The Contribution of Discourse Markers to Communicative Competence in Aphasia

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Discourse markers, expressions used to organize conversational interaction, are widely used by speakers in social conversation. An ethnographic investigation of compensatory strategies employed in natural communication by two aphasic subjects revealed a variety of behaviors fulfilling the requirements of discourse markers. The role of discourse markers as compensatory strategies to promote conversation in aphasia is discussed, with descriptive examples drawn from the ethnographic study.

Holland's (1977) observation that aphasic individuals tend to communicate better than they talk is now an accepted tenet among aphasiologists. In fact, such comments have been supported by considerable research. For example, Holland (1982) found frequent communicative success in spite of language impairments among 40 aphasic individuals observed in functional situations. Ulatowska and colleagues have repeatedly demonstrated discourse-level competence in aphasia (e.g., Ulatowska, Doyel, Stern, & Haynes, 1983; Ulatowska, Haynes, & North, 1980; Ulatowska, North, & Haynes, 1981). Gurland, Chwat, & Wollner (1982) reported a greater range of communicative ability than would be inferred from language testing for two aphasic subjects. Others have agreed that level of linguistic performance in aphasia may not predict communicative ability (Behrmann & Penn, 1984; Davis & Wilcox, 1981; Green, 1984; Herrmann, Koch, Johannsen-Horbach, & Wallesch, 1989; Klippi, 1991; Penn, 1987).

Although communicative competence has been attributed to aphasic speakers, evidence of the precise methods that aphasic individuals employ in maintaining communicative exchanges and promoting social interaction is sparse. Interestingly, an in-depth descriptive study of spontaneous communication of two individuals with nonfluent aphasia revealed the prominent use of discourse markers to promote social discourse in spite of significant language handicaps (Simmons, 1993).

Since discourse markers appear to be a potential contributor to communicative competence in aphasia, this area requires attention. Therefore, this paper will discuss the role of discourse markers among nonaphasic speakers, present examples of discourse markers employed by aphasic speakers, and discuss their implications relative to communicative competence in aphasia.

Discourse Markers Defined

Discourse markers are expressions used to organize conversational interaction (Shiffrin, 1987). More specifically, discourse markers are "members of a functional class of verbal (or nonverbal) devices which provide contextual coordinates for ongoing talk" (Shiffrin, 1987, p. 41). For example, the familiar utterances *oh*, *well*, *I mean*, *you know,* and *okay*, typically discounted as verbal fillers, are actually tools for regulating informal interpersonal communication. These devices can manage the flow of information by focusing attention, by helping participants recognize old information and anticipate new information, or by marking transitions. Thus, discourse markers increase the likelihood that the speaker and listener will share a joint focus. Additionally, discourse markers provide cues to a participant's frame of reference and attitude. For example, the utterance *oh* is likely to mark receipt of unanticipated information or a shift in orientation of the speaker (Shiffrin, 1987). The frequently uttered *you know* marks information in discourse to which the hearer is invited to attend (Shiffrin, 1987). In fact, Brown and Levinson (1978) suggest that *you know* serves as a type of politeness tag that establishes a knowledge bond and suggests to hearers that they have sufficient experience with similar information to relate to the speaker's proposition in a sympathetic manner. Similarly, *well* helps speakers enter an interaction when their upcoming contribution is not in full agreement

with the speaking partner's utterance (Shiffrin, 1987) and *okay*, a device frequently heard in speech-language treatment sessions, tends to mark transitions from one activity to another (Kovarsky, 1989; Merritt, 1984).

Discourse markers can be linguistic (e.g., *I mean*, *you know*), suprasegmental (e.g., prosodic shifts), or nonverbal (e.g., hand gestures) (Shiffrin, 1987). In fact, any "sequentially dependent elements that bracket units of talk" (Shiffrin, 1987, p. 31) and assist in discourse organization can be categorized as discourse markers.

It is important to note that discourse markers are defined functionally rather than syntactically or semantically. In other words, discourse devices serve some functional use in context but may or may not have immediately specifiable literal or dictionary meaning (Brown & Levinson, 1978; Shiffrin, 1987). Moreover, discourse markers are flexible and optional; that is, speakers can employ any discourse marker that suits their conversational style, speaking context, and discourse goal, or employ no discourse marker if deemed appropriate. Typically, discourse markers are most frequent during spontaneous social conversation when they help to organize the rapid exchange of sentence fragments, incomplete ideas, and fluidly changing information states. As formality constraints increase, speakers tend to rely more on direct syntactic and semantic means for conveying ideas.

Although there are references to discourse markers among nonaphasic speakers (Brown & Levinson, 1978; Kovarsky, 1989; Merritt, 1984; Shiffrin, 1987), the role of these devices has not been explored in aphasia. Furthermore, since speakers are free to adopt idiosyncratic devices that fulfill discourse goals and conform to pragmatic rules, it is possible that aphasic individuals might adopt conventional or unconventional behaviors to serve a compensatory role in discourse. To explore this possibility, a body of descriptive data drawn from a larger investigation into compensatory strategies in aphasia will be presented (Simmons, 1993).

Method

An analysis of 8-1/2 hours of videotaped conversations between two aphasic subjects and a variety of speaking partners, 14-1/2 hours of participant observations, over 13 hours of ethnographic interviews, and over 7 hours of videotape review (Agar, 1986; Cicourel, 1974) by uninformed speech-language pathologists was undertaken as part of an ethnographic investigation into compensatory strategies in aphasia (Simmons, 1993). Based on the data, compensatory strategy was defined as a new or expanded communicative behavior that is used to overcome a communication barrier in an effort to meet communication goals (Simmons, 1993; Simmons-Mackie & Damico, in press). To be considered new or expanded communicative behaviors, the compensatory strategies possessed one or more of the following attributes: (a) the quantity or frequency of occurrence of the behavior exceeded premorbid or expected usage; (b) the quality of the behavior was such that it was used in an exaggerated manner compared to premorbid or expected usage; (c) the behavior was novel; that is, it was not present in the premorbid or normal interactive communication system; or (d) the behavior was a recasting of a premorbid or normal conversation behavior; that is, it was used for a different purpose than premorbid or expected usage (Simmons, 1993).

For each subject, an array of compensatory strategies was identified and described. Confirmation that behaviors met with the definition of compensatory strategy was obtained through ethnographic interviews (with subjects, family members, friends, and speech-language pathologists), participant observation, videotape analysis, and review by uninformed observers. For example, through participant observation and videotapes the investigator noted that the words *really* and *nice* were frequently verbalized in conversation by one subject. The subject's family did not recall this behavior as a characteristic of premorbid communication; this was confirmed with videotapes made prior to the onset of aphasia. Informants unfamiliar with the subject considered production of "nice" and "really" to be exaggerations of a normal communicative behavior based on their "intuitions as native speakers." Furthermore, informants felt that the words might serve some type of avoidance function—that is, a means of shifting speaking burden back to the nonaphasic partner. Thus, *nice* and *really* appeared to be relatively frequent, exaggerated behaviors possibly used to overcome aphasic communication barriers and achieve a communication goal.

Once potential compensatory behaviors were identified, specific functions were determined through similar ethnographic "triangulation" procedures as well as analysis of usage patterns across contexts, including various settings (i.e., home, restaurant, clinic), speaking partners (i.e., family, strangers, friends), and goals (i.e., eat lunch, visit friends, wait for treatment). By identifying the contextual variables that related to occurrence and nonoccurrence, usage patterns were clarified (see Appendix A for variables coded across contexts). For example, a list of all potential functions or explanations for *nice* and *really* (including potential compensatory functions, potential as "disorder symptoms," random behavior, etc.) was maintained by the investigator, and evidence to support or refute these interpretations was sought. In addition, usage patterns were studied to discover if a systematic and purposeful pattern supported, refuted, or offered alternative explanations. For example, the investigator found that *nice* and *really* occurred primarily during informal social dialogue with less familiar listeners. The words were not used during standardized testing or barrier activities designed to elicit picture descriptions. The words were not used prior to the subject introducing topics or new information. Thus, the observed usage pattern supported and expanded interpretations offered through other sources.

Finally, these procedures for identifying and interpreting strategies were implemented in a cyclic fashion so that as evidence was collected, the investigator recycled through the various sources, added sources, and collected additional data to confirm or deny, and expand or revise findings.

In addition to authenticating and confirming interpretations through traditional ethnographic procedures, the authors also collected point-to-point reliability data. Thus, the authors independently judged a random sample of 10% of videotaped turns to identify every compensatory strategy. A 95% level of point-to-point agreement was obtained for strategy identification. In addition, each strategy in the random sample was independently coded across a variety of dimensions of context (Appendix A) to determine the reliability of behavioral coding. This resulted in an overall point-to-point agreement of 94%, with individual dimension ratings ranging from 84% to 100% agreement.

Both subjects demonstrated several compensatory strategies in the form of discourse markers to promote and regulate their conversational discourse. Descriptive excerpts will be presented to demonstrate the variety, applications, and functions of these compensatory discourse devices.

Subjects

The subjects of this investigation were two 50-year-old Caucasian women, DC and NN, who had nonfluent aphasia and apraxia of speech. Both were right-handed prior to onset of right hemiparesis.

DC sustained a left cerebral vascular accident. At 14 months postonset, her verbal mean score on the Porch Index of Communicative Ability (PICA; Porch, 1981) averaged 11.23 on the 16-point scale with a verbal percentile score of 71 (see Table 1). DC spoke in telegraphic utterances, producing primarily content words, with a mean utterance length of 3.5 words. DC had a high school education and was employed as an office manager prior to onset.

NN demonstrated more severe involvement resulting from primary progressive aphasia. Her PICA verbal score at 3 years postonset was 5.83, with a verbal percentile score of 29 (see Table 1). Her mean utterance length on picture descriptions was 3.3 word approximations. Markedly impaired word finding was complicated by apraxic errors that rendered much of her speech unintelligible. NN's utterances were frequently associated with repeated self-correction attempts. Prior to diagnosis of her progressive aphasia, NN was a schoolteacher; she had a college education.

TABLE 1. PICA scores for DC and NN.

	DC		NN	
	Mean	Percentile	Mean	Percentile
Overall	12.63	71	8.85	29
Gestural	13.66	68	13.14	56
Reading	13.10	67	12.45	63
Pantomime	12.25	76	10.90	53
Auditory	14.30	51	14.80	64/72
Visual	15.00	35/100	14.40	14
Verbal	11.23	52	5.83	23
Graphic	12.18	83	5.15	10
Writing	11.58	84	5.00	20/27
Copying	13.40	70	5.45	6

Compensatory Discourse Devices: Description

Both subjects demonstrated an array of compensatory strategies for dealing with social conversation. Many of the strategies served more than a literal or syntactic function; rather, they regulated social interaction and organized unfolding discourse. These behaviors met the standard definition of discourse markers (Shiffrin, 1987).

Several of the subjects' discourse markers will be described in the following sections. It should be noted that, although some quantitative data are reported based on videotaped interactions, the bulk of evidence derives from qualitative, interpretive data obtained through cyclical patterns of participant observation, interview, lamination, and artifact review typical of ethnographic research. For ease of description, the discourse markers used by these two subjects will be presented in functional categories as follows: (a) alerting or initiation markers, (b) termination or reorientation markers, (c) participant role markers, (d) politeness or affiliation markers, and (e) truth level markers.

Initiation Markers

Each subject produced a behavior that marked the approach of important content. These initiation markers directed attention and alerted the listener to expect information. For example, DC produced the utterance *is* (pronounced /ɪs/ with unvoiced sibilant) frequently during conversation for a total of 434 "runs" (i.e., single *is* or reiterative *is is* production) out of 864 videotaped speaking turns (i.e., 50% of her turns). Analysis of *is* utterances revealed that *is* typically initiated thoughts or pieces of information as in *is man…is golf*; in fact, 90% of *is* productions initiated pieces of information. Interestingly, the 10% of *is* utterances that did not initiate content were described as utterance failures/giving up, speaking partner interruptions, or unintelligible responses.

Is not only initiated verbal content, but also introduced gestural and written content, as in example #1 below:

1. *Context:* DC and a friend are discussing a medication that makes DC sleepy.
   Friend: Drugs will make you do that.
   DC: Yeah, Oh man….*is is is* [writes bed] isy.
   Is is [signs sleep]…*is* bed.
   is [writes NOO].
   Friend: Noon?
   DC: Yeah [signs sleep]
   Interpretation: is = initiation marker.

The utterance *is* held DC's turn, kept her active in the verbal channel, and alerted the listener to upcoming information that was communicated primarily via writing

and gesturing. The absence of attempted verbalization during fifty (50) *is* turns suggested that *is* was not a verbal facilitator or starter. In fact, analysis of usage patterns revealed that *is* clearly served as a discourse marker contributing to information management in DC's telegraphic though socially interactive discourse.

NN adopted a nonverbal discourse marker to introduce information content during spontaneous conversation. She often held her place and signaled coming verbal content by raising her hand upward or pointing upward in a somewhat exaggerated gesture. This occurred 124 times during 723 videotaped turns. This behavior held her turn by alerting the speaking partner to give her time to process and "pointed to" coming information in a manner similar to the *is* marker of DC. Excerpt #2 demonstrates the use of this gestural discourse device.

2. *Context:* NN and an acquaintance are discussing a walk that NN took earlier in the day.
   Friend: You already went today? You're an early bird.
   NN: Yea, uh…[holds finger up]…ken o'cock.
   Interpretation: "finger up" gesture = initiation marker

NN affirms her speaking partner's comment, then alerts her to a new piece of information (ten o'clock) with the gesture. These gestures occurred primarily when new information was introduced. In fact, 87% of these gestures introduced new information (this might be compared to NN's total of 40% new information across her videotaped speaking turns). The association with new information reinforces the role of this gesture as a marker of approaching content.

The purpose of "alerting" markers for both DC and NN appeared to relate to their aphasia. DC produced agrammatic utterances combined with nonverbal modes of conveying information (e.g., gesturing and writing). NN produced approximations of targets and word forms that were difficult to understand due to apraxic errors. In both cases, subtle signals highlighting "bits of information" helped the listener direct attention. The success of these markers was confirmed by informants' observations.

Termination or Reorientation Markers

In addition to initiation markers, both subjects employed a form of termination marker to further outline their propositions in interactive discourse. The utterance *isy* (pronounced /ɪsi/ with stress on the second syllable) was produced frequently and fluently by DC. Twenty-five percent of DC's videotaped turns included *isy* (i.e., 213/864 turns). *Isy* often occurred after content words or terminated thought units (196 out of 213 *isy* turns followed content) as in example 3:

3. *Context:* DC is explaining that her former employer would not hire help for her, but now has hired two people to replace her.
   DC: No…is money isy. No…no help isy. Now is…yea.
   Interpretation: isy = termination marker

Loosely translated, the meaning of the above might be something like "No, there was no money (to hire); I got no help. Now they hired someone." Here *isy* signaled the end of a thought or formed terminal junctures of propositions. *Isy* also played a role in terminating ideas of the previous speaking partner's turn while simultaneously shifting frame of reference to DC's own ideas as follows:

4. *Context:* DC and her speech-language pathologist are discussing DC's therapy schedule.
   SLP: How many times a week you go to PT?
   DC: Two.
   SLP: How many times a week you going to OT?
   DC: Two
   SLP: Two too? Heh!
   DC: Yea, isy. Here three.
   Interpretation: isy = reorientation marker

Here DC acknowledged her speaking partner's humorous comment and "closed" the thought while allowing the listener to reorient to the new information that she attended speech treatment three times a week. *Isy* marked the transition from a completed proposition to a new proposition.

NN used a gestural device to terminate ideas or indicate changes in orientation. Her termination signal involved "hand clasping" (79 occurrences over 723 videotaped turns). This peculiar motion was performed in a systematic pattern to mark the end of a proposition or topic sequence (74 instances), or to mark a pause within her discourse at which time she needed to regroup or shift to a new idea (5 instances). Thus, hand clasping served a subtle "preclosing" function for topics or signaled that an idea was being abandoned.

5. *Context:* NN and a new acquaintance are discussing a trip to Paris.
   Acquaintance: We're talking about French huh?
   NN: Yes yes yes uh haman...uh awright
   [points to her ring]
   [sits back] uh really.
   [clasps hands]
   Interpretation: "hand clasp" = termination marker

In this segment, NN wishes to convey that her husband speaks French, but failing this, she sits back and clasps her hands indicating that she has abandoned her attempt. Unlike a more direct turn-taking signal, hand clasping marked an open field, giving the listener the option to continue on topic, introduce a new topic, or wait for NN to continue.

These discourse devices demonstrated functional significance in discourse organization. Both *isy* and NN's hand-clasping gestures signaled terminal junctions or shifts in orientation, thus helping the listener recognize units of information during the unfolding conversation.

Participant Role Markers

Another type of compensatory discourse device noted was the *participant role marker*. Participant role markers were used to delineate aspects of speaker-listener role and identify speaking-turn assignments. For example, both

subjects used an exaggerated behavior to transfer speaker-listener roles; thus, these aphasic individuals employed a device to purposely shift the burden of communication back to the nonaphasic partner. For example, DC used an exaggerated combination of gaze and forward body lean to nonverbally shift the turn to the speaking partner. These "gaze solicitation" behaviors occurred on 28 occasions during videotaped conversations. In all 28 instances, the speaking partner then assumed the speaker role. Informants considered the behavior to be an exaggeration of a normal conversational device that DC employed to get out of trouble when she encountered communicative breakdown.

NN employed an overt turn-shifting marker consisting of pointing towards the listener or extending her hand palm up towards the listener, holding the motion, gazing steadily at the partner, and leaning forward. This occurred 88 times out of 723 turns. The function of this gesture always invited the speaking partner to answer a question, fill in, or take over the topic. This highly effective device succeeded in shifting the turn on videotaped occasions. In effect, it expressed NN's interest in continuing as a participant in the interaction in spite of her inability to maintain responsibility for the speaking turn. NN also employed "interest markers" as a second, more subtle means of shifting turns. However, since interest markers played a key role in establishing an affiliation framework, they will be discussed in the following section as affiliation markers.

Affiliation Markers

A common discourse device found in everyday conversation is the politeness tag (Brown & Levinson, 1978). Speakers use politeness rules in order to engage in the cooperative activity of talking, to establish and maintain social bonds, and to avoid threats to one's "face" or identity (Goffman, 1967; Sacks, 1987, 1992). In effect, the devices serve the function of "affiliating" the speakers through politeness features. The subjects with aphasia adopted numerous devices, labeled here as affiliation markers, to inform speaking partners of their willingness to listen and interact. One such device used by NN involved the enthusiastic and somewhat exaggerated utterance of affirmatives such as *yes yes yes, very nice* or *really* in response to speaking partner's utterances. These "interest markers" occurred 449 times during NN's 723 videotaped turns. The markers conveyed a positive tone and attention to the speaking partner, and simultaneously encouraged the speaking partner to continue talking. Not only did these utterances establish a warm social bond, but also they shifted the burden of communication to the partner and kept up the flow of the conversational interaction. For example, when used as "interest markers," 81% of NN's *really* and *nice* turns resulted in the speaking partner readily assuming the speaking role and continuing on topic; this might be compared to an overall 57% rate of "sustaining" responses after NN's turns. Also, speaking partners described positive feelings evoked by these markers such as "feeling rewarded," "reinforcing," "pulling you in and keeping you with her," or "made me feel like she liked me." That is, the markers served the dual purpose of an affiliation strategy to maintain the exchange and a participant role marker.

DC used the stereotypic expression *is good* (83/864 turns) to affiliate with the speaking partner and create social "small talk" as in example 6:

6. *Context:* DC has indicated that she would like an acquaintance's business card in order to exchange telephone numbers.
   Acquaintance: I don't have a card but I have a phone number.
   DC: Is good, yeah.
   Acquaintance: This is not a very fancy card.
   DC: Is good [nodding yes and laughing].

Interpretation: is good = affiliation marker

Although adding only minimally to the content, DC's utterance kept the exchange going by alerting the speaking partner to a positive orientation.

Like nonaphasic conversationalists, aphasic people attempt to establish politeness and good will in order to maintain conversational interactions (Sacks, 1992). Thus, NN and DC deployed simple automatic utterances to serve as affiliation markers in conversation.

Truth Level Markers

People frequently attempt to comply with the requirement that speakers utter the "truth" by inserting hedges or qualifiers within their propositions, as in "This is Mary's purse, I guess," or "My sister is sort of tall" (Brown & Levinson, 1978; Grice, 1975; Lakoff, 1972). DC used the phrase *I don't know* on numerous occasions for this purpose, far exceeding the expected quantity and placement of this phrase. In fact, 152 of DC's videotaped turns included one or more instances of *I don't know*. The phrase expressed uncertainty or allowed DC to opt out of making a statement. For example:

7. *Context:* DC is continuing to explain that she failed to convince her employer to hire another staff member, but now they have done so.
   DC: Is good. Yea…is me, I don't know. Is talk talk talk. Now I don't know isy…is good now. [signs talk] [points to self]

Interpretation: I don't know = truth-level marker

Interpreting this utterance in context suggests something like "That's right. Yea. It was me I guess. I kept asking. Now, I don't know…I'm not there. Now everything is OK I guess." The phrase *I don't know* appeared to express DC's uncertainty about the facts and cautioned her listener not to hold her responsible for factual accuracy. Thus, the *I don't know* provided the listener with a guideline for interpreting DC's utterances as "opinion" content (Lakoff, 1972).

Conclusions

Both subjects demonstrated systematic and purposeful discourse behaviors that fit the functional definition of

discourse markers. The discourse markers were considered compensatory strategies to overcome barriers imposed by aphasia. The primary objective of these compensations was to promote the flow and organization of social communication, rather than perform specific semantic or syntactic roles. Each device performed functions such as information organization, role management, affiliation maintenance, and establishment of truth value. Some devices simultaneously served more than one function. Many strategies were unconventional, (e.g., DC's *is* and *isy* utterances were not even real words); nor were the specific behaviors characteristic of either subject's premorbid communication. For example, NN's nonverbal regulatory gestures were acquired behaviors; videotapes made prior to her language impairment did not evidence these gestures. Furthermore, each individual developed a unique array of discourse devices, and varied them to suit her own functional and stylistic needs (Simmons-Mackie & Damico, 1995).

Based on these results, it is possible that other aphasic speakers employ discourse markers as compensatory strategies to promote conversational interaction. Therefore, discourse markers are a potentially important aspect of communicative competence in aphasia.

Discussion

Several issues regarding discourse markers in aphasia deserve discussion. First, the description and discussion of these discourse markers has placed them in the foreground of the reader's consciousness. In natural circumstances, discourse devices tend to maintain a low profile. That is, conversational participants often are not consciously aware of their existence. The strategies serve at an almost subliminal level, without diverting attention away from the flow and content of the conversation (Goffman, 1974). In fact, when initially transcribing conversations for this study, discourse markers were frequently missed. The fact that discourse markers sometimes function at a subliminal level does not mean that they do not exert powerful influences on communication partners. Just as we might fail to recall that a speaking partner smiles or raises his eyebrows during a conversation even though these cues influence interpretation of the utterance, so discourse devices subtly frame and organize discourse to aid the speaking partner's interpretation of both social and referential meanings. Thus, careful analysis of conversation with particular attention to unexpected and low visibility behaviors is necessary in order to expose these behaviors.

Another key feature of discourse devices is that they are optionally employed. That is, the speaker may or may not use markers depending on context and attitudes regarding the exchange. For example, NN used information initiation and termination markers rarely in public social conversations; rather, she relied more heavily on affiliation and turn-shifting devices to maintain the flow of social interaction. Thus, a number of interactions and a variety of contexts should be studied in order to fairly represent the speaker's repertoire and fully understand the level of competence in natural social communication.

It is also important to note that the functional categories described in this paper are not meant to imply a universal, exhaustive, or even relevant taxonomy that can be applied to other speakers. Discourse markers are devised to suit the needs and personalities of individual speakers in a given context (Shiffrin, 1987); their use is optional and their functions are flexible, with one behavior capable of fulfilling more than one function. In fact, choice of discourse markers may be idiosyncratic. Whereas one individual relies heavily on *ya know* and *I mean*, another might use *like I say* and intonational markers. These two subjects demonstrated different discourse devices, different patterns of usage, and different conversational styles. Level of language impairment, personal style, and communication needs are likely to influence choice of discourse strategies. Therefore, one cannot study aphasic conversation with a preconceived notion of potential devices or potential categories of function. Rather, natural behaviors must be observed with the goal of seeking functional significance and systematicness.

Identification of discourse markers requires an open-minded and nonjudgmental attitude regarding conversational behaviors. Because syntactic and lexical significance may not be apparent, such behaviors could be overlooked or misinterpreted as symptoms of aphasic impairment, problem behaviors to be extinguished, or aberrant adaptations to language barriers. For example, the investigator's initial response to DC's *is* and *isy* utterances was to discount them as aphasic automatisms or fillers. However, a search for systematic usage patterns and underlying functions revealed behaviors that promoted social communication. It is important that the potential role of seemingly meaningless behavior be appreciated lest our treatments eliminate behaviors that serve significant interactive functions.

Finally, successful development and deployment of discourse markers is shown to be an important aspect of pragmatic skill in social conversation. Among aphasic speakers, we might expect to find different levels of success in using such devices to promote conversation. Therefore, future efforts might develop methods for assessing the appropriateness or success of various discourse management strategies among aphasic speakers.

Normal conversation is a remarkable accomplishment. Somehow, speakers produce an orderly and rapid sequence of turns that interact to produce a coherent, yet evolving meaning with minimal overlap in talk, few instances of silence, and little confusion (Lee, 1987). In order to achieve this, people collaborate in conforming to the rules of conversational discourse. Many aphasic patients grasp these principles of collaborative effort and attempt to take turns, maintain the flow, mark boundaries, and establish interaction in the best way they can to be part of the orderly process. The creative development and application of discourse markers appears to be one method that aphasic individuals employ to fulfill their desire to converse. Perhaps an appreciation of discourse markers and their role in promoting social discourse will contribute to more socially conscious and effective management of communication in people with aphasia.

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Appendix A

Behavioral Coding Categories

Discourse Categories
Speech act
Strategy initiator
Situation tempo
Discourse key
Goals of strategy
Spontaneity
Accompanying modes
Presence of SLP

Speaking Partner
Familiarity
Role
Relative power
Knowledge of aphasia
Gender
Age
Comfort with subject
Occupation
Solidarity

Listener Reaction
Discourse consequences
Mood of response

Setting Categories
Physical factors
Formality
Familiarity
People
Distractibility
Location
Presence of investigator

Topic Categories
New vs. old information
Topic introduction
Interest of subject
Technicality
Abstractness
Emotional load of topic
Structural complexity