 2004). Further, the expectations of sequential turns at talk, where specialist ask questions and patients answer them might hinder the ability of providers to allow for flexibility in sequences such as history taking. Institutional interactions are also often characterized by unfamiliarity between speakers. Certain forms of collaborative talk, such as joint productions, often rely on shared information states, especially personal experience information states, which are more likely in couples or in patient and next-of-kin relationships.

It also bears mentioning that the fields of speech language pathology and nursing are quite different in their nature, objectives, and practices. The effect of unfamiliarity on collaborative behavior may be curbed by continued interaction between PWA and speech-language pathologist, just as in other more institutionally oriented interactions, such as psychotherapy interactions. As Ferrara (1992) points out, “the familiarity which grows out of repeated contacts, and the concerted purpose which accompanies a joint activity such as psychotherapy are likely to be characteristics which facilitate this type of behavior” (p. 213). The same may not be true for interactions with medical providers who may not see the same patients routinely or with enough frequency.

In addition, concerns about speaking for a patient may be of a different nature in the field of speech language pathology, given that either restorative or compensatory approaches to therapy may require encouraging the person with aphasia to attempt repairs or complete turns unaided or through alternative communication strategies. However, even in these cases, sessions in which the speech-language pathologist and PWA are getting to know each other may be opportunities for sharing more of the communicative burden, especially considering the risk of not checking or missing important information useful for charting a course of therapy. As Laakso (2014) suggests, “when [certain behaviors] are reciprocated by the therapists, it enhance[s] the flow of interaction and, at least to some extent, seem[s] to remedy the interactional trouble. One can see that affiliating responses may even lead to more fluent speech” (p. 422).

6. Conclusion

The findings suggest that providers may engage in collaborative forms of talk, even without formal communication training. However, some important factors, such as the institutional characteristics of and expectations for the interactions and lack of training may, at times, influence the way in which providers engage in collaborative talk. Limited engagement with certain types of collaborative talk at key points of the interaction may increase the possibility of misunderstandings or loss of important information.

Thus, communication training should include modules or activities which aim to achieve a number of things. Firstly, to expose trainees to the various forms of collaborative interaction that are possible in conversation and enhance their ability to promote collaboration where collaboration is requested. Training should pay special attention to increasing trainees’ ability to perceive and attend to collaboration requests in all their forms. These include pauses, gestures, gaze, but also mutual monitoring of talk. Secondly, training should help trainees understand the importance of interactional flow and information checking and practices ways to help the former and ensure the latter.

Such aims can be accomplished by explicit instruction in linguistics and conversation analysis, review and analysis of recordings of interactions with PWA, exposure to direct interaction with PWA but also to interaction between PWA and spouses or caretakers, and support and discussion groups between providers, linguists, and PWA. In addition, it is important to acknowledge that “individual communication skills training may not in itself lead to improved patient outcomes if not supported by attention to the particular needs of the practice setting […] and strategies for sustained implementation of the intervention in context” (Horton *et al.* 2016, p. 632). System level changes are often necessary to help promote and sustain individual communication training.

CHAPTER IV

STUDY 3

Communication With PWA According to the Care Team of a Skilled Nursing Home

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1. Introduction

Study 2 has highlighted some of the possible consequences of the non-use of collaborative forms of talk in patient-provider dyads and some of the possible factors for such non-use. However, it is also important to look at systems of care (see Simmons-Mackie *et al.*, 2007). Indeed, care teams are an important locus of study, since patient care is usually not in the hands of a single provider, but rather in those of a team of professionals working together, especially in long-term care (LTC). In addition, along with analysis of behaviors as they emerge in interaction, it is necessary to explore the ways in which institutional cultures can shape those behaviors. In Study 2, in fact, the discussion of some of the reason for non-use of collaborative talk touched upon the notion that institutional expectations may influence the way providers interact with the patients. Thus, through a series of interviews, Study 3 explored how the members of the care team of a skilled nursing home perceive communication with PWA in order to better understand the extent to which the perceptions of the team were systematic in the facility. It also investigated the extent to which provider goals aligned with those of PWA, as reported in previous literature.

2. Background

Some of the factors which seemed to have played a role in the non-use of collaborative talk in Study 2 have been reported in studies on communication HCP and patients with communication disorders in LTC settings as well. Indeed, some studies have shown that communication with PWA in LTC occurs much more frequently for instrumental interactions rather than social interactions (Carpiac-Claver & Levy-Storms, 2007; Stans *et al.*, 2013; Forsgren *et al.*, 2016) and that personal factors such as knowledge of patient history and present interests (which can be thought as shared information states) can influence the amount of time nurses spend in social interaction more than the severity of the disorder or the type of activity (Saldert *et al*., 2018). In addition, a lack of specialized knowledge about aphasia and alternative communication strategies (or lack of training) has also been reported as a barrier to successful communication in these contexts (Stans *et al.*, 2013). In addition, a few other factors have been found to negatively affect interactions with residents with communication disorders, including professional attributes, such as motivation to improve communication (Stans *et al.*, 2013), and environmental factors, such as lack of time and space and turnover of staff (Forsgren *et al.*, 2016).

Though only a limited number of studies have explored these interactions in the context of nursing homes (Forsgren *et al.*, 2016), the available findings from the LTC literature indicate that at least some of these barriers to successful communication with PWA are systemic in nature, influenced by institutional constraints and expectations, and present an important challenge that may not be easily addressed through individual dyadic training alone. As Simmons-Mackie and colleagues (2007) have noted, “the ultimate outcome goal is improved communicative access and participation in the larger realm of society or systems. Without support from systems and social institutions, long-term sustainable changes in communicative access are unlikely” (p. 41). Indeed, in their study, one of the only ones to focus on training an entire care team, they found that training on this level not only successfully increased the staff’s perception of their communication knowledge and skills, but also lead to teams brainstorming and later implementing certain facility-specific goals, such as new procedures and roles, and sharing communication responsibilities more across members.

However, while intervention studies like that of Simmons-Mackie and colleagues often interview or survey members about their knowledge and skills (see Sorin-Peters *et al.*, 2010), they less frequently use interviews to investigate if and how institutional cultures influence team perceptions and beliefs about communication with PWA. While training at the team level is certainly a necessity and, in some cases, has proven to be effective in engendering facility-wide changes, more in-depth investigations of the way the culture of the facility, and the influence of the institution of healthcare in general, shape how team members think about and perceive communication with PWA is crucial to creating training programs which address wider issues in and across such systems.

In addition, it is important to start analyzing the goals of providers in comparison to the goals of people affected by communication disorders. Some research has been conducted on those goals which are perceived as most important to PWA, and in a 2011 study, Worrall and colleagues summarized these goals:

> Participants with aphasia wanted to return to their pre-stroke life and to communicate not only their basic needs but also their opinions. They also wanted information about aphasia, stroke, and available services; more speech therapy; greater autonomy; and dignity and respect. They identified the importance of engagement in social, leisure, and work activities as well as regaining their physical health. Interestingly, their goals included wanting to help others (p. 309)

However, not much is available in terms of how providers categorize the goals their facilities or organizations set out for their patients with communication disorders, and it remains unclear whether LTC facilities set out goals which align with those of PWA. Thus, in the current study, the members of a care team (i.e. nurse’s aides, charge, skill, and floor nurses, directors, and social services) in a local nursing home were interviewed to help answer three main research questions:

(1) How do team members perceive communication with PWA in their facility?
(2) Are these perceptions overarching in a facility or do they vary individually according to team member position or experience (i.e. more or less contact with patient, total years of experience, more or less supervisory experience)?
(3) Do the communicative goals mentioned by the care team align with those of PWA?

3. Methods

3.1 Site and Participants

The site of this study is a local skilled nursing home, chosen for its reputable standing in the community and for its high percentage of patients with some type of communication disorder. Site permission was requested from the administrator and, after an informational interview, a plan for recruitment, consent, and interviewing was approved. The study was then approved by the Institutional Review Board (IRB) of Oklahoma State University. The administrator selected participants, with the only criteria that they be employed in a nursing team role (i.e. CNA, RN, LPN, DON, Case Manager, Charge Nurse, Social Services, etc.). A total of eight participants were selected and approved for participation. The role and details of the role, the number of years employed at the site, the previous experience, and the total years of experience of each participant is reported in Table 5. Participants are ordered from those who engage less in direct care (DON) to those that engage more with direct care (CNA). A slash (/) indicates information that was not disclosed. Seven participants were female, one was male. They had between 2.5 and 4 years of experience at the site, and a total experience ranging from 6 to 42 years. Previous experiences were varied across participants, though all of them had some previous experience that differed from their current roles at the site.

Table 5

Participant Details (Roles and Experience)

			Experience		
	Role at site	**Role Details**	**Site (Years)**	**Previous**	**Total (Years)**
- direct care	Director of Nurses (DON)	- Oversees nursing personnel and patient care - Keeps records and budget	3	Floor nurse, Medical-surgical, ER, ICU	12
↓	Assistant Director of Nurses & Licensed Practical Nurse (LPN)	- Assists DON - Provides basic medical and nursing care (e.g. checking blood pressure, discussing health care with patients, reporting status of patient to RNs or doctors) - Oversees Case Managers	4	DON, Case Manager, Admissions	24
	Skilled Case Manager (CASE)	- Coordinates the various elements that are involved in the care of an individual patient.	2.5	CNA	7
	Charge Nurse (CHARGE)	- Coordinates a ward in the healthcare facility	4	CNA	6
	Social Services (SS)	- Identifies psychosocial, mental and emotional needs of patients - Provides develops, and/or aides in the access of services to meet those needs.	3.5	Activities, HR	6
	Nurse #1 (RN1)	- Administer medication and treatment to patients, coordinate plans for patient care, perform diagnostic test and analyze results, instruct patients on how to manage illnesses after treatment, - Oversee CNAs and LPNs.	3	/	20

+ direct care

Nurse #2 (RN2)	- See above	3	CNA, CMA, Restorative/Wound Care, Floor nurse, Central supply/Medical records, MDS/PPS, DON, Home health, Hospice	42
Nurse’s Aide (CNA)	- Provides individual, hands-on healthcare to patients helping with bathing, dressing and the basic activities of life	3	/	5

3.2 Interviews

Face-to-face, semi-structured, qualitative interviews were conducted at the site. The interviews were audio recorded and lasted around 15 minutes each. The first set of questions centered around each participant’s role on the nursing team and at the site, their previous nursing experiences, and the length of their experience at the site and overall (e.g. “What is your current role here?”). The second set of questions concerned their experiences with communication with people with language impairments and, specifically, with aphasia (e.g. “Have you had any experience with a resident with aphasia?”). The third set of questions explored the use of communication strategies (e.g. “What do you do to communicate with them?”).

3.3 Data Analysis

The audio recorded interactions were reviewed a number of times to gain familiarity with the content and were then transcribed in full. A qualitative description approach was used to collect and summarize narratives from participants’ perspectives and experiences. Emergent categories within and across each transcript were added to the a priori category of communication strategies (which was elicited through direct questions) through coding of the transcribed interviews. Categories were then analyzed for major themes or recurring opinions and attitudes that were discussed by a majority of participants. In addition, the analysis also explored whether any trends in the structure of the team (i.e. more or less contact with patient, total years of experience, more or less supervisory experience) correlated to the opinions and perspectives elicited from the participants.

Four categories were coded: (1) Goals of communication, (2) Communication Strategies & Training, (3) Barriers and Facilitators, and (4) Role of the Speech-Language Pathologist. Each category contained a number of themes as shown in Table 6.

Table 6

Categories and Themes from the Interviews

	Category	**Themes**
1	Goals of Communication	• Patient needs and routine • Adaptation • Distribution of communicative burden
2	Facilitators and Barriers	• Familiarity • Lack of time and frustration
3	Communication Strategies & Training	• Boards, writing, speed, patience • Amount and focus of training
4	Role of the Speech-language Pathologist	• Interprofessional collaboration

Any statement that referred to reasons team members communicated with patients, the objectives set out for that interaction, and/or the objectives of communicating with a patient in general, were marked as belonging to the category of (1) Goals Of Communication. Statements such as *they have figured out "Oh, yeah, that means that or this is" … what their routine is* would fall under this goals category. The statement refers to the fact that nurses, in communicating with PWA, may learn what each utterance, sound, or gesture might mean and this information helps them with understanding the routine of the patient. Thus, the goal of such interaction is to learn what the patient currently needs in their routine and the routine in general. Statements about how patients adapt their speech or are taught to adapt their speech are also included in this category, since this would be considered a communicative goal. The third theme in this category is the distribution of the communicative burden, which emerged from statements such as *you could still teach them an effective way to communicate*; the statement is referring to who should be learning to communicate more effectively (the patient, here) and thus is signaling the perception of how the communicative burden is to be shared.

Statements that referred to any type of barrier or facilitator to communication with PWA were marked under the category of (2) Facilitator and Barriers. If a team member, for example, stated that something that helps them or colleagues communicate better with PWA is *learning that person individually*, this statement was marked as belonging to the facilitator category, under the theme of familiarity. Statements that were marked for the category of barriers would signal some type of obstacle for effective communication, such as *it is hard sometimes because we don't always have the time to slow down*. Here, lack of time was the theme.

The category of (3) Communication Strategies & Training included any statement regarding which communicative strategies the team members used or were familiar with and any training they or their colleagues had completed or were completing. For example, a statement such as *we use like picture things we have. I don't know exactly the correct word for it* would fall under the category of communication strategies, under the theme of boards, writing, speed, and patience.

Lastly, any statement regarding interactions between team members and speech-language pathologists, the role of SLPs in the nursing home, or their collaborative efforts, were marked as belonging to the (4) Role of the Speech-language Pathologist category. An example of such a statement is, for instance, *and, you know, for a long time I thought speech therapy was just, you know, one thing, but they actually do a lot, a lot of different things*.

4. Results & Discussion

4.1 Goals of Communication

Half of the team members directly or indirectly revealed that a major goal in their communication with PWA is the necessity to address basic needs and learn routines. This knowledge helps them understand, even anticipate, *what people need* (CNA), as well as anticipate any issues.

(1)

RN2: Like, if you… **within two or three days** you should, you know… **we basically figure out their toileting patterns, what they will or**

won't eat, how they eat, you know, very small bites, drink in between each bite, those kinds of things.
[…]
Some are easier to figure out than others. **Some are very routine-oriented**. Even when they have no self-awareness or anything.

(2)
LPN: They ((nurses))[11] **learn their routine**. They learn… it's almost like they **know what their routine is** and they can… they have figured out "Oh, yeah, that means that or this is" … **what their routine is.**

(3)
CNA: And sometimes when you've been taking care of… especially the nurse's aides, you know, **they can almost know what somebody needs before they need it,** you know, **out of just repetition, doing that routine, the same things**, they know what they need.
[…]
You know, you can use that ((communication board)) for a lot of people, people with aphasia language problems. But for the most part, you know, everyone has… you just have your… **you get your routine** and you kind of figure out what people need… their **basic needs**.

This stance seems to closely follow a medical model, in which the interaction between providers and patients is heavily task-based and the medical needs of the patient are central and primary as compared to more psychosocial or affective interactions. Indeed, other studies have shown that nurses often tend to engage in task-focused talk, allowing limited opportunities for communication outside care routines, such as that centered on informing, comforting, and building social relationships with patients (Gordon *et al.,* 2009; Ball *et al.,* 2014; Saldert *et al.,* 2018).

Only one of the eight team members, SS, also mentioned communication for non-task-based matters, as reported in (4). This team member is the person who accompanies

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[11] Here and in the rest of the work, referents are provided in ((double parentheses)).

residents to doctor's visits and interacts with them in group and one-on-one settings to assess their well-being.

(4)

SS: **Everybody needs to talk to somebody about something**. And so sometimes the conversations may not be as long because they don't know how to continue a conversation. So… but I mean, everybody is… **even people that they might only say five words, but if they want to talk, you know, I'll talk to them.**

Another goal of communication that emerged from the interviews was that of helping the resident with aphasia "adapt," with an implicit parameter of this adaptation being a return to a perceived normative speech. For example, the DON mentioned that when patients have external motivation, such as the presence of family members, they will fare better in the recovery of their communicative abilities than those who are more isolated. However, this explanation of patient motivation seemed to hinge on the notion that the objective of the recovery of communicative skills for PWA is that of returning to "normal" speech. This concept is more evident when she notes that those who only interact with staff members, and have only limited opportunities to communicate with people outside of the nursing home, have less of a need for this adaptation. In other words, because the staff presumably facilitates the communication of PWA, the residents end up not having to "adapt" (*they don't have to adapt)* to more "normal" communication. In this sense, she is also implying that the communicative adaptation of others to the person's impairment is seen as somewhat detrimental to the perceived goal of returning to "normal" speech.

(5)

DON: You know, I think that has a lot to do with motivation like grandkids wandering around in the room. They want to communicate with them. Where somebody who doesn't and where when they're around for a long time, then they're not as motivated to speak. **Because we figure out ways to speak with them, they don't have to adapt.**

When asked whether she saw any variation in the way PWA communicated, the LPN noted that she did, at least until they received speech therapy and "adapted." Here too, this adaptation seems to be related to a return to premorbid speech. Indeed, she implicitly states that the variation in the communicative skills of the patients is reduced once the residents receive speech therapy. In other words, a perceived goal, or at least outcome, of speech therapy is that of standardization towards a premorbid way of speaking.

(6)

R:	And do you think there's difference in how they communicate?
LPN:	**Oh, yes. I mean, obviously until they can adapt to it.** You know, typically if they come in with speech, if they're able to get therapy and they come in as a skilled resident, which means that, you know, they, obviously… if it was recent they had their stroke, they come in from the hospital, they come here, **they receive therapy** through speech and speech works on a lot of techniques.

One of the team members also mentioned the goal of *teach*ing PWA *an effective way to communicate*. Though it is unclear what was meant by *effective*, it seemed implicit that it is the responsibility of the patient to do so, rather than of the patient and the staff together, as indicated by the use of the wording <u>*you*</u> ((the staff)) *can* […] *teach* <u>*them*</u>.

(7)

R:	Do you think it's important for nurses to communicate well?
SS:	Yes, they need to because sometimes you can draw something out of somebody where they don't know how to, **you can almost still teach them…** you know what I mean? It don't matter that they're 60 or 70 years old or 75 years old, and you know, **you could still teach them an effective way to communicate.**

Overall, communication for this care team seems to have the primary goal of acquiring information on the routine and basic needs of the residents (i.e. toileting, feeding, etc.), which in turn is perceived as familiarization, though its objective is once again to improve communication (even to forgo it, if possible) about this routine. Though, it is undoubtedly important for care teams to perform the tasks of care that are at the center of a residents' lives in a nursing home, "fundamental human needs involve social and psychological as well as physical aspects" (Thompson & Mckeever, 2014, p. 410). Many have discussed the need of nurses to move beyond their traditional role of providing basic care and become active participants in a variety of aspects of rehabilitation (Burton, 2000; Perry *et al.,* 2004; Vähäkangas *et al.,* 2008) and to ensure that patients engage in meaningful social interactions (Lagacé *et al.,* 2012; Saldert *et al.,* 2018). As Kane (2001) argues, "embedded in most of our rules and regulations is the idea that LTC should aspire to the best possible quality of life *as is consistent with health and safety*. But ordinary people may prefer the best health and safety outcomes possible *that are consistent with a meaningful quality of life*" (p. 296).

The other, more implicit goal is the normalization of the patients' communicative skills towards a perceived standard, most likely that of premorbid usage, whether through adaptation or teaching. This goal also seems to align with a more medical model, which, in the context of communication with people with language disorders, focuses on impairment level goals. While debate between impairment-based and functional approaches is ongoing, some have agreed that both may be necessary (Martin *et al.,* 2008) and the World Health Organization (WHO) developed an International Classification of Functioning, Disability and Health (ICF) which includes person-centered functional goals, or those goals “identified by the client, in partnership with the clinician and family, that allow participation in meaningful activities and roles” (WHO, 2001). Certainly, many PWA have often highlighted their interest in functional goals (Worrall *et al.,* 2011). As Worrall and colleagues (2011) note, “services that fail to target these (either directly or indirectly) are failing to address the major life priorities of clients” (p. 319).

Underlying this latter goal is also the notion that it is the patient who must carry the burden of such a recovery, as it is the residents who have to adapt. An extension of participation-level, or functional goals, however, is that the active participation of communication partners of PWA is essential. The numerous recent efforts of training communicative partners of PWA (Kagan, 1998; Lock *et al.*, 2001; Turner & Whitworth, 2006; Simmons-Mackie *et al.*, 2010; Wilkinson & Wielaert, 2012; Beeke *et al.*, 2013; Simmons-Mackie *et al.,* 2016) indicate that it has become more apparent that conversation is a collaborative activity, in which all co-participants play a role.

These notions – communication for basic needs and adaptation – seemed to be homogenous in the care team, regardless of role or experience. Only SS appeared to me more sensitive to the need for social interaction, though she too partly indicated that the burden of learning an *effective way to communicate* falls on the patient.

4.2 Facilitators and Barriers

In discussing the experiences of the team members with communication with PWA, many mentioned a variety of facilitators and barriers, considered here to be all those items which affect communication but are non-linguistic. According to the majority of team members, familiarity with the patient seemed to be the main facilitator. For example, the LPN discussed the fact that direct care staff have more exposure to residents and thus *know what they* ((the residents)) *want more than we will*, adding that this is because they *know that person individually.*

(8)

LPN: I, well, personally, I find that a lot of our direct care staff, they learn them ((residents)) better because **they're working with them more every day**. So they're kind of our eyes and ears. And a lot of times they're able to communicate and know what they want more than we will. Time and just **learning that person individually**.

Similarly, SS noted that when nurses have trouble communicating with the patient, they may require her as *a second set of ears* since she is usually *more familiar with that person.* She also mentions that being around PWA frequently allows her to *kind of decipher what they're saying*.

(9)

SS: A lot of times, an employee nurse, somebody might come get me, “See if you can understand what she’s needing,” you know. And so somebody needs a second set of ears to hear it, because **some people are more familiar with that person.**
[…]
The people that I'm dealing with that mostly have had strokes and they've got limited speech, **I've been around them**. And after I can kind of decipher what they're saying.

Similarly, the Case Manager reports that over time, she learns about the way a patient may communicate (e.g. if they *keep hitting their leg*).

(10)

CASE: **Over time you start to learn** kind of what they mean whenever they, you know, keep hitting the leg or, you know, something like that.

In discussing whether it was important to become more familiar with PWA to help with communication, the CNA reported that, when the length of stay requires it, it is *good* for residents *to adapt* to the ways of the nursing home, recalling the goal of "adaptation" that emerged in interviews with other members (see Section 4.1). This concept becomes more clearly linked to communication when he adds that lengthy relationships and adaptation on the part of the patient lead staff members to know residents' needs *without talking*.

(11)

R:	Do you think that's important to have sort of a long relationship with someone like that ((someone with aphasia))?
CNA:	I think in the long-term care setting it is important because, you know, we're here with these people every day. And sometimes it could be for years. So **it's good for them to adapt to our way here.** I think you get on a level with people. And sometimes when you've been taking care of… especially the nurse's aides I know, they can almost **know what somebody needs without talking.**

Considering that when the team members described successful interactions (see Section 4.3) as those in which the staff figures out a resident's *basic needs* (CNA), such as *their toileting patterns, what they will or won't eat, how they eat, you know, very small bites, drink in between each bite* (RN2), and in general *what their routine is* (LPN), it appears as if familiarization is being framed by the team members as a tool to anticipate resident needs and circumvent the difficulties in communication altogether (*they can almost know what somebody needs without talking)*. These statements on familiarity then refine our insight into what the goal of adaptation entails: it is not the refinement of a system of interaction that allows all parties to communicate more effectively about all aspects of PWA's lives, but rather it is a keen awareness of primary care routines – and this awareness can often lead to foregoing communication entirely. While this process is undeniably necessary for attending to the residents' health and safety needs, familiarization may not be taking a form that could promote participation in "meaningful activities and roles" (WHO, 2001).

A different kind of familiarity emerged in discussion with the two registered nurses: that of non-staff members. In fact, the two nurses mentioned other people as a resource, including family members and other residents. Nurse #2, for example, stated that when the family members have experience communicating with a resident, they may inform the staff. Nurse #1 reports that other residents may also help, as they often get to know each other more intimately.

(12)

RN2: It's harder, you know, unless **the family has already experienced it** and knows and we've been informed.

(13)

RN1: **Other residents sometimes can help us** because they interact with each other and they know. They can tell you, "Oh, they're wanting this or they're wanting that."

The fact that family members and other residents can help the team better communicate with residents with aphasia supports the notion that familiarity is essential, though perhaps the familiarization with patients by family and friends is quite different in nature to that by the staff. However, if such familiarization is folded into the "basic needs" goal, the problem of scarce participation in social interactions may still be present.

The DON was the only team member to mention the personality of the patient as either a barrier or a resource, claiming that outgoing personalities are *a lot easier to talk to,* while introverts take *a little bit longer to communicate back.* Though some have found that the characteristics of a patient, such as motivation and initiative, can have a large influence on their communication (Dalemans *et al.,* 2010; Stans *et al.,* 2013), the remark in (14) is still somewhat ambiguous: it is unclear whether it is the personality of the patient with aphasia that is affecting their ability to communicate or whether a patient with aphasia who communicates more easily and quickly is perceived as more outgoing.

(14)

DON: I mean, **an outgoing personality is going to be a lot easier to talk to** and get your thoughts across to you than, like, an introverted person. And so, in my experience, **somebody who is more outgoing, relays their speech a lot quicker than somebody that's introverted, it seems like it takes them a little bit longer to communicate back.**

Overall, familiarity was considered an important facilitator by the majority of team members. On the opposite end of the spectrum, one of the major barriers which emerged from the interviews was lack of time on the part of the staff members to interact with residents with aphasia, as exemplified by the following quotes from the Nurse #1 and the DON.

(15)

RN1: It is hard sometimes because **we don't always have the time** to slow down and, you know, spend 20 minutes in there trying to figure out what they're talking about.

(16)

DON: For nurses to **be able to sit there that long** for them to be able to say that and then do that. You know, **it takes up a lot of time**.

As Seneviratne and colleagues (2009) note, “space limitations and time constraints are the backdrop of clinical care throughout North America.” However, in aphasiological research, it is generally studies which focus on acute stroke units and rehabilitation centers that discuss a lack of time on the part of nurses to interact with patients (Seneviratne *et al.*, 2009; Westbrook *et al.,* 2011; Hersh *et al.,* 2016), often due to relatively fast turnover of patients and changing shifts (Hersh *et al.,* 2016), with some reporting that nurses spend only around 37% of their time with patients (Westbrook *et al.*, 2011). In fact, others report that, in LTC, nurses generally spend considerable amounts of time interacting with patients (Barreca & Wilkins, 2008). A few of the team members in this study in both higher and lower supervisory levels, however, clearly felt that they did not have enough time. It may be possible that the process of "basic-needs" familiarization is not sufficient to really know a resident beyond their routines, so that interactions which are outside of it may become more laborious (see Trede & Higgs, 2003).

Staff members also mentioned frustration on the part of the patient in trying to communicate or in not being understood as another important barrier.

(17)

CASE: But it's challenging ((to talk to someone with aphasia)).

R: Any particular challenge that you remember having talking to someone with aphasia?

CASE: Yeah. Sometimes **it's that frustration that they have** that they can't express what they need, you know. For years and years and years they've could've talked just fine and not have any problems. But now, all of a sudden, they can't comment.

(18)

RN1: Sometimes they might be angry because they had a stroke and, you know, whatever, like, **sometimes they get frustrated** because whoever they're trying to communicate with is **just frustrating them** by not understanding what they're trying to say.

(19)

RN2: **You try not to get them frustrated**, because it makes the process incredibly difficult.

This barrier appears to contrast in an important way with that of lack of time. In fact, this frustration is consistently described as a reaction of the patient. The implication is that only patients experience frustration (*you try not to get <u>them</u> frustrated; it's that* *frustration that* *<u>they</u>* *have; sometimes* *<u>they</u>* *get frustrated*). But for one team member, who discussed her own frustration (*it has been frustrating at times in the past*; RN2, Section 4.3), the other members did not mention their own potential frustration. In addition, except for the statement of Nurse #1 about the fact that the frustration is due to whoever *they're trying to communicate with* […] *not understanding what they're trying to say*, no mention was made by other members relating this frustration to a lack of an appropriate communicative system for the patient or to the communicative skills of the staff. The frustration seems to be generally be perceived as an emotion of the patients, resulting from their inability to express themselves and make themselves understood to the staff (*<u>they</u>* *can't express what they need*; *<u>they</u>* *can't comment*).

However, frustration, which is often reported in the literature on the aphasic experience (Garcia *et al.*, 2002; Liechty & Buchholz, 2006; Bullain *at al.*, 2007; Johansson *et al.*, 2012) and is considered an important indicator of the psychosocial well-being of the person with aphasia which requires "special care and attention" (Bullain *et al.*, 2007, p. 262), is also often tied to lack of time. As Hemsley and colleagues (2001) found in their study:

> Many of the difficulties could be viewed as a breakdown in understanding arising from the lack of a readily interpretable communication system that could be used efficiently by both nurse and patient. This in turn increased the amount of time and effort […] [and] lead to considerable frustration for the majority of nurses. (p. 833)

The danger of not recognizing one's own frustration as an HCP may be that lack of time may not be thought of as a primary source of the frustration, shifting more of the burden of communication success on patients and their ability to control their emotions.

Overall, team members were homogeneous in pointing out familiarity with the patient as a main facilitator and the frustration of the patient as a main barrier. There appeared to be no significant differences in opinion relating to member role or experience, except for that fact that only the two RNs mentioned non-staff members (i.e. family and other residents) as potential resources for communication.

4.3 Communicative Strategies and Training

In discussing the communicative strategies that each member of the nursing team uses to communicate with residents with aphasia, all eight members primarily mentioned the communication book, though many of them were unsure about its name.

(20)
CNA: We also have a… **I can't recall what it's called now. It's where they can point at different pictures**. If they're able to use those, that's great. You know, you can use that for a lot of people with aphasia language problems.

(21)
CASE: We use **like picture things** we have. **I don't know exactly the correct word for it. But we have like this little packet put together.** And it's actually down in my office and it has like different pictures and stuff on it. So if someone can't communicate what they're feeling or what they're needing, **they can like point to a picture or something like that**.

(22)
CHARGE: Like specifically stroke patients do have like **little charts** that we will have, like **little pictures that you can point out** to help them get their points across.

(23)
DON: Of course, **we've got the pain thing that's got the faces and the smiling and the crying**.

(24)
RN1: We actually have **a book** where we can take them **with pictures**.

However, many described a few of the limitations of communication boards and books. For example, RN2 mentioned that sometimes the content is limited and the patient is indicating something else. She also notes that some residents with aphasia may say *yes to everything,* which complicates the use of this type of communication aide.

(25)

RN2: Well, communication boards obviously. So we have that but it has been frustrating at times in the past where **they just say one thing that isn't there** and you have to go through the room, "Is it this? Is it this? Is it this?" **or they say yes to everything.**

RN1 also indicated that some residents may have problems with pointing and the DON noted that communication books and boards might work best for younger patients with good eyesight.

(26)

RN1: Sometimes the pictures help **if they can point**… then by, you know, by all means.

(27)

DON: Like, **if they're younger and have good eyesight** and things we'll do like the communication boards.

Three team members mentioned yes/no questions, or scaffolded questioning, as a useful communicative strategy, though RN2 did previously mention that some residents with aphasia have trouble with the yes/no distinction. It is also unclear what she means by *simple question* or what the progression from one *phase* to the next looks like (30).

(28)

RN1: **Sometimes it's just asking them questions, and yes and no**, and sometimes you're random enough that certain things that they will say, you can figure out what they're saying.

(29)

LPN: **Down to yes/no questions**, you know. In my experience and opinion, if you can… **get it down to a yes or no** where they can either indicate by nodding yes or no or by saying.

(30)

RN2: **Ask simple questions, get the answer to that, then go on to the next phase of the question** until you get to the bottom of it.

Three team members also indicated that they use writing as a way to help communication. However, they also mention that the patients need to have dexterity in their hands and not be confused in order for writing to work as an aide to communication.

(31)

DON: We **let them write stuff out**.

(32)

SS: **I'll ask them to write the word**, you know, **if they have the dexterity in the hands.**

(33)

LPN: If they're completely… **if they're not confused** like any type of **whiteboard to write or paper**, we've used all those.

The DON, the LPN, and the Case Manager also mentioned slowing down and being patient as important communicative strategies.

(34)

DON: They ((nurses)) definitely need to be **very slow in their communication** and be **very patient**. The more patient you are with them, the less flustered they get and actually, the quicker they'll get the words out.

(35)

CASE: And whoever's dealing with it, being able to **have the patience to slow down** and try to learn what they're talking about.

One member (SS) mentioned five strategies: asking the resident to repeat, use gesture, or point at objects in the environment, as well as *other communications* such as the body language or noises of a patient.

(36)

SS: So when they are saying something, if I don't understand what they're saying, **I ask them to repeat it**, or **almost act it out**, so to speak, you know, or "**can you point to it is in this room?"**
[…]
There's a lot of **other communications** or, what am I trying to say, like, you know, **body language or noises** that they're making. For people who can't communicate, their body language and **their faces**. If they're making **grimaces** or if they're not, or they're moaning or not, you know, if they're **relaxed or** if they're **tense**, we can kind of understand… maybe if they're **fidgeting**, they need to be changed, or they're not comfortable or, you know, we just use stuff like that.

The LPN also indicated that one should face the resident and position themselves at eye level. She was the only one to mention an environmental strategy that relates to the positioning of the interlocutors and one that uses the body language of the unimpaired speaker.

(37)

LPN: **You want to be at eye level, facing them**. **Slow down with your wording**. I wouldn't speak too fast about everything. And if there's more than one deficit, like if they're having difficulty writing because the stroke has affected more areas than just their speech, things like that, yeah, then you have a lot of, sort of… **being patient and slowing down and speaking slow and articulate.**

Overall, the primary strategies mentioned were communication boards, writing, yes/no questions, and speaking slowing, aligning with findings from other studies (Hemsley *et al.*, 2001; McCabe, 2004; Hersh *et al.,* 2016; Cameron *et al.,* 2017; Azios *et al.*, 2018). Many, however, also pointed to limitations in the use of some of these strategies, such as difficulties with pointing, eyesight, difficulties in production, and difficulties in answering yes or no. Only on member discussed repetition, gestures, or patient body language as strategies, and only one member mentioned positioning of the interlocutor. No pattern was found in terms of amount of experience or contact with patients, even with the members that mentioned the most strategies, such as the LPN and the SS, who mentioned five strategies each. Indeed, though the SS is often in contact with the patients on a daily basis, the LPN has, and has had in the past, a more supervisory role and spends less time with each resident. In addition, though the LPN has a total experience of 24 years, the SS has a total experience of 6 years.

Training was brought up by two members, the Charge Nurse and the CNA. The Charge Nurse reports that she was trained to use communication boards, but that during clinical rotations she did not make use of them frequently. She adds that the training entailed a demonstration or simulation, though her use of words like *little* and the use of the singular form would indicate that this training was not particularly extensive. When asked whether she had received training with any other alternative communicative tool, she replied that she had not.

(38)

CHARGE: We get trained to use them ((communication boards)). They just kind of introduce us to the charts. During clinicals, we didn't have to use it so much. But they would go through like a scenario that… **we'll do a demonstration**. Just kind of like **a little simulation** that we'll go through.

R: And what about any other sort of alternative communication, did you get any professional development or training on that?

CHARGE: No, no… I did not.

The Charge Nurse also mentioned an online course on effective communicating, stating that the course taught them to listen and communicate actively, to paraphrase patient's statements, and to ensure understanding on the part of both the staff member and the patient. However, when asked about whether these strategies would extend to interactions with patients with aphasia, she was unsure.

(39)

CHARGE: We do, like, monthly training online that touches on effective communicating.
R: What is effective communicating?
CHARGE: It's active listening and communicating, you know, making sure that, you know… just paraphrasing what you heard them ((patients)) saying, you know, just to make sure that you are fully understanding their ideas and that they're understood.
R: Does affective communicating extend to patients with aphasia?
CHARGE: **Well, maybe**.

The CNA talked about a monthly class where students learned to put themselves *in their* ((the patients')) *position* and *think of what they're going through… what their needs may be, especially if they can't speak.* The course, however, did not seem to contain any sections about communication and was conducted once monthly. Here, too, communication with PWA may not have been a focus of training.

(40)

CNA: I went to… they sent us to a class where we learn to put ourselves in their position, the stroke people, you know, to think of how… think of what they're going through, think of what they might… what their needs may be, especially if they can't speak. So that helped a lot in that situation. It could have been just like a learning thing with our online... but I feel like there was a person there. We would have a monthly meeting and someone would come and talk to us.

Overall, only two people mentioned any training. In addition, the training would seem to have been infrequent or limited and either not directly related to communication or not directly related to persons with language impairments. Others have indicated that nurses are undertrained in communication with patients with communication impairments (Finke *et al.*, 2008), and especially in the use of augmentative and alternative communication methods (Balandin & Iacono, 1998; Beukelman & Mirenda, 1998; Hemsley *et al.* 2001; Welsh & Szabo, 2011).

4.4 The Role of the Speech-Language Pathologist

Two team members, the Case Manager and the LPN, touched upon the role of speech-pathologists at the site. The Case Manager seemed to have been unfamiliar with the role of SLPs or even the nature of the job itself in the past, which may be due to her being one of the team members with the fewest total years of experience (6 years). However, it seems evident from her later statement that, though she has since had exposure to the therapy, she is still unfamiliar with its details (*and I've seen a lot of speech therapists do, like <u>weird exercises</u>*). Nonetheless, she seemed adamant about underscoring the capabilities of SLPs (*they <u>actually</u> do a <u>really, really</u> good job ... they <u>actually</u> do <u>a lot, a lot</u> of different things),* though it remained unclear if she had any knowledge of the specific benefits of such therapy.

(41)

CASE: Speech therapy is a part of therapy as well. And they ((speech-language pathologists)) actually do a really, really good job working with them ((residents)). And, you know, **for a long time I thought speech therapy was just, you know, one thing**, but they actually do a lot, a lot of different things. **And I've seen a lot of speech therapists do, like, weird exercises** that I wouldn't think of.

The LPN discussed the fact that SLPs might write up notes for the nurses, at least for specific patients. Their ability to do so, according to the SLP, is due to their familiarity with the patient.

(42)

LPN: If there's a particular patient or resident that… **they** ((speech-language pathologists)) might, like, **make a little, a little note** or something that would indicate if, you know… **to help us**. So, because they're able to spend more time with them sometimes and they can maybe discern exactly what's going on better than me.

Though the experiences of the Case Manager and the LPN are quite different, these statements seem to reveal an awareness of speech therapy. It is possible that since the Case Manager coordinates the various elements that are involved in the care of an individual patient, and that the LPN may oversee the Case Managers, both are more aware of speech therapy. However, these statements also reveal a common unfamiliarity with the extent of the contributions of SLPs to the care of patients with communication disorders. The Case Manager, with 6 years of total experience, and 2 years of experience as a CNA, has had more direct care roles. The LPN, with 24 years of total experience, has had mostly supervisory roles, though she has been a Case Manager herself. However, neither combination of experiences seems to have offered many opportunities to interact more deeply with SLPs and increase their familiarity with the outcomes of the therapy. Indeed, neither member makes any reference to the direct benefits of therapy on the patients themselves. In addition, the LPN seems to indicate that the ability of an SLP to make notes for nurses about the communicative needs of a patient are based solely on familiarity, rather than a combination of training, experience, and familiarity. However, they were the only two members to mention speech therapy.

Though the WHO has called for a push towards interprofessional collaboration, as outlined in their Framework for Action on Interprofessional Education & Collaborative Practice report, and found that in many countries "interprofessional education [is] compulsory" (p. 16), "it is missing or poorly represented in [fields] such as nursing and speech-language pathology" (Harvey *et al.*, 2017, p. 2). In addition, research on the effectiveness of interprofessional collaboration programs is still limited to students (Ghassemi & Fabus, 2017; Harvey *et al.*, 2017), and little is known about interprofessional collaboration in the workplace.

5. Conclusion

5.1 How do the team members perceive communication with PWA?

The results of this study echo earlier findings on the way communication with PWA is perceived in LTC. The themes that emerged during the interviews with the care team recall a medical model approach in which basic care and impairment-level goals are of primary importance, often to the detriment or exclusion of functional ones (see Carpiac-Claver & Levy-Storms, 2007; Stans *et al.*, 2013; Forsgren *et al.*, 2016). The medical model seemed to also extend into the barriers mentioned by the team members, with issues in the allocation of time (as found in Forsgren *et al.*, 2016) and an absent link with patient frustration. As found elsewhere (see Stans *et al.*, 2013), the use of limited or inappropriate communicative strategies, caused partly by a lack of training on approaches to communication with PWA and partly because of limited interprofessional collaboration with SLPs, may exacerbate the difficulties in communication. Lastly, the role of the speech-language pathologist was mentioned only by the Case Manager and the

LPN. It is possible that since the Case Manager coordinates the various elements that are involved in the care of an individual patient, and that the LPN may oversee Case Managers, both are more aware of speech therapy.

Of note was the underlying assumption that patients are to adapt and carry much of the communicative burden, though the co-constructional patterns found in the interactions of the PWA elsewhere (see Study 1 and Study 2) indicate that a reapportioning of communicative burden is necessary for successful interactions and that this reapportioning can present in different ways according to a variety of factors. Indeed, as Parr and Byng (1998) stated more than 20 years ago, it is more about "how the *system* copes, rather than how the aphasic individual adapts in isolation" (p. 848). Issues in allocation of time, assumptions about the frustration of the patient, the limited tailoring of communicative strategies, and a fragmented interprofessional collaboration with SLPs may all be potentially shifting even more of the burden on PWA.

5.2 Are these perceptions overarching in a facility?

The medical modal approach, with a sharp focus on impairment-level goals, was unanimous across team members. Only SS indicated that she engages in communication for social reasons. Her role may influence the way she must interact with patients, as she is responsible for identifying the psychosocial, mental, and emotional needs of the residents, as well as helping to provide access to services. Another common theme across experience and position was the notion of having the communicative burden fall onto the patient, which all team members mentioned either directly or indirectly, and which seems related to this overarching medical model approach. Barriers and facilitators to communication with PWA were also quite homogenous across the team, with many mentioning familiarity and familiarization as a main facilitator and the frustration of the patient as a main barrier.

On the other hand, use and knowledge of communicative strategies, training experiences, and interprofessional collaboration were much less unanimous. Only the SS and the LPN were able to mentioned more than two or three strategies, and included body language and positioning strategies, though no particular connection with role or experience was found for the LPN. Further, only the Charge Nurse and the CNA mentioned training, though it may be possible that, being the youngest and less experienced nursing professionals, they may be the only ones still systematically participating in training. Lastly, the role of the speech-language pathologist was mentioned only by the Case Manager and the LPN. It is possible that since the Case Manager coordinates the various elements that are involved in the care of an individual patient, and that the LPN may oversee Case Managers, both are more aware of speech therapy. Position and experience seemed to more strongly influence the types of communicative strategies that were used, the way team members perceived ongoing training as a professional resource, and the amount of interprofessional collaboration each team member engages in.

Overall, then, it appears that institutional culture shapes the general goals of practice and thus may mold the way providers perceive facilitators and barriers of those goals. However, since training and collaboration are not systematized and can vary according to schooling, position, role, and facility, perceptions regarding their uses and functions are much less homogenous within care teams. It would be important to further investigate whether variation in these perceptions strengthen the influence of systemic ideas about communication with PWA in healthcare. Research of this sort would help to tailor bottom-up or top-down approaches aimed at achieving society or systems changes.

5.3 Do the goals of the care team align with those of PWA?

The findings in this study suggest that the goals of communication expressed by the care team members do not seem to be entirely aligned with those of the PWA as reported in previous literature (see Worrall *et al.,* 2011). In fact, previous studies have reported that functional goals are extremely important to PWA, chief among them the ability to express opinions, to engage in social, leisure, and work activities, to build trusting relationships with HCP, and to have access to communication resources which fit their needs. The communicative goals expressed by this team, however, seem to center on the ability of the staff to carry out their work, which seems often constrained to taking care of the physical needs and routines of the patients. In addition, the notion that patients are to adapt to the communication that is available to them or is taken as what is routinely done is the particular facility does not align with the goal of PWA to access to communication resources which fit their needs, and the paucity of interest in or understanding of interprofessional collaboration with speech-language pathology signaled in the interviews by the care team seems to hinder even more the possibility for these goals to align.

CHAPTER V

CONCLUSION

1. Brief Overview of Findings

The three studies in this work furthered our understanding of collaborative talk in aphasia. In particular, they showed how applying methodologies from a variety of linguistic approaches to discourse and interaction can help us reanalyze certain communicative behaviors, better understand their functions in interaction, and explore how certain behaviors or lack of behaviors influence the way information is exchanged. The works here also collate findings on the experiences of people with aphasia with healthcare and allied healthcare providers as well as the perceptions of communication with people with aphasia from the point of view of care teams.

The following sections provide a discussion of the implications of these studies, both methodological and clinical. They also provide suggestions on how these findings and implications can inform future communication training efforts as well as the ways in which these results and the linguistic methodologies which helped uncover them can be used to rethink concepts and practices

2. Methodological Implications

The works collated here provide evidence of the benefits of viewing communication with PWA as a joint interactional process. They specifically point to the need to reconceptualize familiarization and speaking for behaviors in healthcare and allied healthcare fields with the objective of enhancing PWA's communicative access.

Study 1 was an investigation into collaboration in triadic interactions in which the person with aphasia had a post onset time of 10 or more years. The analysis of the application of an example of deficit-oriented approach showed how such approaches can oversimplify, even conceal, some of the deeper, more complex work that certain communicative behaviors are doing in interaction. For example, Claire's husband's "corrections" and "revisions" were actually doing some important face-saving work, co-constructional work, and interactional work in the interview setting.

By using elements of analysis from CA, IS, and pragmatics, the focus shifted from understanding how a partner supports a loved one with aphasia from a production point of view, to how they may collaborate with them to achieve certain social actions. For example, looking at the way in which discourse markers organize talk or the ways in which questions are posed to elicit narration from a linguistics perspective has allowed us here to understand how the co-participants are orienting to each other's talk. In this way, we were able to look for clues to deeper social and pragmatic work: for example, helping a person with aphasia to be fully cooperative in the conversational context (i.e. not violating maxims), or helping do face saving work when face is threatened by limited linguistic resources.

By applying these methodologies, we were even able to follow how the people with aphasia themselves leverage interactional resources such as the co-constructional nature of conversation or the sequential aspect of talk-in-interaction to their advantage. Methodologies which focus on how co-participants in interaction support production, and are thus *a priori* oriented to understanding how the unimpaired speakers helps the impaired speaker talk, often overlook the deeper work that is being done by certain communicative behaviors.

Study 2 was an analysis of interactions between students and Stephen. The results showed that students often left turns incomplete, did not provide candidate understandings, did not engage in collaborative sequences, and infrequently checked understanding. These behaviors lead to issues with information exchange and created problems with how much the students were able to understand of Stephen's primary concerns and lead to certain misunderstandings.

This study was heavily reliant on the level of micro-analysis that CA offers. On the surface level, these interactions might have appeared entirely successful. There were no major breakdowns in communication, the co-participants built rapport, and the students even often supported Stephen's communication by offering alternative methods of communication, participating in a few joint productions, using acknowledgement tokens, laughter, and gesture. But CA offers a magnifying glass through which one can notice and analyze even the smallest elements of the conversation: micropauses, gaze, progressivity links. By using CA, in fact, the analysis showed deeper issues with information exchange and the possibility of overlooking crucial information in these important interactions.

Study 3 was an interview-based approach to how the members of a care team in a skilled nursing home perceive communication with PWA. The findings showed how certain institutional influences shape the way providers perceive primary communicative goals in long term care settings, as well as the facilitators and barriers of those goals. However, since training and collaboration are not systematized and can vary according to schooling, position, role, and facility, perceptions regarding their uses and functions were much less unanimous within teams. Thus, we can be left with a team which operates with a unified but simplistic goal using a disordered set of methods.

By using the understanding in pragmatics that certain presuppositions exist and certain implicature work must be done in order to derive meaning from language, the interviews became a rich locus of investigation of perceptions and institutional influences. On the surface, the overall attitude of the care team might have seemed perfectly “normal”: the members of the team oriented to the needs of the patients, they leveraged facilitators and tried to eliminate barriers, and they were reasonably knowledgeable of the communicative difficulties of PWA. However, by taking into account presuppositions, and, most importantly, of the implicature work needed to understand what was meant, the analysis revealed a uniform misdirection in the overall attitude towards care for PWA: a focus on basic needs and not social needs, the notion of adaptation and normalization of speech, a heavy communicative burden on the patient, and efforts to circumvent communication altogether.

The methodologies used here clearly offer deeper insight into collaborative talk in aphasia from a variety of perspectives and for a range of purposes. Beyond that, they allowed for a richer understanding of some of the issues in healthcare interactions with PWA, which are discussed in the following section.

3. Clinical Implications: Communicative Access in Healthcare Settings

Studies in aphasiology concerning communicative access have been expanding over the last two decades. They have highlighted how improved access can offer PWA opportunities to participate in decision making (Simmons-Mackie *et al.*, 2010; Kagan *et al.*, 2020), to be socially included in life and the community (Azios *et al.*, 2018; Manning *et al.*, 2019; Berg *et al.*, 2020), and, in general, to receive better healthcare (Bartlett *et al.*, 2008; Hemsley *et al.*, 2013; Tomkins *et al.*, 2013; Hersh, 2015). However, as Simmons-Mackie *et al*. (2007) note, "in spite of the growing recognition that communication is essential in healthcare delivery, studies describe diminished communicative access in health care in a variety of populations including individuals with aphasia" (p. 40). Some of the reason highlighted in this work include the issue of familiarity and shared information states, speaking for behaviors and single-speaker agency ideologies, lack of training, and institutional cultures.

All these barriers, while at times embodied at the individual or dyadic level, are tied to institutional or system practices. If we are to reform the ways society and systems support communicative access for PWA, we must find ways to overcome "the challenges associated with reconsidering common practices […] beginning with the fact that the traditional medical model is linear and unidirectional with a focus on particular areas at different points rather than considering relevant intervention in all areas at each stage of the healthcare pathway" (Kagan *et al.*, 2003, p. 310). I argue that one of the ways we can move towards this goal of "fundamental rethinking of values and practices, and [of] reframing the relationship between service providers and service users" (Pound *et al.*, 2007, p. 25) is to reframe the way certain concepts, such as familiarization and speaking for behaviors, are conceptualized by and taught to healthcare and allied HCP.

3.1 Familiarization

Communication partner training has been an essential branch of aphasiological research, one which has highlighted the benefits of training communication partners and developed programs to accomplish such training (see Wilkinson, 1995; Lyon *et al.*, 1997; Kagan, 1998; Lock *et al.*, 2001; Hopper *et al.*, 2002). Familiar partners have been found to not only often develop collaboration on their own, but also to improve and refine such collaboration when trained (Saldert *et al.*, 2013; Jensen *et al.*, 2015; Wilkinson *et al.*, 2010; Beckley *et al.*, 2013; McMenamin *et al.*, 2015). An important implication of these results is that familiarizing with the person with aphasia is that process which helps enhance shared information states (Oelschlaeger & Damico, 1998). In Study 1, in fact, pairs who were very familiar with each other and had been refining their joint communication skills for many years appeared to be able to leverage even those behaviors which may initially hinder the participation of the impaired speaker to co-create narratives and address interview questions in triadic interactions. The familiarity between the speakers was both a matter of information, having participated in many of the events recounted in the narratives, but also a matter of communication: knowing when to support the person with aphasia and in what ways.

However, Study 3 has shown that familiarization can be misinterpreted in certain institutional settings and framed as a tool to anticipate basic needs and altogether circumvent communication. This institutional conceptualization of familiarity with a patient, embodiment of a biomedical focus on the physical or the impairment-level care, can obscure or even hinder progression towards other important functional goals of the care and rehabilitation of those with communication disorders (see Carpiac-Claver & Levy-Storms, 2007; Stans *et al.,* 2013; Forsgren *et al.,* 2016). Though an essential component of medical care is that of therapy, symptom management, and basic needs, it is important that providers who interact with PWA receive the training necessary to incorporate other elements of care into their routines with these patients. Indeed, those who have been diagnosed with aphasia do not only have goals related to their physical well-being, but also those tied to their ability to partake in interactions, both those centered around their healthcare and those which allow a social exchange with others (see Worrall *et al.,* 2011).

Thus, familiarity should be clarified and aided in the medical field. Training programs should emphasize what familiarization for communicative purposes actually entails: increased knowledge of the personality, life, and goals of the person with aphasia, which complements the knowledge healthcare providers can gain about the physical well-being or the type of pathology of the patient. While many factors can hinder or slow down this process, including lack of time to interact with patients (Seneviratne *et al.*, 2009; Westbrook *et al.,* 2011; Hersh *et al.,* 2016), fast turnover of patients, and changing shifts (Hersh *et al.,* 2016), it is important to frame familiarization as a tool to make future interactions less laborious and to highlight that even unfamiliar partners can be trained to improve communicative access (see Kagan *et al.*, 2001; Généreux *et al.*, 2004; Hickey *et al.*, 2004; Legg *et al.*, 2005; Heard *et al.*, 2017). Policies should consider these long-term benefits in the way they address issues with the demand for time placed on providers. These changes may be particularly successful in LTC settings, in which some of the constraints for time and issues with turnover may be less imposing.

3.2 Speaking for and Reapportioning of the Communicative Burden

Another important barrier to collaborative talk is the “adherence to an ideology of single-speaker agency as the basis of verbal communication” (Auer, 2014, p. 189) and the notion the speaking for behaviors may lessen participation or take away from speaker agency. Study 1 has shown, however, that this is not always the case. In fact, the speaking for behaviors seen in Study 1 enhanced the participation of Jeanne, for example, and the repairs of Claire’s husband helped maintain her participation throughout the interview. In addition, as shown in Study 2, withdrawing from collaborative forms of talk, especially when turns are incomplete, as well as not taking and providing opportunities to check understanding, can increase the likelihood of misunderstandings or loss of information. As underscored in Study 2, training should include activities that to expose trainees to the various forms of collaborative interaction that are possible in conversation and enhance their ability to perceive and attend to collaboration requests in all their forms. While striving to maintaining speaker agency in conversation with PWA is crucial, and preferences for collaboration can vary individually, extensive, cyclical training can have enormous impacts on communicative access for PWA.

In addition, in the interest of coupling individual training with system changes, it is important to reframe the concept of communicative burden and its reapportioning. Collaborative talk must be understood as a way to use of conversational strategies to allow for flexibility in more constrained contexts. Paired with increased familiarization, policies which address the methods, frequency, and outcome measures related to training can help align the goals of both parties: for PWA, to be included in conversation, to emerge as competent individuals, and to partake in decisions about their health and lifestyle, and for healthcare professionals to fully understand the medical and psychosocial issues of a patient, to define and implement the best courses of action, and to lower any adverse outcomes.

4. Study Limitations and Future Directions

4.1 Study 1

Study 1, though a case study, had only two participants of the five that were scheduled to partake in the interviews due to the outbreak of the COVID-19 pandemic. Conducting interviews with PWA over the internet or phone is challenging both in methodological terms and in social terms and was thus discarded as an option for this project. It would be important that future research include more PWA with longer post onset times and with different types of aphasia and partners. Insight into the contributions and participation of PWA and their caregivers and loved ones to triadic interactions such as interviews could help shed light into the ways collaborative talk evolves over time and across context. Interview settings are particularly useful as they often share certain characteristics and constraints with medical interactions; however, other contexts should be included in studies of this sort, including interactions in daily life (i.e. customer service, shopping, travelling), work contexts, and leisure activities (i.e. sports, hobbies).

4.2 Study 2

Study 2 has three main limitations. Firstly, the interactions analyzed are approximations of actual consultations and thus may have different characteristics than real ones. The methodology with which the interactions were set up tried to replicate both the settings and the constraints of actual history taking interactions, but future research would benefit from analysis of provider-patient interactions in real-life settings. Secondly, the research included student participants, who do not have the training or experience of professionals. Though it is of current interest to explore the communication behaviors of advanced students in the fields of speech-language pathology and nursing, it would be useful to analyze the behaviors of licensed professionals in different medical and therapeutic contexts as well. Comparison of such behaviors could inform curriculum design and training. Thirdly, it would be important to explore other conversational strategies: future research should include patients which present a variety of types of aphasia and analyze a range of healthcare interactions.

4.3 Study 3

The main limitation of Study 3 is that the original intent of the study was to gather observational data as well. In doing so, the approach would have been more ethnographic in nature, with data both from the participants in the form of interviews and data from observation of participant interactions with patients of the nursing home with aphasia. Unfortunately, the outbreak of the COVID-19 pandemic did not allow for the observational data to be gathered safely. Future research should aim to understand how care teams operate, as well as utilizing qualitative semi-structured interviews to explore the perceptions of team members of communication. It would be useful to study a variety of LTC settings and a variety of teams. The addition of observational data could help gain insights into how the perceptions translate to practice and, conversely, how facility-wide practices and policies help shape perceptions.

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APPENDICES

APPENDIX A

Transcription conventions[12]

↑	marked shift in pitch, rising	
↓	marked shift in pitch, falling	
.	(period) falling intonation	
,	(comma) slight rising intonation	
?	(question mark) rising or questioning intonation	
(3.0)	length of an interval in seconds	
(.)	micropause	
[	beginning of overlapping utterance	
]	end of overlapping utterance	
<u>word</u>	stressed words	
=	(equal sign) no break or gap; latching	
w(h)ord	abrupt spurts of breathiness as in laughing while talking	
£word£	smiley voice, or suppressed laughter	
::	(colon(s)) prolongation of sound preceding the colon(s); the longer the colon row, the longer the prolongation	
-	(hyphen) a self-interruption or restart	
⌈ ⌊	gesture starts	⌈computer five or six,⌉ ⌊*((gaze down))* ⌋
⌉ ⌋	gesture ends	
((gaze up))	gloss of non-verbal features (gaze, gesture)	

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[12] Modified version of transcription conventions outlined by Jefferson (2004).

APPENDIX B

Full transcripts (Study 2)

<u>Transcript: Stephen and Mary</u>

Mary: hi I'm Mary[13] (.) what's your name?
Stephen: Stephen.
Mary: nice to meet you. what are you coming in for today?
Stephen: uhm (2.0) tell me again?
Mary: uhm what are you coming in to be seen for today? (.) for speech therap:y?
Stephen: yes.
Mary: o:h ok. ha[ve,]
Stephen: [I-I couldn't talk.]
Mary: couldn't talk? okay.
Stephen: long time ago.
Mary: a long time ago. uhm can you tell me what happened to make it difficult for you to talk?
Stephen: uhm (2.0) long time ago I couldn't talk and (.) now (.) hard. to. say. the words. uhm (5.0)
Mary: so it's just hard to get some words out?
Stephen: yeah. same thing. I (8.0)
Mary: so have you seen a speech therapist before?
Stephen: uh yes.
Mary: you have? (2.0) about how long did you see a speech therapist for? was it a few months? o:r?
Stephen: (6.0) eight years.
Mary: eight years?
Stephen: two times a week.
Mary: ⌈eight years. twice a week.⌉
⌊*((writing down))* ⌋
Stephen: long time ago I couldn't talk but now ((*inaudible*)) but now I (2.0)
Mary: so speech therapy really helped you?
Stephen: yes.
Mary: that's great (2.0) that's good. (2.0) let's see (2.0) what do you feel are some of your <u>strengths</u> with communication?

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[13] Pseudonym.

Stephen: ((*points to his cellphone*))

Mary: £yeah?£

Stephen: yes.

Mary: typing?

Stephen: yeah. n-n-no I-see I-I don’t read.

Mary: okay.

Stephen: now I first grade read now.

Mary: oh okay.

Stephen: but (2.0) suppose I-I (2.0) service calls? um (4.0) washer dryers and ice box.

Mary: o:h you repair [those?]

Stephen: [yes. okay.]

Mary: o:h okay.

Stephen: and now man or woman call me (2.0) and um (8.0) suppose ice box (.) problem. one or two minutes (2.0) hold up I stroke hard to talk.

Mary: yes.

Stephen: okay and she man or woman unders[tand.]

Mary: [o::h] good so you tell them when they call you (.) I had a stroke. it may be hard for me to talk.

Stephen: yes uh uh y-yes. and (5.0) and now and now I what time? ten o’clock tomorrow ten o’clock meet. your house. and I explain. I hang up. and you text me. (.) text me your name and (.) address.

Mary: okay.

Stephen: and then, ((*uses cellphone*))

Mary: right. and then you can ↑put it in the <u>map</u>.

Stephen: yes.

Mary: okay. well that’s good that you (.) let them <u>know</u> beforehand that it may be a little diffi[cult=]

Stephen: [yes.]

Mary: =with the previous stro[ke=]

Stephen: [yes.]

Mary: =and then you also have them text you.

Stephen: yes.

Mary: that’s a good system.

Stephen: yeah.

Mary: it’s good. (4.0) do you-what do you feel are some difficulties that you still may have from the stroke? communication (2.0) wise?

Stephen: uhm (3.0) personally I (2.0) I can’t read.

Mary: reading?

Stephen: yes. but now th-th-the uh computer (2.0) I know (3.0) the papers and push the button and read back.

Mary: mh hm ↑<u>yeah</u> you have where it can read to you [right?]

Stephen: [yes.] yes.

Mary: yes that’s really good that you’re able to use that so you can press a button and it’ll read the text to you.

77 Stephen: yeah but many times papers can’t read it [but sometimes] works.
78 [mhmm.]
79 Mary: at your job (.) so your job is pretty hands ↑<u>on</u> you don’t have to do
80 a whole lot of (.) rea:ding?
81 Stephen: ↑well (.) yes but see uh (.) youtube uhm (.) suppose the numbers-
82 cell numbers ⌈(.) and put the five or six⌉ ⌈(3.0) ⌉
⌊*((gaze down))* ⌋ ⌊*((gaze to Mary))*⌋
83 ⌈computer five or six,⌉ ⌈(3.0) ⌉
⌊*((gaze down))* ⌋ ⌊*((gaze to Mary))* ⌋
⌊*((hand cupped, fingers move back and forth))*⌋
84 ⌈can’t say it.⌉ ⌈see the mind don’t work uhm (.) uh⌉ ⌈(2.0) ⌉
⌊*((gaze down))*⌋ ⌊*((gaze to Mary))* ⌋ ⌊*((gaze down))*⌋
85 can’t say it. ⌈(.) you buy the parts.⌉
⌊*((gaze to Mary))* ⌋
86 Mary: uh huh
87 Stephen: and (.) and then put (.) word in comments uhm ⌈(3.0) ⌉
⌊*((gaze down))*⌋
88 can’t say it uhm,
89 Mary: do you think you could write it ↑<u>down</u> (.) ⌈what you’re thinking? ⌉
⌊*((pulls out paper and pen))*⌋
90 Stephen: well (.) s-s-suppose icebox. and, (3.0) uhm ice. maker.
91 Mary: mhmm so you’re gonna fix an ice box? an ice maker?
92 Stephen: yes but see I can’t write ehm (2.0) but now, *((opens app on phone))*
93 ⌈ice. maker. ⌉
⌊*((speaking into phone))*⌋ *((shows phone to Mary))* *((copies word onto paper))*
94 Mary: ⌈ok ↑yeah. ⌉
⌊*((looks at piece of paper))*⌋
95 but see I and I order the piece
96 mh hmm
97 and five or six days show up at my house and come back the man
98 or woman and fix it.
99 okay nice
100 Mary: so sometimes it’s hard (.) to remember the letters and how to spell
101 it all?
102 Stephen: see I can’t, *((points to piece of paper and pen on table and then to his head))*
103 Mary: okay.
104 Stephen: ⌈now ⌉ ⌈I= ⌉
⌊*((points to mouth and then cellphone))*⌋ ⌊*((gaze to Mary))*⌋
105 Mary: =you can say it in, *((points to cellphone))*
106 Stephen: yes.
107 Mary: that’s <u>really</u> ↑nice that you’ve learnt how to use those things.
108 Stephen: yeah. yep.
109 Mary: what-so (.) do you feel like you have some goals in particular that
110 you want to work on? uhm in speech therapy? do you want to work
111 on reading?
112 Stephen: yeah. yes.

Mary: work on reading? and writing?

Stephen: ye(h)ah y(h)es yes. yes.

Mary: when you were in speech before what did (.) he focus on?

Stephen: uhm (.) talk. long time ago I couldn't talk.

Mary: ri::ght. okay.

Stephen: and (.) TU. here.

Mary: that is ↑great.

Stephen: £yeah£ well TU (.) uhm the center uhm (3.0)

Mary: ye::ah the center uhm for individuals with physical challenges?

Stephen: yeah.

Mary: £ye::s£

Stephen: two times a week (.) one and a half hour sessions (.) yeah.

Mary: £that's gre::at£

Stephen: yeah good place.

Mary: it is. I've been the[re I] helped out th[ere.]

Stephen: [you?] [oh?]

Mary: ye::s last semester I helped [out]

Stephen: [fan]tastic.

Mary: twice a week.

Stephen: yes same thing morning.

Mary: oh ↑oka::y. very ↑nice (3.0) uhm what kind of things do you like to do with free time?

Stephen: uh fish.

Mary: fish.

Stephen: on my boat and,

Mary: o::h

Stephen: uh stripers.

Mary: is that a type of fish?

Stephen: yeah c-and (5.0) and catfish yeah.

Mary: okay that's very fun I love catfish I was seeing here just looking at these things (.) have you ever used any type of communication board? o:r?

Stephen: long time ago, yes.

Mary: long time ago yeah

Stephen: uhm the hospital I just out of it and (.) and rehab before *((inaudible))* after one or two weeks after come back and-and pick the *((inaudible))*

Mary: mh hmm but now since your speech has impr[oved] and you have=

Stephen: [yes.]

Mary: =the phone [you don't] have to use any extra [thing] like this?

Stephen: [oh yes.] [yes.] yeah.

Mary: so (.) how often (.) do you see yourself wanting to attend speech therapy I know you said you used to go twice weekly?

Stephen: Ye-ye-yes uh four five years stop but uhm uhm (4.0) uh mom's long time ago I (.) quit because (.) mom's in the hospital in rehab and or and uhm *((reaches for piece of paper and writes))* (5.0) just a minute. (3.0) uh o-old people home? uhm,

Mary: oh uh like a (.) nursing home?

Stephen: yeah yes see I can’t say it.

Mary: o:h okay. so she was in one of those so you needed to focus on helping her?

Stephen: yeah yeah every day every day I visit mom. yeah.

Mary: hmm okay.

Stephen: but now the center I donate the time back-donate the time uhm (5.0) help people.

Mary: ↑o::h you volunteer there?

Stephen: volunteers. yes.

Mary: o::h okay. that’s nice and so do you drive? o:r do you take the lyft or [the bus,]

Stephen: [no no no] I car uh myself uh Skiatook.

Mary: oh okay so you dri[ve] from Skia[took]

Stephen: [yeah] [yeah] long time ago I *((shakes head))* now I drive.

Mary: oh okay.

Stephen: but see the-same thing. I know the signs stop signs and this but I can’t *((mimics reading from his hand))*

Mary: o::h reading street signs that would make it a little difficult especially if you’re somewhere you don’t know

Stephen: yeah and no nighttime *((laughs))*

Mary: okay.

Stephen: yeah.

Mary: yeah. well that’s good that you know, you know, what you-what’s best and what may not be the safest or (.) what may not be the best option for you.

Stephen mh hm.

Mary: well (.) thank you.

Transcript: Stephen and Kay

Stephen: Stephen. you? name?
Kay: I'm Kay[14].
Stephen: Kay.
Kay: yeah. I'm a senior nursing student at the university we're usually on the downtown campus so that's why I don't know where I'm going when £I'm here£ *((laughter))*
Stephen: *((laughter))*
Kay: okay Stephen what-what is it that you are coming in for today?
Stephen: uhm my hand.
Kay: your ↑hand? okay. how long is that been going on?
Stephen: eighteen-eighteen years.
Kay: okay.
Stephen: stroke.
Kay: o::h okay. you had a stroke eighteen years ago?
Stephen: uh (.) uh couldn't talk and *((inaudible))* I uh just resting I'm just,
Kay: right. ↑well you look like you're doing great now. you're getting the help that you need?
Stephen: yes.
Kay: yeah? okay. and what-did you have any other medical history before your stroke leading up to it?
Stephen: I-uh no. I couldn't-I don't drink and I don't smoke. and all of a sudden just collapsed.
Kay: and your blood pressure?
Stephen: no. I don't know.
Kay: really? okay. did they tell you what part of the brain the stroke was on o:r?
Stephen: yes but (.) one year I couldn't. out of it. I ate (2.0) six days (5.0) five days in reh-no.
Kay: there were five days that you couldn't,
Stephen: no no. (5.0) five weeks. rehab.
Kay: o:h okay. and how long did it take you to be able to get your speech to where you could communicate a little bit?
Stephen: uh next door rehab. two three weeks. two times a week. morning and afternoon. speech therapist. and finally (2.0) I first sit down.
Kay: o:h wow.
Stephen: yeah.
Kay: well (2.0) how has this whole process been for you? How are you dealing with it?
Stephen: very slow.
Kay: £very slowly£ *((laughter))*
Stephen: yeah, yeah.

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[14] Pseudonym.

42	Kay:	And I see you (.) you said you were coming in for your hands (.)
43		what exactly:?
44	Stephen:	well I want exercise (.) or see long time ago
45		arm ⌈hanging down ⌉
46		⌊*((hangs arm down))*⌋
47		[but uhm,]
48	Kay:	[oka:y.]
49	Stephen:	I want more, (.) *((showing he can't open hand fully))* [to drink,]
50	Kay:	[more func]tional
51		use more range of use.
52	Stephen:	see I, *((placing cupped hand on table))* ⌈the pop (.) ⌉
		⌊*((indicating the palm))*⌋
53		but I can't, ⌈(3.0) ⌉
		⌊*((lifting cupped hand to face in zig-zag motion)) ((gaze to Kay))*⌋
54		hard to,
55	Kay:	ri:ght. right.
56	Stephen:	pop and, *((lifting cupped hand to face in a zig-zag motion and hitting one*
57		*cheek at a time and smiling))*
58	Kay:	a(h) £ohhh£ now is that your dominant hand?
59	Stephen:	yes.
60	Kay:	that's frustrating isn't it?
61	Stephen:	yeah but, *((shrugs shoulders))*
62	Kay:	so I'm seeing you must've had a left sided stroke because your (.)
63		right side is the one that's (.) affected.
64	Stephen:	yes. yes.
65	Kay:	how have you (.) adapted to having to use your other hand? are you
66		using it more o:r?
67	Stephen:	uhh yes *((showing range of motion with left hand))*
68	Kay:	£it's fine£ *((laughter))* o(h)kay. there's no problems with that one.
69	Stephen:	£yes£
70	Kay:	so are you currently seeing an occupational therapist o:r anyone?
71	Stephen:	no.
72	Kay:	no?
73	Stephen:	no.
74	Kay:	have you done that in the past? bef:ore,
75	Stephen:	long long time ago ⌈exercise (.) ⌉
		⌊*((mimicking a bicep curl))*⌋
76		see I ⌈can't, ⌉ ⌈lift it. ⌉
		⌊*((attempting to lift right arm above shoulder))*⌋ ⌊*((gaze to Kay))*⌋
77	Kay:	ri:ght. okay.
78	Stephen:	*((lifting left arm above shoulder))*
79	Kay:	yeah so ⌈this one's full range of motion.⌉⌈this one is not (.) ⌉
		⌊*((points to left arm))* ⌋⌊*((points to right arm))*⌋
80		as full as [this one.] *((gaze to left arm))*
81	Stephen:	[yes.]

82 Kay: what are the activities that are the most difficult for you to do with
83 that hand?
84 Stephen: one more time?
85 Kay which activities are the most difficult-that concern you the most? is
86 it ea:ting? o:r?
87 Stephen: well,
88 Kay: wri:ting?
89 Stephen: personally the rock. ⌈can't lift it. ⌉
⌊*((mimicking lifting an object with arms))*⌋
90 Kay: which rock?
91 Stephen: no no or a big (.) box. can't lift it.
92 Kay: o::h, right. right. okay.
93 Stephen: rock o:r,
94 Kay: o:h okay. £I gotchyou£ *((laughter))* the r(h)ocker. (2.0) do you have
95 someone that helps you? in the home o:r?
96 Stephen: no. myself.
97 Kay: by yourself. have you had a home health aide or someone that's
98 come out?
99 Stephen: no.
100 Kay: okay. well is there anything else that's still affecting you from your
101 stroke other than your mobility in your right hand? (3.0) or you
102 speech as well.
103 Stephen: uh yeah big big time. well-it's (2.0) now I (4.0) I couldn't talk but I
104 can't read now. first grade read now.
105 Kay: o:k well (.) I do want to use some of these. *((picking up board from*
106 *table and placing it in front of Stephen*)) I think this is interesting. do
107 you-are you able to recognize and say these pictures on this side
108 like (.) ehm (.) ⌈this one? ⌉
109 ⌊*((indicating))*⌋
110 Stephen: glass.
111 Kay: and then?
112 Stephen: water.
113 Kay: okay and can-are you able to read ⌈these as well?⌉
⌊*((indicating))* ⌋
114 Stephen: well I know the big [sign] is off.
115 Kay: [right]
116 so lights on lights off (.) and (.) ⌈this picture?⌉
⌊*((indicating))* ⌋
117 Stephen cry or s-sad?
118 Kay: ok. so you can recognize the pictures. are you able to read the
119 words and process,?
120 Stephen: well I can't. like ⌈right there ⌉ I can't.
⌊*((indicating))*⌋
121 Kay: ri:ght.
122 Stephen: frown?
123 Kay: yes frustrated.

Stephen: yeah.
Kay: ⌈and? ⌉
⌊*((indicating))*⌋
Stephen: choke.
Kay: there you go (3.0) yeah *((indicating))* °dizzy°
Stephen: di-dizzy yeah.
Kay: oo:h ⌈this is an easy one.⌉
⌊*((indicating))* ⌋
Stephen: nurse.
Kay: £yeah£ *((laughter))*
Stephen: *((indicating))* doctor.
Kay: doctor.
Stephen: *((indicating))* chaplain.
Kay: o:h there you go. awesome. now are you in any pain? have you been in any pain? *((putting board away))*
Stephen: in the hospital no pain.
Kay: no pain? just weakness. not being able to talk.
Stephen: yeah
Kay: now when you first had the stroke (.) did you have any speech at all? o:r it was just completely, (2.0) gone? for a while?
Stephen: yeah but (.) the uh no talk. but (.) back to rehab morning-or breakfast lunch dinner man or woman or nurse o:r people stay and watch me eat.
Kay: o:h okay.
Stephen: because I *((imitating missing the mouth with silverware))* every once in while I missed the mouth *((laugher))*
Kay: *((laughter))* it's really e(h)asy *((laughter))*
Stephen: *((laughter))* now (.) now I understand the stroke problems I just watch the k-the people just,
Kay: ri:ght.
Stephen: we're all the same.
Kay: ⌈here I'll take these right here for you.⌉
⌊*((puts away boards))* ⌋
Stephen: well the same thing just *((indicates board))*
Kay: so you-they use these in the hospital for you?
Stephen: yeah because just *((indicates mouth))*
Kay: hm mh okay. well, that's good. did they uhm are you able to eat-feed yourself at home using regular utensils?
Stephen: o:h yeah, yeah.
Kay: oh okay cuz they have different adaptive ad-devices like the,
Stephen: oh yeah. long time ago I just=
Kay: =you had to do that but now you're okay.
Stephen: yes, yeah.
Kay: okay, and have you ever had any issues (.) swallowing or ↑choking? o:r any of that?
Stephen: uh no.

Kay: no? okay. well just general information (.) have you ever had any uhm prior surgeries o:r procedures or anything?

Stephen: uh

Kay: either before or after your stroke?

Stephen: before.

Kay: before? what was the procedure or surgery that you had?

Stephen: toes o:r,

Kay: okay. so nothing major.

Stephen: no?

Kay: £no?£ *((laughter))* okay.

Stephen: no, no.

Kay: and what medications do they have you on currently?

Stephen: uh now uh I have one two three four medicine.

Kay: okay.

Stephen: but I can’t *((points to head))* no.

Kay: you can’t remember what they are called?

Stephen: well the doctors knows it.

Kay: okay.

Stephen: doctor Stacken

Kay: okay.

Stephen: but uh (2.0) Plavix.

Kay: Plavix?

Stephen: yeah.

Kay: okay. that makes sense, ye:ah. that is an antiplatelet.

Stephen: every tim-every day.

Kay: mh hm

Stephen: yeah and one two three of them I can’t.

Kay: you don’t know what they are?

Stephen: pressures o:r,

Kay: ri:ght okay. so you knew one of them that’s ↑good. yeah that’s a common one that’s given after strokes and heart attacks,

Stephen: and doctor don’t (2.0) don’t take it completely uh (.) don’t take-no (3.0) uh doctors takes this-take it once a w- (.)

Kay: once a day?

Stephen: yes.

Kay: oh okay.

Stephen: for the rest of life.

Kay: yeah that-that is one of the ones that’s a long-term medication £usually£ *((laughter))*

Stephen: £yes.£

Kay: well you seem to be doing pretty well (.) do you feel like you’re doing ok (.) at home other than lifting things?

Stephen: yeah, yes.

Kay: okay.

APPENDIX C

Croteau *et al.* (2007) Analysis Procedure And Definitions

‘‘Speaking for’’

Turns where the non-aphasic spouse expresses an opinion or when he/she adds information to the conversation when the person with aphasia has the floor.

Repair behaviors

Efforts made to repair conversational trouble:

- *Revision*. The spouse reformulates the person with aphasia’s verbal or non-verbal turn.
- *Assistance in word finding*. The spouse offers assistance when a word-finding problem occurs. This can take the form of a suggested word or words, phonemic or sentence cueing.
- *Hypothesis verification*. The spouse verifies whether he/she has a good comprehension of what the person with aphasia means by proposing an idea in the form of a question (e.g., ‘‘You mean she’s taking the files?’’).
- *Correction*. The spouse corrects what he/she believes is incorrect information.
- *Redirecting to the topic*. The spouse redirects the aphasic person to the topic being discussed.
- *Repair of the interviewer’s turn*. The spouse corrects or revises the interviewer’s turn.

Support

Assistance to support the person with aphasia to speak, advice on how the person with aphasia should proceed to speak, or reflection on what the person with aphasia is experiencing:

- *Elicitation of verbal production*. The spouse contributes with a hint, prompt, or question aimed at helping the person with aphasia speak, so that the latter can offer an opinion or qualify his/her statement.
- *Support to continue*. Advice from the spouse on how the person with aphasia should proceed to speak (e.g., ‘‘Talk slower.’’).
- *Acknowledgment of difficulties*. Verbalizations of the spouse as to what the person with aphasia is experiencing (e.g., ‘‘She has trouble expressing herself.’’).

Solicitation

The spouse’s contributions were qualified as either previously solicited or not (verbally or non-verbally) by the person with aphasia.

Reaction

The reaction of the person with aphasia to the contribution of his/her spouse in terms of whether or not an explicit physical or verbal response is involved and whether or not the contribution allows the person with aphasia to maintain the topic:

- *Explicit approval*. The person with aphasia approves or repeats the spouse’s contribution or part of it. Laughing by the aphasic person was considered an explicit approval.
- *Non-explicit approval*. The person with aphasia does not react explicitly to the spouse’s contribution. The topic is either maintained or appropriately changed.
- *Rejection*. The person with aphasia overrules the spouse’s contribution or makes a comment expressing discomfort (e.g., ‘‘Wait a minute!’’). An abrupt or inappropriate change in the topic of conversation may occur.
- *Ambivalent reaction*. There is no clear reaction on the part of the person with aphasia and the topic is maintained. The person with aphasia appears ambivalent, the response is insufficient, or she/he appears more or less in agreement with the contribution.

Participation

The participation of the person with aphasia following the spouse’s contribution was qualified in comparison to the spouse’s participation (major, minor, equal, and undetermined) in the nine turns following the contribution. Contributive turns were calculated to qualify the participation.

- *Major*. The number of contributive turns by the person with aphasia exceeds the number produced by the spouse.
- *Minor*. The number of contributive turns by the partner with aphasia is fewer than the number produced by the spouse.
- *Equal*. The number of contributive turns by the person with aphasia is equal to the number produced by the spouse.
- *Undetermined*. The number of contributive turns cannot be determined due to a change in conversational topic initiated by the interviewer, or because the interviewer redirects the conversation to the non-aphasic spouse.

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