Speech Act Analysis Of Aphasic Communication In Individual and Group Settings

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Background

Assessment of the deficits associated with aphasic language production have generally focused on the linguistic output in isolation. That is, language production is typically assessed with regard to the accuracy and structure of a response. Although such a means of assessment certainly provides information concerning the syntactic and lexical aspects of communication, it does not fully consider the role that context plays in language production. Recent linguistic literature (Searle, 1975; Gordon and Lakoff, 1975) suggests that in order to achieve a complete understanding of communicative effectiveness we need to consider the relation of a linguistic proposition to its context. This type of focus can be called pragmatics and is probably best defined as a study of the ways in which language is used in social settings. The purpose of this investigation was to do a pragmatic analysis of patient/clinician communication in two settings: individual therapy and an unstructured social group. We were primarily interested in developing a method of analysis to obtain a more complete description of our patient's communicative effectiveness in these two settings.

Searle (1969) has generated a theory, known as speech act theory, which we have found useful in applying pragmatic concepts to the analysis of a communicative interaction. Searle describes a speech act as the most basic unit of communication which consists of two elements: 1) A proposition which can be defined as the words uttered or the symbols employed in communication and 2) An illocutionary force which can be defined as the speaker's intention in communication. Speech acts can be regarded as such things as making statements, giving commands, thanking, greeting, warning and so on. Furthermore, speech acts are made possible by, and performed in accordance with, a system of rules for the combination and use of symbolic elements. The basic unit of communication is not the symbol employed, that is, the proposition, but rather the use of propositions in the performance of speech acts. Thus, the idea of a speech act is intended to capture the relationship between a particular proposition and its use in communication.

The analysis of language, in terms of speech acts, would seem to offer valuable insights into aphasic communication. This has been most recently discussed by Holland (1975) as she was examining the comprehension and use of speech acts in aphasic patients. She reported two interesting features. First, in spite of severe limitations in the expression of propositional content, she observed aphasic individuals, in relatively natural settings, communicating a variety of intentions. These intentions included such things as warning, agreeing, promising, and complaining. She suggested that formal diagnostic tests seemed to minimize the patient's opportunity to reveal these communicative assets. Second, she suggested that the traditional individual treatment setting appeared to limit the range of speech acts that the patient

may be required to comprehend and produce. She reported that the patient is usually required to comprehend requests and to produce assertions. The primary emphasis in this form of treatment seemed to lie in the proposition itself rather than in the use of a proposition to perform a variety of speech acts. For this reason, the therapeutic setting did not seem to be totally facilitating the skills necessary to function in a communicative setting with people other than the clinician.

Therefore, the purpose of the present investigation was to develop a method for analyzing speech acts used by aphasic patients. In addition, we have related the results of using this method on some of our patients to Holland's (1975) claims regarding the range of speech acts expressed by aphasic individuals.

Method

Subjects

Three adult aphasic patients who were enrolled in a 3 hour per day treatment program at the Memphis Speech and Hearing Center served as subjects in this investigation. The patients' clinicians were graduate students who were in their last semester of training in our M.A. program. The symptom complexes of each subject corresponded to three different types of aphasia: one Broca's, one Wernicke's, and one anomic. A complete subject description with examples of the symptom complexes and a list of standard test scores can be found in Table 1.

Data Collection

The data used in the investigation consisted of three one-hour video-tapes per subject which were recorded from their individual treatment sessions, and four, 30-60 minute videotapes which were recorded from group sessions consisting of informal social interaction among the three subjects and their clinicians. It should be emphasized that the social sessions were not structured group treatment sessions; rather, they represented a rest period between individual and group treatment. Thus, we felt that these social sessions, which consisted of refreshments and informal conversation, could be considered representative of a more natural communicative setting.

Data Analysis Procedures

These data were transcribed from the videotapes, for each subject, by noting all utterances, gestures, and/or intonation contours, as well as the relevant context in which each was observed. Included in the relevant context was a transcription of all the clinicians' verbalizations. Thus, we had a transcript of the communicative exchange between the patients and the clinicians. The transcribed data were then classified according to the speech acts proposed by Searle, by relating the propositions to their contexts. This system of classification was done for the subjects' as well as the clinician's communicative acts and included verbal as well as nonverbal communication. The speech act categories used in the analysis are listed in Table 2. If any of the communicative acts did not fall within one of the speech act categories they

Table 1. Symptom Complexes And PICA Scores Of The Three Subjects

PICA Scores (November, 1976):	Anomic		Broca's		Wernicke's	
Overall	13.00	81%ile	11.32	58%ile	9.30	38%ile
Gestural	13.71	74	13.63	72	12.86	53
Verbal	13.73	75	12.25	56	3.90	16
Graphic	12.70	91	7.63	52	8.15	58

Boston Diagnostic Aphasia Exams And Speech Characteristics:

Anomic
1. Auditory comprehension good.
2. Speech fluent, grammatically complete
3. Frequent verbal paraphasias, circumlouctions.
4. Repetition poor for low frequency phrases.

Broca's
1. Comprehension good in conversation, poor for stories.
2. Speech hesitant, grammatically incomplete.
3. Phrase length 7-words, occasionally.
4. Occasional literal paraphasias.
5. Incomplete repetitions.

Wernicke's
1. Poor auditory comprehension; reading much better.
2. Speech fluent with variety of paraphasias.
3. Neologistic jargon being replaced by common social phrases.
4. Inability to repeat.

Table 2. Summary of the Speech Acts Used For Classification (Based on those Discussed By Searle, 1969).

Act	Condition	Example (Speaker)
Request	The speaker believes the listener is capable of performing the act but may not perform the act in the normal course of events. Counts as an attempt by the speaker to get the listener to perform the act.	"Please shut the door."
Assert	The speaker believes some proposition and it is not obvious that the listener knows the proposition to be true. Also includes a sub-set called affirm which is instances in which the speaker is agreeing with or confirming a proposition.	"It's time to go." "It's a nice day." "Yes it is."
Question	The speaker does not know if the proposition is true (or does not have the information needed) and thinks the speaker may be able to provide the information. Also includes instances in which the speaker wants to know if the listener knows the answer.	"How old are you?"
Greet	The speaker has just encountered the listener.	"Hi"
Thank	The speaker believes that some act, attributable to the listener, has benefited him/her or the act is appreciated by the speaker.	(Listener offers speaker his/her chair.)"Oh thank you."
Order	The speaker believes the listener is capable of performing the act and may not perform it in the normal course of events and the speaker perceives himself/herself as in a position of authority over the listener.	"I want you to type this letter."
Argue	Speaker believes some proposition and wishes the proposition to be believed by the listener who does not seem to know its true.	"No, the movie only took 2 years to make."
Advise	Speaker believes that some act will benefit the listener and it is not obvious that the listener will perform the act in the normal course of events.	"You shouldn't smoke."
Warn	Speaker believes that some event will occur which is not in the listener's interest and that it is not obvious to the listener that the event will occur.	"Watch out, you'll burn your hand."
Congratulate	Speaker is pleased with some event, related to the listener, which has taken place. Or, speaker believes that some event which has taken place is in the listener's interest.	"You did a nice job."

were simply labeled as "other". To assess reliability of the classification of speech acts, 25% of the data was classified by two independent observers who were familiar with speech act theory. Percentage of agreement for the classification was 92.4%.

Results

Figure 1 displays the results for individual therapy. This includes the proportions of the types of speech acts used by the patients and their clinicians. Upon inspection of the line representing the patients, it can be seen that they produced almost exclusively assertions. With regard to the clinicians, a somewhat wider variety of acts were observed, with the largest proportions being distributed across questions, requests, and assertions. In general the clinicians produced questions and requests and the patients produced assertions in response to the questions and requests.

Figure 2 shows the results for the social groups. Overall, it can be seen that the patterns of speech act usage for the clinicians and the patients were very similar to the patterns of usage in individual therapy. For the patients, there was a lower level of assertions and a higher level of questions and a slightly higher level of requests than were observed in individual therapy. For the clinicians there was an even higher level of questions, a slightly higher level of assertions, and a lower level of requests than in individual therapy. The levels of other speech act usage remained about the same for the patients and the clinicians across both settings. In the social groups, the clinicians' total level of questions and requests closely approximated the level of the patients' assertions. This seemed to indicate that there were not many self-initiated assertions on the part of the patients.

It can also be seen, in Figure 2, that an additional population is plotted. This includes data informally obtained from a group of 5 normal adults under a situation similar to the social group. The purpose of these preliminary data was to give us some idea as to the normal distribution of speech act usage. By examining the proportions of speech act usage for this population you can see that there is more of a balance among the usage of request, assert, and question than was observed for the aphasic patients. You will also notice that the usage of other speech act types, unlike the aphasic subjects, is at levels above 0%. These preliminary data obtained on normal adults would seem to indicate that the aphasic subjects' usage of assertions in the social groups was abnormally high, while their usage of other speech act types was abnormally low.

Discussion

In relating these results to Holland's claims, we found that individual treatment did indeed seem to be primarily centered on the propositional aspect of communication. This is supported by the fact that in the individual treatment settings the patients produced primarily assertions in response to the clinicians' questions and requests.

We observed a slight difference in the patients' speech act usage in the informal social group but the general range of speech act usage was still rather limited. However, we do not feel that this was because the patients were incapable of producing a wider range of speech acts. Rather, we feel there are
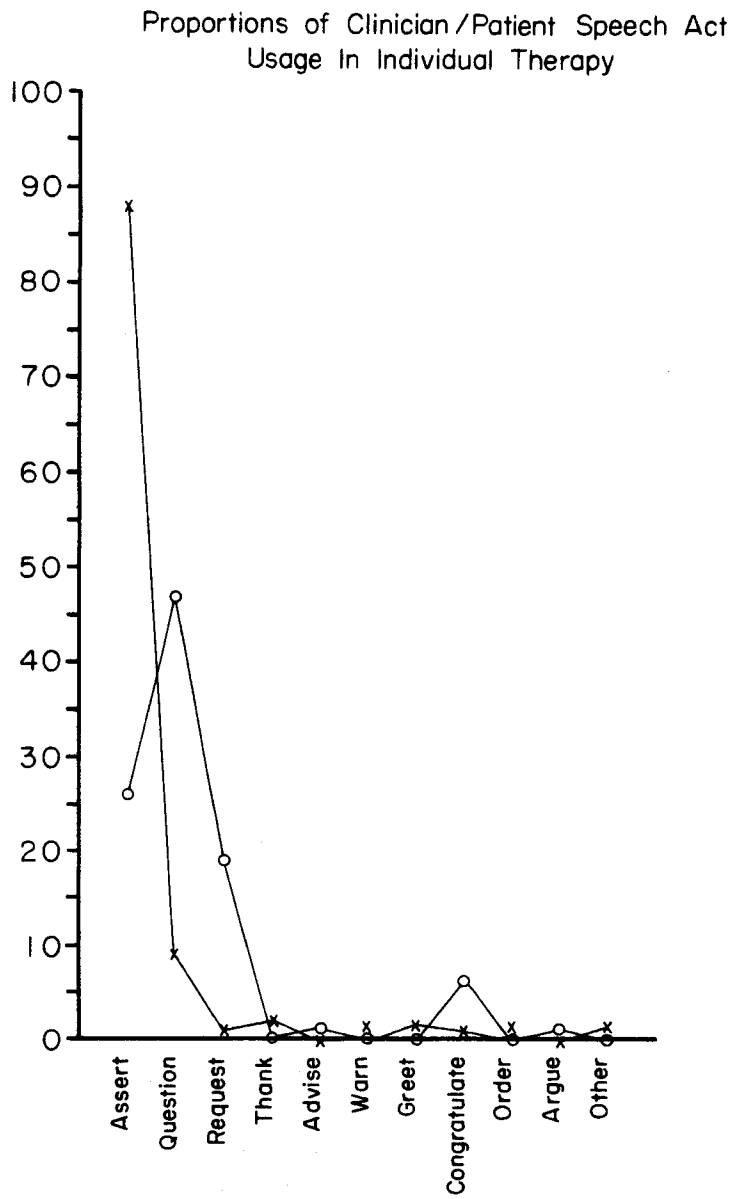
Proportions of Clinician/Patient Speech Act
Usage In Individual Therapy

Figure 1

0———0 = clinicians

x———x = patients

Proportions of Patient, Clinician, and Normal Adult
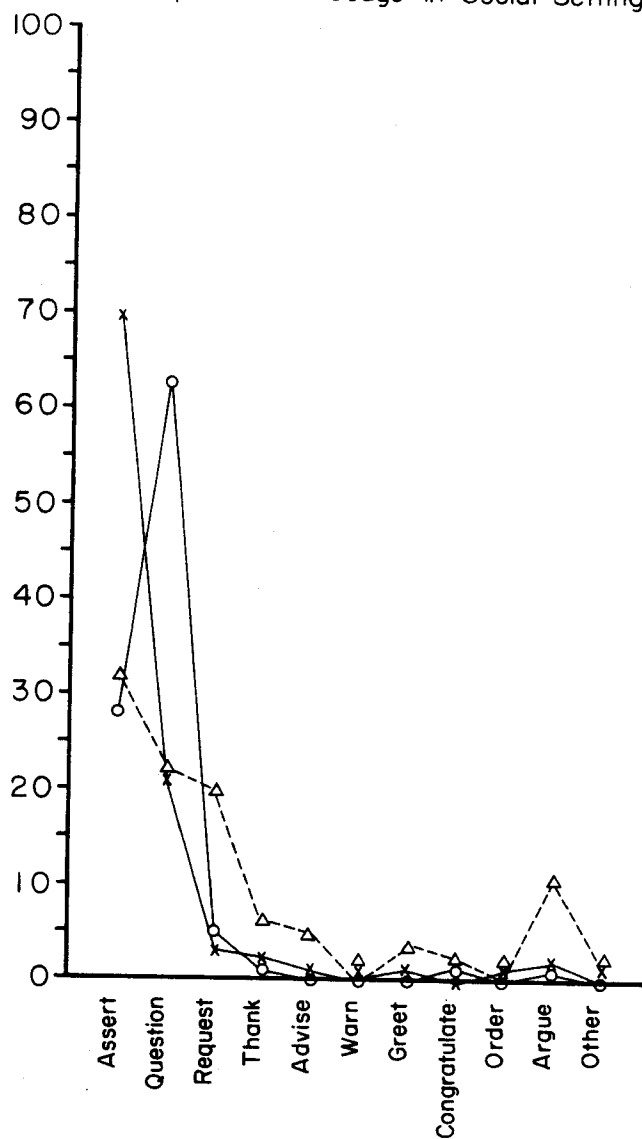Speech Act Usage In Social Settings

Figure 2

0———0 = clinicians

x———x = patients

Δ———Δ = normal adults

possible variables which can account for the limited usage observed in the social groups. First, it seems that the clinicians' patterns of speech act usage are an important variable to consider. That is, essentially there were no differences observed in the general patterns of the clinicians' speech act usage in the individual treatment settings and the social groups. In fact, in the social groups the clinicans asked an even larger amount of questions. It appeared that our clinicans were retaining their clinician role in the social setting. Since the patients were used to having the clinicans structure the environment in the individual treatment sessions, it seemed likely that they either expected, or perhaps merely allowed, the clinicans to continue to structure the linguistic environment in the social groups.

However, in addition to the influences of the clinicians' responses, we also need to consider the influences of the structure of the individual treatment sessions. It seems possible that the lexical and syntactic aspects of communication were so strongly emphasized in individual therapy that the patients were perhaps disproportionately concerned with this, and inadvertantly limited their own communicative effectiveness. We have all perhaps encountered examples of this, in situations where the patient would either give up, or not attempt to communicate something because he did not have the words.

The major point we are interested in making is that to communicate effectively we employ much more than a lexicon and a set of syntactic and semantic rules; we also communicate intentions. Unless we have an intention to communicate, all the other aspects of language are essentially meaningless. In applying these concepts to aphasia rehabilitation we are suggesting that the lexical, syntactic, and gestural aspects of communication be incorporated into a framework of communicating intentions, for it seems likely that the capacity for having intentions to communicate is one that is relatively unaffected in aphasia. And, it would seem that this is a communicative asset that can be used to advantage in aphasia rehabilitation. The idea of using a less impaired or relatively unaffected modality to strengthen an affected one is not a new one in the aphasia literature and we are suggesting that this sort of relationship can apply to the communication of intentions and the formulation of propositions, either gestural or linguistic, in aphasic patients' language. Furthermore, it seems that the best way to implement this notion is to start providing opportunities in individual and group treatment for the patients to produce propositions which can communicate a variety of intentions. We do not mean to suggest that every treatment session should provide opportunities to communicate all possible intentions, for this is neither feasible nor realistic. But rather, treatment should be structured so that the patient is allowed to intend more than an assertion in response to the clinician's questions. For example, playing charades in a group setting could provide opportunities for asserting, questioning, arguing, and possible advising. In individual treatment the clinician could select, for a conversation topic, something which he or she knows the patient is very familiar with, such as the patient's line of work. The clinician could then purposely make some either inappropriate or incorrect statements concerning the topic. This could possibly elicit such acts from the patient as questioning, advising, arguing, or perhaps even warning. There are potentially an infinite number of other situations which can be designed to elicit a variety of speech acts. The point is, the creation of such situations would not only emphasize the patients' communicative assets, but it would also provide opportunities in treatment for the patient to communicate more realistically. And, finally, it seems that a feasible means of evaluating our effectiveness in

creating such situations would be to employ a speech act analysis of the communicative interaction in therapeutic settings.

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