

Establishing A Communication Profile in Adult Aphasia:
Analysis of Communicative Acts and Conversational Sequences

Gail B. Gurland
Brooklyn College, City University of New York, Brooklyn, New York

Sam E. Chwat
Flower Hospital, New York, New York

Sima Gerber Wollner
Queens College, City University of New York, Flushing, New York

The traditional goal of aphasia treatment faced the challenge of maximizing aphasic communication for use in natural settings by focusing on cognitive-linguistic therapy in clinical settings. While there has been research supporting a high correlation between cognitive and communicative skills in aphasia (Ulatowska *et al.*, 1980), there has been general agreement that a focus on the communicative context is a valuable aid to aphasic language production and comprehension. Although the therapeutic trend of developing pragmatic abilities in aphasic persons is growing, Holland (1975) has noted clinicians' continuing reliance on tests of cognition and language, and has indicated that we have no data on how aphasic persons communicate in natural settings. More recent research has explored speech act analysis of aphasic persons in individual and group sessions (Wilcox and Davis, 1977), clinician-patient interactions (Brookshire, 1976), and communicative competence relative to home therapy and spouse interaction (Metzler and Jelinek, 1977; Lubinski *et al.*, 1980). However, a comprehensive framework of natural aphasic communicative skills for use in planning treatment and for supplementing tests of the aphasic individual's pragmatic language ability has yet to be developed.

Pragmatic therapy was recently described by Wilcox and Davis (1981), based on principles governing normal conversation. They advised "careful examination of nonverbal communication" as well as the linguistic communication of the aphasic person, but they did not offer standardized tests or a procedure for analysis of these behaviors. In the aphasiologist's clinical repertoire, tests of cognitive-linguistic deficits shed little light on communicative behavior. At present, in order to obtain this type of information, the aphasiologist is dependent on two standardized tools, The Functional Communication Profile (Sarno, 1969) and The Test of Communicative Abilities in Daily Living (Holland, 1980). While Sarno and Holland offer the best available tests of communicative ability in aphasia, these measures do not easily translate to treatment programs. It is also unclear whether these tests cover the full range of communicative behaviors or, if not, what sort of supplemental procedures might be necessary for planning communication-based therapy. It is also unclear how much the spouse can contribute to treatment planning, given conflicting reports of their knowledge of the communication impairment (Helmick *et al.*, 1976; Chwat *et al.*, 1980; Chwat and Gurland, 1981).

The literature on language pragmatics has led to the recent development, in the study of child language disorders, of communication assessment tools to supplement tests of cognition and language. For example, The Communication Profile proposed by Wollner and Geller (in press), integrates information on normal pragmatic development from the work of Dore, Gearhart and

Newman (1978) and Corsaro (1979). This profile, which offers a framework for analyzing language samples, does not substitute for traditional clinical assessment, but has application for communication therapy planning by specifying a taxonomy of communication behaviors to be explored.

The goals of this study are (1) to provide a descriptive profile of communicative abilities in aphasia with different communication partners; (2) to determine the usefulness of The Communication Profile in the assessment of communication in aphasia and in planning therapy; and (3) to compare the results of The Communication Profile with the results of standardized measures of communicative abilities in aphasia.

METHOD

Subjects. Subjects were two males, GC (age 54 years) and AZ (age 79 years), with aphasia resulting from single left CVAs, 6 months post-onset and 8 months post-onset, respectively. Both subjects have a high school education and are from middle class socioeconomic backgrounds. GC is receiving speech and language therapy; AZ recently chose to terminate therapy. GC (Subject 1) and AZ (Subject 2) were assessed for language deficit with The Minnesota Test for Differential Diagnosis of Aphasia (Schuell, 1965) and demonstrated mixed aphasia with moderate deficits across all modalities and mixed aphasia with severe deficits across all modalities, respectively.

Procedures. Each subject participated in two communicative interactions, one with a familiar conversational partner (spouse) and one with an unfamiliar partner (certified speech and language pathologist). The physical setting for each of these interactions was a traditional clinic treatment room with the participants seated across the table from one another. Each interaction took from 12 to 15 minutes and was videotaped for analysis of communicative acts and conversational sequence, using an adaptation of The Communication Profile (Wollner and Geller, in press). Prior to subject-spouse interactions, the partners were instructed to speak with one another as they usually do; several topics such as family, friends, the stroke, were suggested, but not required. Prior to subject-clinician interactions, the clinician was instructed to speak with the subject to establish rapport and to informally learn about the language and communicative abilities of the aphasic person; topics similar to those presented to the spouse were suggested, but not required. The video equipment was visible but unobtrusive during the sessions. One of the investigators monitored the recording from a separate room. A second investigator administered the CADL (Holland, 1980) to each of the subjects approximately one week after the communicative interactions were recorded.

A descriptive analysis was completed for each communicative interaction for each subject using The Communication Profile (see Appendix A). Both aphasic subjects' and conversational partners' utterances were coded for communicative act and conversational act based upon the established criteria (Dore *et al.*, 1978; Corsaro, 1979; Geller and Wollner, 1980; Wollner and Geller, in press). Results of the CADL were analyzed for each subject and compared with those obtained from The Communication Profile. Additionally, the CADL items were analyzed with respect to The Communication Profile.

RESULTS

The results are presented in terms of a communicative act analysis for each subject and his respective conversational partners. This is followed by an analysis of conversational acts for each subject and his respective partners. Data from administration of the CADL (Holland, 1980) are then presented and compared with the results obtained from The Communication Profile (Wollner and Geller, in press).

Communicative Act Analysis

Subject 1. During 112 conversational turns with the clinician and 90 turns with the spouse, Subject 1 produced a range of communicative acts, including requests, comments, responses, and organizational devices. The predominant category that he used with both partners was responsive; 84% of his turns with the clinician and 69% of those with the spouse fell into this category. There was relatively little difference in his use of requests (2% vs. 4%) or comments (11% vs. 12%), with respect to conversational partner. As noted above, he produced responses more frequently with the clinician than with the spouse. A closer examination of the subtypes of the response category indicated a greater frequency of the use of response-acknowledgment with the spouse (34%) than with the clinician (17%).

During their respective interactions with this subject, the clinician produced more requests (69% vs. 43%) while the spouse produced more comments (45% vs. 18%). Both conversational partners produced relatively few responses, 10% for the clinician and 3% for the spouse. One communicative act category that the clinician produced which the spouse did not was that of Instructional (e.g., Try your name again).

Subject 2. During 101 conversational turns with the clinician and 121 turns with the spouse, Subject 2 produced a range of communicative acts, including requests, comments, responses, performatives, and organizational devices. He demonstrated differences depending on conversational partner; he produced more comments (53% vs. 41%) and responses (45% vs. 36%) with the clinician than with the spouse; he produced requests only with his spouse. During their respective interactions with the subject, the clinician produced more requests (57% vs. 20%) and responses (28% vs. 16%) than the spouse. It is noteworthy that the spouse made greater use of comments (43% vs. 11%), and instruction (17% vs. 1%) during the interaction than the clinician did.

Conversational Act Analysis

Since the conversational acts initiate and terminate represent less than 3% of the total turns for either subject or conversational partner, the results will examine the frequency distribution of subtypes of the category extend.

Subject 1. This subject produced a range of conversational acts. He did, however, demonstrate differences with respect to conversational partner for the subtypes acknowledgment and topic-relevant. The greater number of acknowledgments produced with the spouse (56% vs. 21%) and topic-relevant turns produced with the clinician (51% vs. 20%) indicated a more passive, less informative conversational role with the spouse compared to the clinician. A comparison of the spouse and the clinician indicated little difference in the communicative acts produced. The clinician and spouse used a relatively large number of topic shifts (21% and 25%, respectively) to keep the interaction going, as well as a large number of clarification requests (22% and 18%, respectively) to prevent or repair breakdowns in communication.

Subject 2. Subject 2 produced a range of conversational acts. He used a greater number of acknowledgments with the spouse (20% vs. 5%) and a greater number of topic relevant turns with the clinician (68% vs. 53%). This again suggested increased passiveness and less informativeness with the spouse as compared with the clinician. Use of conversational acts by the two conversational partners was somewhat different with this subject. The clinician produced more acknowledgments (30% vs. 7%), clarification requests (19% vs. 11%), and topic shifts (9% vs. 2%), while the spouse produced more topic-relevant turns (63% vs. 35%). The clinician, who was unfamiliar with the subject, had more difficulty interpreting his messages and attempted to clarify the discourse and keep it going with these extension devices.

CADL Analysis

Both subjects scored within the range appropriate for their age-matched, noninstitutionalized counterparts with mixed aphasia in the standardization sample. Both subjects were responsive to the examiner, and, across all tasks Subject 1's performance was somewhat superior to Subject 2's performance.

Results of analysis of responses to the CADL items with respect to The Communication Profile indicated that of the 71 items required, 57 (80%) were requests for information and 14 (20%) were instructional requests, politeness markers, requests for action, and organizational devices from the examiner. Of the aphasic person's turns, 54 (76%) were responses to questions, and 17 (24%) were responses to instructions, comment descriptions, comment explanations, comment labels, requests for clarification, and organizational devices.

DISCUSSION

Pragmatic analysis is not designed to replace linguistic analysis, but rather to augment it and to expand the focus of diagnosis and remediation. In this study, pragmatic analysis demonstrates the need to consider individual variation in communicative interaction in developing clinical strategies for evaluation and treatment.

Although the two subjects present different degrees of linguistic deficit, they both demonstrate an awareness of turn-taking and the knowledge that they play a conversational role with each of their partners. Subject 1 used a similar range and frequency of communicative acts regardless of the differences in input provided by his partners. He played a responsive role in the communication dyad. The data suggest that the passive, noninformative style of the subject shaped the conversational strategies of the clinician and the spouse respectively. The clinician asked questions and the spouse made comments in order to keep up the interaction and pass the turn back to the subject. Analysis of conversational acts provided further evidence of the subject shaping the style of his partners. Both partners used topic shifts and clarification requests to maintain the interaction and pass the turn back to the subject.

It is interesting to note that Subject 1 had the linguistic ability needed to produce a wide range of communicative and conversational acts. However, his use of language was primarily in the responsive mode. This suggests that, for this client, treatment might focus on establishing contexts for eliciting requests and comments as well as more varied use of

conversational extensions. Since the client spends most of his day with his spouse, her participation in widening his communicative interaction appears essential.

Subject 2 was a more assertive, active conversational partner in spite of a more severe linguistic deficit. This communicative style was reflected in the proportionately greater use of comments with the clinician and in the use of requests with the spouse. Again, there was a tendency for the clinician to make a large number of requests and the spouse to make a large number of comments. This spouse, unlike that of Subject 1, made use of instructional acts. In fact, she did far more direct teaching than the clinician in order to improve the subject's semantic accuracy. Once again, there is a strong suggestion that the subject's communicative behavior shaped that of his partners. For example, the clinician relied on requests to handle the subject's semantically anomalous utterances as a way to get him back to a more meaningful exchange. Further, the clinician, who was unfamiliar with the subject's background, often appeared to engage in a parallel conversation with him through the use of topic shifts in an attempt to establish a topic with which the client would be more successful. The spouse, on the other hand, appeared more interactive and filled in the conversation with topic-relevant turns. Whereas the clinician relied on requests to keep Subject 1 in the conversation, she used requests to get on safe ground with Subject 2. The therapeutic focus for Subject 2 should probably be more linguistic than communicative at this stage.

The CADL clearly offers an index of our subjects' communicative abilities and a measure of their communicative deficits. In fact, an analysis of the CADL items in terms of The Communication Profile taxonomy revealed that the CADL taps a variety of communicative acts, although it does not specifically tap conversational sequence. The Communication Profile provides us with an opportunity to examine communication in a natural environment, while the CADL relies on clinically contrived conversational samples. Subjects' functional communication seems more comprehensively sampled with The Communication Profile, which accounts for a greater range of acts than the CADL does. The CADL does test a greater number of functional skills and language use in different contexts; however, scores seem to be affected by the aphasic person's ability to shift and abstract for the pretend tasks, which may reflect the nature of the task more than communicative function. Indeed, the CADL sometimes seems to tap abstraction and divergent abilities more than functional communication.

The CADL overall score seems more constrained in its sampling of the aphasic person's spontaneous, self-generated and self-initiated conversation than The Communication Profile's. For example, both subjects were motivated in the conversational samples to talk about their stroke history and experiences; however, both scored 0 for CADL item 9, which is concerned with the origin of the speech problem. The Communication Profile has its own limitations. Although it accounts for nonlinguistic communication, it does not easily account for suprasegmental communicative markers. Although The Communication Profile contributes to the thoroughness of the clinical evaluation and provides a more detailed analysis of communicative acts and sequences, it must be noted that it is time-consuming. The Communication Profile does not, unlike the CADL, offer a perspective on normal conversational-range expectations or what is expected of aphasic communication. However, The Communication Profile does reveal that the aphasic individuals

sampled have a greater range of communicative abilities than can be inferred from tests of communicative ability, and it does demonstrate that communication is regulated by the listener's comprehension, and modifies an old perspective that the intact communicator dominates the nonintact communicator.

In traditional aphasia therapy, the focus has been on maximizing the linguistic system. However, results of this study suggest that the aphasiologist might want to work with the existing linguistic system to improve a patient's flexibility and his ability to play the speaker and listener roles in conversation. Thus, while the focus of therapy for some patients may be on cognitive-linguistic skills, the therapeutic focus for others may be more appropriately placed on pragmatic skills.

While pragmatic analysis is significant for the aphasic adult, The Communication Profile provides an important understanding of the conversational style of the partners as well. This type of evaluation of the dynamic interaction may well be a critical factor in determining the need for and direction of communicative therapy in adult aphasia.

ACKNOWLEDGMENTS

The authors acknowledge with gratitude the assistance of Gloria Schlisselberg, Gene Murray, Sheryl Bader, and Lois Jankeloff. In addition, we thank the Brooklyn College Speech and Hearing Center for its cooperation throughout this study.

REFERENCES

- Brookshire, R. A system for coding and recording events in patient-clinician interaction during aphasia treatment sessions. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1976.
- Chwat, S., Chapey, R., Gurland, G., Pieras, G. Environmental impact of aphasia: the child's perspective. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1980.
- Chwat, S. and Gurland, G.B. Comparative family perspectives on aphasia: diagnostic, treatment, and counseling implications. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1981.
- Corsaro, W.A. Sociolinguistic patterns in adult-child interaction. In E. Ochs and B.B. Schieffelin (Eds.), Developmental Pragmatics. New York, NY: Academic Press, 1978.
- Davis, G.A. and Wilcox, J. Incorporating parameters of natural conversation in aphasia treatment. In R. Chapey (Ed.), Language Intervention Strategies in Adult Aphasia. Baltimore, MD: Williams and Wilkins, 1981.
- Dore, J., Gearhart, M. and Newman, D. The structure of nursery school conversation. In K. Nelson (Ed.), Children's Language, Vol. 1. New York, NY: Gardner Press, 1978.
- Geller, E. and Wollner, S.G. Pragmatic development: Learning how to "function." Short course, Annual Meeting of the American Speech-Language Hearing Association, Detroit, Michigan, 1981.

- Helmick, J.W., Watamori, T.S. and Palmer, J.M. Spouses' understanding of the communication disabilities of aphasic patients. J. Speech Hearing Disorders, 41, 238-243, 1976.
- Holland, A. Some practical considerations in aphasia rehabilitation. In M. Sullivan and M.S. Kommers (Eds.), Rationale for Adult Aphasia Therapy. Nebraska: University of Nebraska Medical Center Print Shop, 1975.
- Holland, A. Communicative Abilities in Daily Living: A Test of Functional Communication for Aphasic Adults. Baltimore, MD: University Park Press, 1980.
- Lubinski, R., Duchan, J. and Weitzner-Lin, B. Analysis of breakdowns and repairs in adult aphasic communication. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1980.
- Metzler, N. and Jelinek, J. Clinical vs. home-based therapy. A comparison of effectiveness. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1977.
- Sarno, M.T. The Functional Communication Profile. New York, NY: N.Y.U. Medical Center, Institute of Rehabilitation Medicine, 1969.
- Schuell, H.M. The Minnesota Test for Differential Diagnosis of Aphasia. Minneapolis, MN: University of Minnesota Press, 1965.
- Ulatowska, H., Macaluso-Hynes, S. and North, A.J. Production of narrative and procedural discourse in aphasia. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1980.
- Wepman, J. Aphasia therapy: Some relative comments and some purely personal prejudices. Procs. Conf. on Language Retraining for Aphasics. Columbus, Ohio: Ohio State University, 1968.
- Wilcox, J. and Davis, G.A. Speech act analysis of aphasic communication in individual and group settings. In R. Brookshire (Ed.), Clinical Aphasiology Conference Proceedings. Minneapolis, MN: BRK Publishers, 1977.
- Wollner, S.G. and Geller, E. The communication profile. In John Irwin (Ed.), The Role of Pragmatics in Language Development. Covina, CA: Fox Point Publications (in press).

APPENDIX A

DEFINITIONS OF COMMUNICATIVE ACTS AND CONVERSATIONAL ACTS*

(From the work of S.G. Wollner and E. Geller, Methods of Assessing Pragmatic Abilities, in press.)

COMMUNICATIVE ACTS

1. Convey Content

a. Requests

Involves soliciting information and actions.

Subtypes include requests for information, action, clarification, permission

b. Comments

Includes descriptions and/or identification of observable events in the environment and statements which report facts or state rules.

Subtypes include labels, descriptions, attributions, rules, explanations.

- c. Instructional
Includes specific directions designed to elicit, expand, or give information so as to obtain a specific linguistic response.
Subtypes include elicit, expansion, give information.
- d. Responses
Involves the speaker providing solicited information to another speaker's prior remark, or the acknowledgment of another speaker's prior utterance.
Subtypes include acknowledgments, responses to questions, responses to clarification-requests.
- e. Performatives
Accomplish acts and establish facts by being said; e.g., That's mine, I go first, Stop that.
Subtypes include claims, jokes, protests.

2. Regulate Conversation

- a. Organizational devices
Accompanies an interactional exchange and controls the conversational flow, maintaining personal contact with the other speaker(s). E.g., It's your turn, By the way, Hey Sam.
Subtypes include attention getters, speaker selections, boundary markers, politeness markers.

3. Express Attitudes

- a. Expressives
Involve the conveying of feelings, attitudes, or offer of support.

CONVERSATIONAL ACTS

- 1. Initiate Interaction/Topic
Establishes joint attention/activity/reference; refers to any act which encourages a focused interaction by at least 2 participants in terms of a specified activity or a specified content.
- 2. Extend Interaction/Topic
Maintain the interaction through one of the following conversational sequences: acknowledgment, topic-relevant utterances, topic-shift utterances, topic-resumption utterances, clarification requests, response clarifications.
- 3. Terminate Interaction/Topic
Refers to any act which leads to the end of a focused interaction.

*Adapted from the work of J. Dore, M. Gearhart, and D. Newman (1978) and W. Corsaro (1979).

DISCUSSION

- Q: Please clarify your comment about the intact communicator dominating the non-intact communicator.
- A: An old perspective on discourse is that the intact person guides and regulates the client and gets him where he wants to go regardless of the severity of the speech impairment. The samples we analyzed

revealed that it was the other way around--that the spouse and clinician were regulated by the language-impaired person. Her syntax became progressively shorter, if you want to talk about form. But concerning the type of communicative acts, the spouse and clinician seemed driven to clarification requests--for example, What did you mean by that? Did you mean this? Did you mean that?--and this put a damper on the discourse. It also implied to us that the patient's language difficulty was regulating her behavior, because she couldn't get on with her own business, or where she wanted to go.

Q: You mentioned something about suprasegmental markers. What sort of markers did you look at?

A: We didn't. Although The Communication Profile does account for linguistic and nonlinguistic communicative acts, it doesn't account for suprasegmental features. Sometimes it seemed that the vocal characteristics or inflectional patterns were just as communicative as what was being said. We had no way of quantifying or describing this through The Communication Profile that we used. But from observation of the videotape, it was apparent that this would be valuable to examine, and we plan to investigate this.

Q: The taxonomy is beautifully simple, and I'm distressed at how long it seems to take to use it. I developed a much more complicated taxonomy for use in a study of aphasic persons in various stages of recovery, and my first thought on looking at your work is ah, we can collapse our taxonomy into yours. I'd like to hear you expand on the amount of time it takes to administer this taxonomy, because I'm wondering what features you could manipulate in simplifying this tool. From your data and our own, for example, it seems that a significant variable is the aphasic person's ability to initiate. It seems that his ability to initiate language is an aspect about which a number of generalizations can be made which cannot be made about an aphasic person who does not demonstrate that feature. His ability to initiate topic, topic change, and the like, are probably the most sensitive indicators of good pragmatic range of abilities.

A: I'm not sure that shortening the procedure is the best direction to take. The transcription process, the analysis, is lengthy, but the ultimate result is profitable in planning treatment. For example, we recently did some interesting work with the data. We observed the videotape with one of the spouses, at her request, and discussed the interaction together. We found this was invaluable in her case, in setting up treatment strategies. There's no question that this is time-consuming; but the ultimate result in terms of therapy may be worth the time spent initially.

Q: I was wondering if you have any reactions to these results.

A: In the conversational act analysis, when we were looking at the extensions, we saw things that we did not expect. For example, the degree to which the aphasic person directed what went on during the interaction was much more apparent from the in-depth analysis than our original assumption--that the reason he was responding most of the time was because the clinician was requesting. After the analysis, just the opposite was apparent. The clinician was requesting because

the aphasic person was not providing accurate responses. So the clinician had to do something to keep the interaction going. We also see the usefulness of this procedure in differentiating language disorders that can be differentiated by language use--senile dementia, for example, or schizophrenia. From two samples we cannot generalize very far even in aphasia, but perhaps we can head in that direction.

Q: I'm concerned that it takes so much time. What do you do when you look at a tape? Do you look across at the communicative acts, and then do you replay for analysis of the conversational turns?

A: That's exactly how we did it. We did it carefully twice, because initially we didn't have our own fluency with the method to use both procedures simultaneously. Initially we had to replay the tape many, many times.

Q: Do you suppose that with increased familiarity you could collapse the two and save yourself some time?

A: Most definitely. One hangover though, is that when we were through for the day and left the room to talk with other people, we were categorizing everybody's utterances. One of the most important characteristics of the whole videotape process remains the integrity of the replay button, especially for garbled utterances and apraxic errors. We have to investigate not only a shorter procedure but how to determine what is the optimal sample to analyze. We used the criterion of 100 utterances--that is, 100 conversational turns. So that gave us 200 utterances to examine for each of 4 interactions. We have to determine what this best sample is.

Q: Will you look at error behavior in a parallel form? For example, repairs, breakdowns, and interchanges. That suggests to me another taxonomy for which a totally adequate taxonomy would have to account.

A: That is exactly where we hope to take the analysis of the data.