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Initiation of Speech Acts Among Older Brain Damaged Adults

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INITIATION OF SPEECH ACTS AMONG OLDER BRAIN DAMAGED ADULTS

BY

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THESIS

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INTRODUCTION

The communicative process, comprising both verbal and non-verbal activity, is highly dynamic and requires close observation. Typically, a speaker delivers an auditory or verbal message to the listener. In the absence of visual, kinesthetic, tactile or proximinal cues, the listener must interpret solely on the basis of linguistic/acoustic information. Ferrara (1980) delineates nine "speech act sequences" to categorize communicative verbal activity. These sequences include the following: initial greeting, howareyou, non-topical, encounter-evaluative, arrangement, topical, closing-greeting, channel-clearing, and emergency sequences. Of these speech acts several are self-explanatory; however, others need clarification.

According to Ferrara, an encounter-evaluative sequence refers to conversation that serves the purpose of being polite and building rapport; an arrangement sequence includes talk that is dominated by invitations, offers, questions and orders; a channel-clearing sequence is utilized when the dialogue needs to be restored, for example, "I beg your pardon." Finally, an emergency sequence alerts the listener to take immediate action. For example, message interpretation requires the processing of both verbal and non-verbal components (Sanders, 1985; Buck &

Duffy, 1980; Vrugt & Kerkstra, 1984; Ellsworth & Carlsmith, 1968; Mackey, 1976; and McGee & Barker, 1982).

Both the content of the preceding utterances and the biases of the listener should be considered when interpreting non-verbal behavior. Thus, a sense of stability and caution are developed in the analysis of non-verbals (Sanders, 1985). Non-verbal behaviors may assume one of three functions. They may: (1) perfectly match; (2) partially match; or (3) show no relationship to the previous utterance. In the case of discrepancies, decisions are made in favor of the non-verbal behavior (Sanders, 1985).

Non-verbals may signal internal or emotional states (Sanders, 1985). Buck and Duffy (1980) suggest that spontaneous communication "arises not from an intention to communicate, but directly, in a natural or conditioned relationship, with an emotional state" (p. 360). Natural non-verbals include behaviors such as posture, facial characteristics and body movements; which signal the interpreter to internal emotional states (Sanders, 1985).

Non-verbal channels become of paramount importance when dealing with individuals having reduced or absent verbal abilities. It is argued that these non-verbal abilities in some brain-damaged individuals may be spared.

The following review strives to delineate verbal and non-verbal behaviors to be studied, and to provide

information as to how these behaviors are affected in the older adult. This study, in turn, will view the communicative process of older brain damaged adults and detail changes in the process as a function of environmental adjustment, specifically the listener.

Verbal Activity

Verbal behavior is rule governed. Ferrara (1980) investigated a rule system which allows speakers to shape their utterances for proper execution . The utterance must not only deliver a message or intent to communicate but must also be consistent with semantic and pragmatic cultural rules. Ferrara (1980) termed this system "speech act sequences". For example, the initial greeting sequence provides the opportunity to open the encounter. This particular sequence involves recognition of another and functions to further verbal exchange.

Once the conversation has been established, other sequences are used. Each speaker may assume control of the direction of the conversation. In Ferrara's study (1980), it was noted that for a given topic of discussion, the speaker may respond in one of three ways: (1) with information totally relevant; (2) with information that is relevant while introducing minor shifts that will eventually result in subject change; or (3) with information that will negotiate a topic shift.

Ferrara (1980) suggests that the speaker may maintain or relinquish control of the speaking platform. One device used by speakers to maintain conversational control is the "preface." This allows time for the completion of an "overextended" utterance, for example, "Let me tell you..." Another option is to allow the listener to respond. When this option is exercised, the speaker allows the opportunity for turn-taking to occur. The use of adjacency pairs aid in turn-taking transitions. These pairs include question/answer, compliment/declining, request/grant, offer/thanks, reproach/justification, and greeting/greeting pairs. Other turn-taking devices include direct questions, tag questions, and/or transitions.

Authors Ferrara (1980) and Boden and Bielby (1983) have indicated that verbal pauses are allowed and sometimes expected between speakers. Pausing also occurs within an individual's connected speech. Pauses or hesitations may remain unfilled, filled with utterances such as "ah" or "eh," or become filled with a sentence revision (Vrugt & Kerkstra, 1984). McGee and Barker (1982) state that when one does not allow the listener to interrupt and maintain desired length of the pause, he becomes the dominant communicator. Research concerning filled pauses states that males have a higher incidence of pauses filled with "ah" or "eh" than do females, and that the ratio increases with anxiety or discomfort. Women, on the other hand, tend to

laugh more and display a "freezing reaction" when confronted with an uncomfortable situation (Vrugt & Kerkstra, 1984).

Non-Verbal Activity

Regarding non-verbal behavior, two aspects will be discussed, proxemics and eye contact. The observation of specific non-verbal behaviors may provide an indication of willingness to engage in interaction (Buck & Duffy, 1980).

Proxemics

A 1977 study by Skolnick, Frasier and Hadar, investigated invasion of personal space and conversation initiation. Invasion was defined by these authors as an intrusion in to an individual's personal space. This personal space is, in turn, defined by each individual and is directly correlated to a degree of comfort and intimacy (Skolnick, Frasier & Hadar, 1977). Results indicated that males were more likely to initiate conversation when invaded by females, and vise versa. Others have investigated personal space, otherwise called body orientation or proxemics, and found the following information. When in a public environment, such as a library or waiting room, women tend to protect the areas to either side of themselves and are less likely to be outspoken by reproachment from other individuals. Men, on the other hand, protect and/or secure the areas in front and behind themselves. They are also

more likely to initiate unfriendly conversation when their personal space is invaded (Vrugt & Kerkstra, 1984).

Mehrabian (1968) investigated body movement, orientation and posture in relation to attitudes towards the speaker. His data indicated no significant difference between the sexes.

Invasion of personal space also includes touching. Touching occurs more frequently between adults when intimate attraction is acceptable (Vrugt & Kerkstra, 1984). Rinck (1980) observed touch in the elderly population and found it to be similar to that of the general population. There was a trend, however, for elderly females to touch more often.

Eye Contact

Eye contact or mutual gaze, like proxemics, provides an indication to internal attitudes or emotion states (Buck & Duffy, 1980). In dyadic interactions, the listener is more likely to maintain eye contact when listening than when speaking (Ellsworth & Carlsmith, 1968). Libby and Vaklevich (1973) discuss options for eye behavior. The listener may either maintain or break eye contact. The subject may chose either lateral or vertical gaze aversion to break eye contact. Gaze aversion was discussed as an index of high or low abasement personality traits (Libby & Vaklevich, 1973). The low abasement individual tends to look more to the left; the high abasement individual looks equally to either side.

Mehrabian (1968) suggests that gaze behavior is affected by degree of familiarity and attitude towards the addressee. Similarly, Ellsworth and Carlsmith (1968) state that the amount of eye contact may predict the rate at which subjects initiate conversation.

Older Adults

Both verbal and non-verbal activity are bound by cultural rules. Just as these behaviors vary between speaker and listener, they tend to vary between age groups. Older adults' interactive abilities may be subject to change as their ages increase (McGee & Barker, 1982). Research by McGee and Barker (1982) is based on "social devaluation of the aged and the typical later life declines in power resources" (p. 247). These individuals are apt to experience loss in control and status. Nonverbally, social dominance is indicated by "interrupting, crowding another's space, frowning, looking stern, or pointing" (p. 250). On the other end of the scale, deference behaviors include "lowering eyes, averting gaze, moving away, yielding to interruptions, obeying non-verbal commands, and smiling" (p. 250).

Boden and Bielby (1983) state that older adults are sufficiently able to respond to turn taking obligations, stating that "latching", the ability to reduce time between responses, in older healthy adults is not significantly

different from that of younger subjects. In fact, a trend appeared in their research. Older adults appeared to excel in decreasing the "latching" time between subjects. Boden and Bielby (1983) investigated the structure of older adult's speech. No significant differences were reported when compared to that of younger subjects. The older adults did, however, excel in decreasing the length of pauses between subjects. Hutchinson (in Hull, 1980) agrees, adding that there is no change in the length of utterance. In addition, Hutchinson states that with increasing age, older adults may pull away or withdraw from social interaction and thus may lose their communicative intent.

Lawton (1977) adds that limitations in health, cognitive ability and ego strength heighten the docility and deference of the individual. McGee and Barker (1982) state that declines in the senses, for instance hearing and vision, may impact deference and dominance by "undermining both old people's ability to meet culturally defined standards of good demeanor and their ability to command deference from others" (p. 254). Factors, affecting both verbal and non-verbal behaviors, may become more pronounced with brain degeneration (Hull, 1980).

Statement of the Problem

The communicative phenomena encompass many facets. The verbal message consists of a linguistic/acoustic signal. The non-verbal message, on the other hand, provides a visual and

perhaps tactile signal. There is a complex interaction between verbal and non-verbal behaviors. Buck and Duffy (1980) describe this interaction as "A cloudy day can be a sign of possible rain and a facial expression, gesture, or body movement can be a sign of an emotional state without any intention on the part of the subject to communicate the presence of such a state" (p. 360). The combination of the two provides the listener with an in-depth assessment of the speaker's needs.

Communicative intent may be signaled by two aspects of non-verbal behavior, body orientation, and eye contact. Body orientation may give a clue to the comfort of the speaker, thereby increasing or decreasing the possibility of interaction (Mehrabian, 1968). Libby and Yaklevich (1973) provided an in-depth discussion on eye contact or eye maintenance. To recapitulate, the degree of lateral gaze aversion is a possible indicator of abasement. In addition, gaze maintenance may be indicative of the subject's need to nurture and prolonged 'left' looking may indicate the subject's necessity to escape the situation. Results of the Ellsworth and Carlsmith study (1968), indicate that positive verbal content and frequent eye contact produce positive evaluations. Positive evaluations may increase the likelihood of social interaction. As the encounter progresses, a storehouse of feedback is formed (Lalljee &

Cook, 1972). This feedback influences interactional performance.

This study will examine aspects of non-verbal behavior, such as body orientation and eye contact, as well as the verbal aspects of initiation and pausing in older adults. The subjects, older adults, have been noted to withdraw from verbal and non-verbal interactions as a result of decreased physical sensitivity (Hull, 1980; McGee & Barker, 1982). The population of brain-injured adults is less verbal. Additionally, it may be "harder for the aged to pick up on the nuisances of interaction; and they may feign deference to seek out others for protection (McGee & Barker, 1982, p. 255). Therefore, an investigation combining verbal and non-verbal aspects may provide useful information about the communicative process of older handicapped adults.

This investigation is concerned with the following questions:

1. How long does it take for a brain-damaged older adult to initiate conversation with a stranger; and is that time affected by the age of the stranger?
2. Are the lengths of conversational pauses for the older brain-damaged adult dependent on the age of the listener?

3. Is there a difference in the body orientation of the older brain-damaged adult as a result of the age of the listener?
4. Is there a difference in frequency of eye contact of the older brain-damaged adult as a result of the age of the listener?

METHODOLOGY

This study examined the following: (1) time to initiate conversation; (2) length of pausing; (3) description of body orientation; and (4) frequency of eye contact.

Subjects

The sample population consisted of 15 brain damaged older adults, 7 female and 8 male, ranging from 55-85 years of age, with a mean age of 69 years. Seven of the 15 subjects (4 male, 3 female) exhibited characteristics of left-hemisphere damage and 8 displayed characteristics of right-hemisphere damage. Brain injury, in all subjects, was the result of a cerebro-vascular accident (CVA) and occurred within 12 months of videotaping. All subjects were acquired from the same outpatient rehabilitation center. Mobility was apparent in the head and neck, trunk, and at least one arm. No other dibilatating condition, for instance Alzheimer's type dementia, existed. Specific information describing each patient's sex, age, time since onset and site of lesion is given in Appendix A.

Each subject had adequate understanding of conversational speech when presented at a normal level in quiet. In addition, pure tone results for the frequencies 500 and 1000 Hertz were screened. Audiometric screening

forms appear in Appendix B. Each subject had adequate vision, which enabled him/her to identify pictures. Vision was screened by the Speech-Language Pathologist (Appendix C). Finally, an orientation checklist was completed by subject's Speech-Language Pathologist (Appendix D) within one month of the experiment to verify orientation to time, date, place, and self.

Confederate

The confederate, an individual specifically selected by the examiner, was seated on one side of the room as the subject entered. The confederate was instructed not to initiate conversation with the subject. If the subject did not initiate in 2 minutes, the confederate looked at the subject and smiled. If the subject still did not initiate conversation within the following 2 minutes, the confederate initiated conversation. If conversation was initiated by the subject, the confederate responded and continued the conversation. Two female confederates were used for the study, a young confederate, 23 years of age, and an older confederate, 85 years of age.

Experimental Situation

The experiment consisted of videotaped communication samples in which the subjects were seen individually with confederates. Each subject was videotaped twice, once with

the younger confederate and once with the older one. Subjects were randomly assigned to confederates for the first and second sessions insuring an equal number of subjects in each experimental cell. The session was recorded, and the first 6 minutes with each confederate were analyzed.

Recording of Data

The room was equipped with video/audio instrumentation. The camera used was a Panasonic VHS Omni Movie HQ, model PV 2200. The entire session was recorded on TOZAI premium grade T-120 VHS cassettes. All data was collected from the video/audio tapes which were viewed at a later date. Forms for data collection appear in Appendix E.

Scoring

Four specific areas were sampled. These areas included: (1) time of speech initiation; (2) length of conversational pauses; (3) body orientation; and (4) frequency of eye contact. Initiation of conversation was recorded the first time the subject required a response from the confederate. Lengths of conversational pauses were sampled every 30 seconds. A conversational pause consisted of breaks of over .5 seconds in duration within the subject's speech. If the confederate interjected with any type of vocalization, the pause was not considered. Tallies

of body orientation were scored by frequency of ocurance. Specific areas observed were: touching, forward lean, turning towards, arms at rest, turning away, leaning away, and arms creating a barrier. A positive and negative score was derived for each session. Eye contact was sampled every 30 seconds and was counted in terms of frequency. Eye contact consisted of the subject looking directly at the confederate. Details for scoring appear in Appendix F.

Procedure

General permission to videotape subjects for treatment purposes was obtained by the rehabilitation center prior to the experiment. Videotaping, with confederates, was completed for the therapy session and released to the experimenter at the conclusion of the session, by the subject. At that time the subject allowed or prohibited the use of his/her experiment in the final product by signing a release form (Appendix G).

Upon arrival, the subject was asked to wait in a room while their treatment room was being readied. The waiting room was complete with a video camera and one of the confederates. The equipment was turned on prior to the subject entering the room. The subject was placed in the room to wait for his clinician to prepare his therapy session. The subject was seated to the right of the confederate. The first confederate acted as instructed.

At the end of 6 minutes, the first confederate was asked to leave and the second confederate was seated in the empty chair. The room was arranged in the same manner for each subject as is detailed in Appendix H. There were no introductions. Again, the confederate remained with the subject for 6 minutes.

Reliability

The video/audio recording was analyzed by the examiner. Following the completion of the observations, four tapes were randomly selected and a second observer was asked to re-score the tapes. The observer was a speech language pathology master's candidate. The same procedure was used by the observer as was initially used by the examiner. The data was scored as follows: First the tape was watched to measure time of initiation for each confederate. The tape was then watched a second time to measure the length of conversational pauses. Next, the tape was reviewed to measure body orientation. Finally, the frequency of eye contact was marked. The scoring directions appear in Appendix F. The range of inter-rater reliability in the four areas was .92 - 1.0. The mean inter-rater reliability was .96.

RESULTS

Nonparametric statistics and a .10 level of significance were utilized to make comparisons, assess statistical significance, and answer questions presented in the methodology.

The first area looked at by the examiner was the length of time required for a brain-damaged adult to initiate conversation. The average length of time required for the subjects to initiate conversation was 195.5 seconds. The most frequently occurring time was 419.0 seconds, which was acquired by 12.5% (4 subjects) of the subjects. These four subjects never initiated conversation, but did respond to comments and questions posed by the confederate. The range of initiation was 0 to 419 seconds. It should be noted that in 19 cases the subject initiated speech before the confederate opened the discussion, and in 13 cases the subject initiated conversation after the discussion had begun.

The Wilcoxan Matched Pairs Nonparametric Test was utilized to determine if the subject's time of initiation was dependent on the age of the confederate. The results indicated that there was a significant difference between the groups at the .10 level of significance. Subjects

initiated conversation more quickly with the older confederate than with the younger confederate.

The second area conversational pauses, was examined in both groups. The mean length of pauses exhibited by the combined groups was 1.524 seconds. The most frequently occurring length was 1.5 seconds and the range was 0 to 4 seconds. The Wilcoxon Matched Pairs Test was utilized to compare the length of conversational pauses in the two experimental situations. The results revealed no significant difference (.10 level of significance) in the frequency of pauses for the subjects when talking with the older confederate versus the younger confederate.

The third area body orientation, was examined. This particular category derives a positive and a negative score for each interaction with each confederate. The results were then summed to allow statistical manipulations. The average summed score was +.438 which indicates that, as a whole, this group of subjects was slightly positive, non-verbally. The most frequent score was +2; 18.8% of the population achieved this summed score. The range was from -14 to +7. The Wilcoxon Matched Pairs Test was then utilized. This test resulted in a p value of .3359 which is not significant at the .10 level. This finding indicates that there is no difference in non-verbal activity when relating to different aged confederates.

The data was also plotted into two figures, using the original positive and negative scores. Figure 1 consists of a line graph depicting the pair of scores derived in each situation for subjects 1-8; Figure 2 for subjects 9-15.

By looking at the data in this manner, there is little variance in the non-verbal behavior of the subjects, when placed with two different confederates. Additionally, subjects that showed a great deal of non-verbal behavior in one situation showed a great deal of activity in the second situation. Conversely, subjects with limited activity with one confederate displayed similar activity with the other. Only one subject, (subject 10), appears to show a difference in activity between the two confederates.

The fourth area frequency of eye contact, yielded the following results. The mean length of eye contact was 3.226 times per minute. The most frequently occurring score for eye contact among these subjects was 2.66 times per minute; 12.5% of the population achieved this score. The range varied from 0 to 9.66 times per minute. The Wilcoxon Matched Pairs Test was used to indicate if a significant difference between the younger and older confederates was evident. Results indicate a highly significant difference exists between the two groups, at the .10 level. Subjects looked at the younger confederate more frequently than at the older confederate.

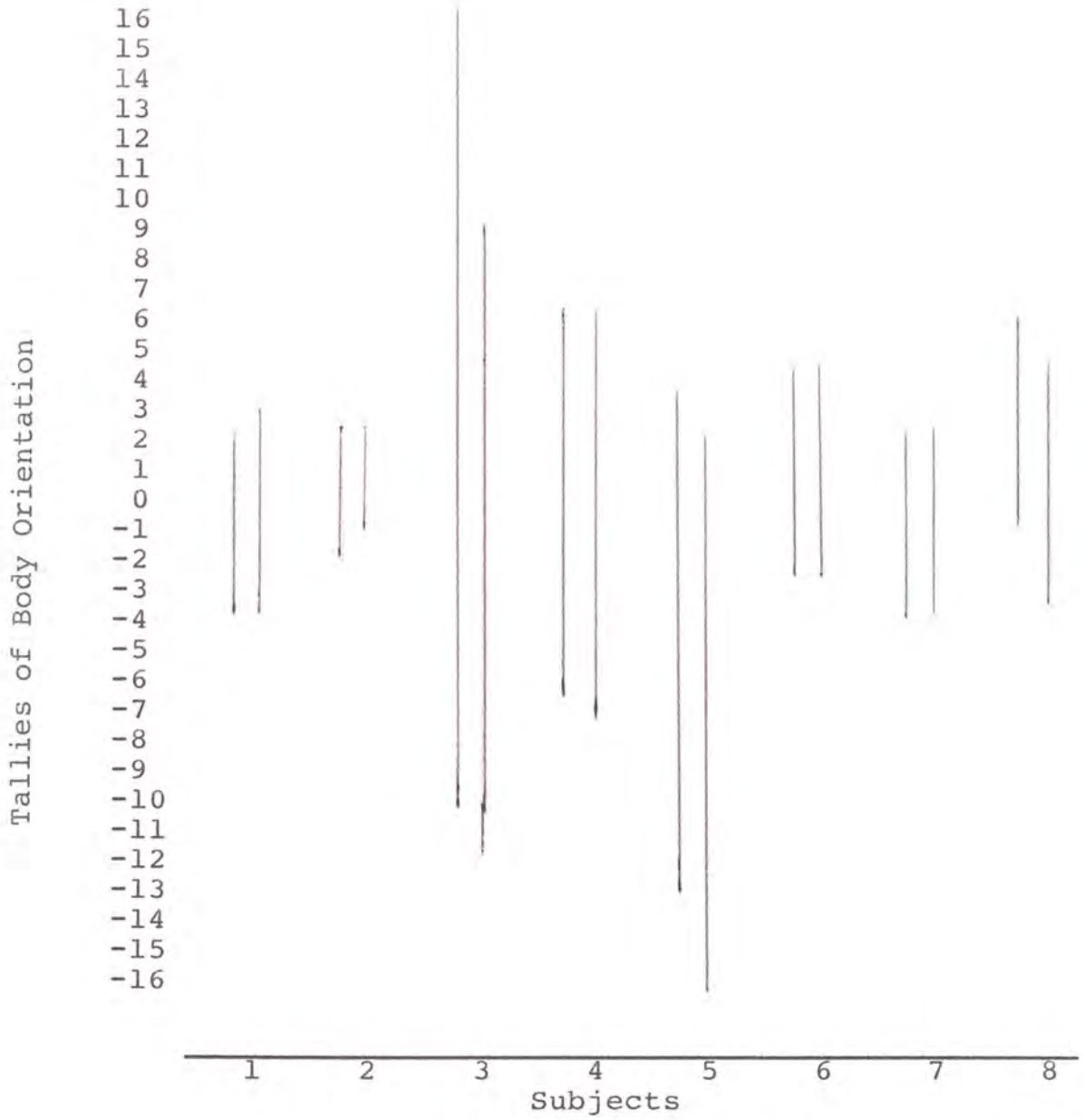


Figure 1. Line Graph Depicting Positive and Negative Scores for Area III; Subjects 1-8

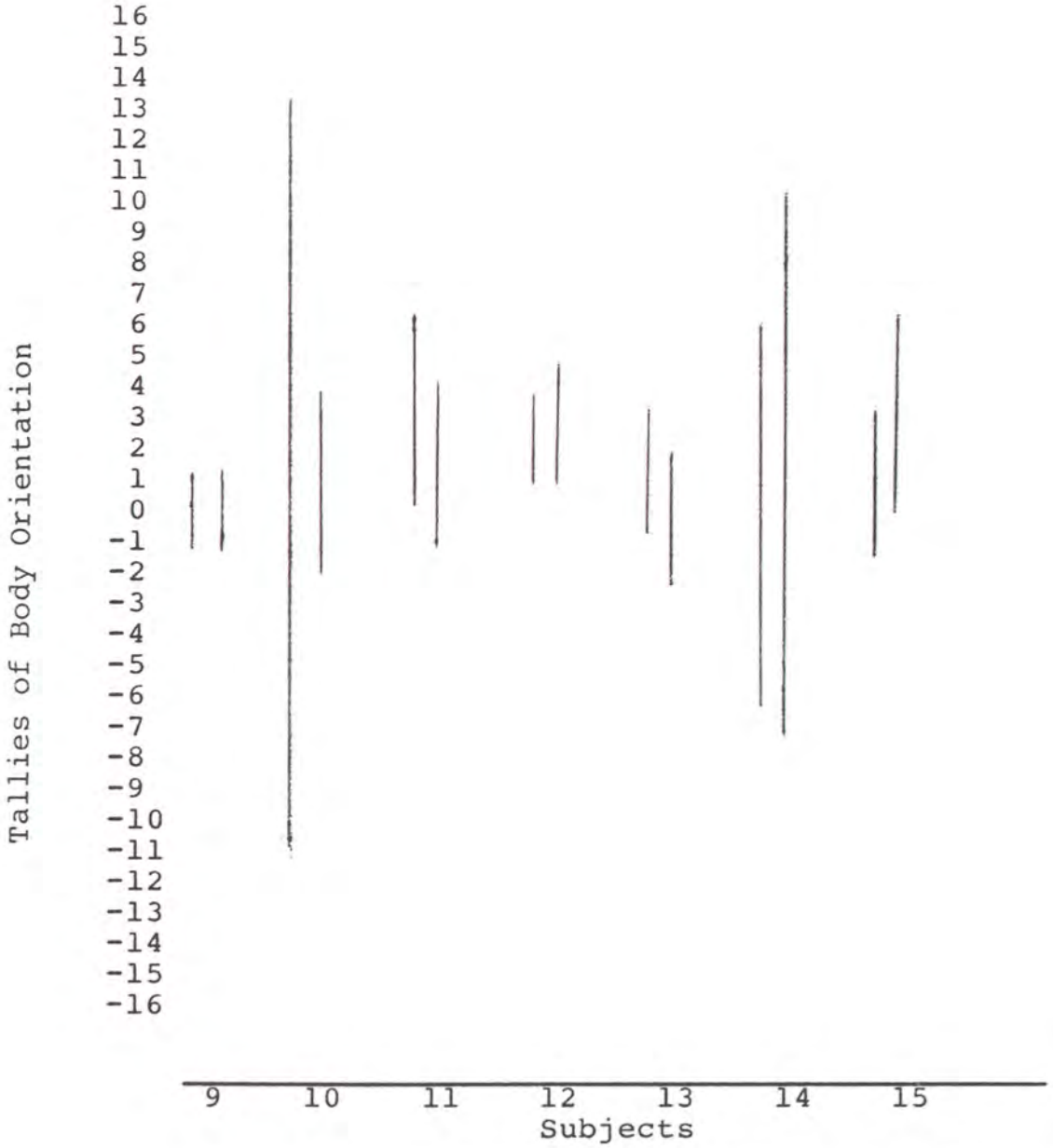


Figure 2. Line Graph Depicting Positive and Negative Scores for Area III; Subjects 9-15

In summary, length of conversational pauses and body orientation, showed no difference between older and younger confederates. Initiation of speech indicated that older brain-damaged adults initiate conversation more quickly with older confederates. Finally, these subjects engage in eye contact more frequently with younger confederates.

The results had been compared between older and younger confederates, the next step was to determine if there was any correlation between the verbal and non-verbal behaviors. The nonparametric test, Spearman Rho, was utilized to identify any correlation between the verbal behaviors, non-verbal behaviors and among the verbal and non-verbal behaviors. The upper half of Table 1 indicates these correlations for the younger confederate. The lower half of Table 1 indicates the same correlations with the older confederate.

TABLE 1

Statistical Significance Comparing Areas Between Older and Younger Confederates; (I) Speech Initiation, (II) Conversational Pauses, (III) Body Orientation, (IV) Eye Contact

		YOUNGER			
		I	II	III	IV
OLDER	I		.084	-.094	-.206
	II	-.068		-.376+	.103
	III	.425+	-.424+		.086
	IV	.136	.496+	.095	

+indicates significance at the .10 level

The only area which was significant, with the younger confederate, was, conversational pauses, when compared to body orientation. These results suggest that the length of conversational pauses increased as the degree of body orientation decreased. A significant correlation was shown between the following areas when looking at the subjects' interactions with the older adult. Body orientation, was significantly related to time of initiation and length of

conversational pauses respectively. Conversational pauses, was significant when compared with eye contact. These results indicate relationships in the following manner: (1) as body orientation increased, time of speech initiation increased; (2) as body orientation decreased, the length of conversational pauses increased; and (3) as the length of conversational pauses increased, the frequency of eye contact increased.

The order of the confederates was randomly varied within the experiment. The following post-hoc question arose: "Did the order of the confederate have an effect on the performance of the subjects?" All behaviors were then examined to note any relationship between performance in each area. The nonparametric Spearman Rho Test was used. The upper half of the Table 2 reports correlation values for the data dealing with the first confederate; the lower half of the table reports data from interactions with the second confederate.

TABLE 2

Statistical Significance Comparing Areas Between First and Second Confederates; (I) Speech Initiation, (II) Conversational Pauses, (III) Body Orientation, (IV) Eye Contact

SECOND \ FIRST	I	II	III	IV
I		.306	-.237	.097
II	-.223		.268	-.109
III	.330+	.510+		.378+
IV	.017	.660+	-.304+	

+indicates significance at the .10 level

These data imply the following relationships: (1) as body orientation increases, the frequency of eye contact increased with the first order confederate; (2) as the time of initiation increased, body orientation increased with the second order confederate; (3) as conversational pauses increased, body orientation decreased with the second order confederate; and (4) as the length of conversational pauses increased, the frequency of eye contact increased.

DISCUSSION

The study has attempted to investigate the behavior of older brain-damaged adults as a result of environmental adjustment. The four chosen behaviors, speech initiation, length of conversational pauses, body orientation, and frequency of eye contact, have allowed the researcher to draw conclusions based on significant data. For possible use and further study it is suggested that the limitations of this study be considered.

As is obvious in this research, the confederate plays an important role. The age of the confederate affected speech initiation and frequency of eye contact. Sex and age of the confederate are not the only factors that come into play. The degree of friendliness, the amount of dialogue the confederate dominated and the general appearance of the confederate may have affected the performance of the subject. For example, a confederate who talks a great deal would acquire much different results than a confederate that is normally subdued. Also, a confederate that is more knowledgable about rehabilitation and cerbro-vascular accidents, may have access to more relevant information to discuss. Finally, the fact that confederates were presented in immediate succession may have affected the statistical outcomes. Future researchers may wish to vary confederates,

using males, and allow a period of time between each experimental situation.

Another integral role in this study was the subject. In this particular study, 15 subjects were used. By increasing the number of subjects to be studied, the results may indicate other differences, for instance, differences between left- and right-hemisphere lesions. For this study, all subjects had been exposed to the routine of the rehabilitation center prior to the experiment. They were all used to flexible schedules and being video taped. This must be consistent for future research.

Results obtained are relatively consistent with the research of several previously mentioned authors. Findings of the correlation tests in this study indicate that with the older and second order confederate, subjects delayed speech initiation and were more active nonverbally. Authors have suggested that when the subject is comfortable, he/she is more likely to initiate and sustain a conversation (Buck & Duffy, 1980; Ellsworth & Carlsmith, 1968; Mehrabian, 1968). Pause length, in older brain-damaged adults, increased in several situations: (1) as body orientation decreased with younger, older, and first order confederates; and (2) as eye contact increased with older and second order confederates. McGee and Barker (1982) suggest that the dominant conversationalist does not allow interuptions, i.e. he/she is able to sustain pause length, and has increased

eye contact, as compared to the deferent adult. The fact that these trends appear in several groupings of the data, lends support to the validity of the results. With an increased subject pool, it is suspected that the direction of the data would be more pronounced.

The results of this study enable conclusions to be drawn that may be useful in the care and rehabilitation of older brain-damaged adults. The initial questions posed in the methodology revolved around two central themes: (1) Is the age of the stranger important when the older brain damaged adult finds himself/herself in a waiting area?, and (2) Is the older brain-damaged adult able to begin and sustain a conversation efficiently by the use of either verbal or non-verbal behaviors?

The first suggestion is that it may be advantageous to provide the brain-damaged adult with an individual that allows him/her to initiate conversation more quickly, the older confederate in this instance, and achieve a more dominant role in the dialogue. By allowing the subject to be the dominant communicator the clinician may provide an avenue for better and more efficient communication.

Secondly, these adults, especially those with left-hemisphere damage are virtually non-verbal. Therefore body orientation and eye contact may signal the clinician to the subject's need to begin and sustain communication.

The findings drawn in this study allow the reader to note that not only does the age of the listener affect the brain damaged adult but also that within this population attention must be payed to nonverbal communication skills, as well as, verbal skills.

APPENDIX A

DESCRIPTION OF SUBJECTS

SUBJECT	AGE	SEX	SITE OF LESION	TIME SINCE ONSET
1	62	M	RIGHT	4
2	85	F	LEFT	7
3	64	F	LEFT	3
4	68	F	RIGHT	6
5	74	F	RIGHT	10
6	69	M	LEFT	8
7	80	M	LEFT	8
8	55	M	LEFT	12
9	64	F	RIGHT	12
10	64	M	LEFT	8
11	79	F	RIGHT	4
12	66	M	RIGHT	8
13	69	M	RIGHT	6
14	66	F	LEFT	11
15	71	M	RIGHT	4

APPENDIX B

AUDIOMETRIC SCREENING RESULTS

Subject Number_____

Sex _____

Age _____

The outpatient records have been checked and subject number _____ has acquired the following results for the following frequencies:

500 Hz _____

1000 Hz _____

_____

Speech Language Pathologist

APPENDIX C

VISUAL SCREENING

Subject Number _____

Sex _____

Age _____

I hereby state that subject number _____ has sufficient visual acuity to allow him/her to recognize pictures during treatment.

_____

Speech Language Pathologist

APPENDIX D

ORIENTATION SCREENING

Subject number_____

I hereby certify that subject number _____ is aware of time, date, place and self.

_____

Speech/Language Clinician

Date_____

APPENDIX E

DATA FORMAT

Subject Number_____ Order of Confederate_____

Sex_____ Date_____

Site of Lesions_____

Age_____

I. Time taken to initiate conversation:

A. Situation 1._____

B. Situation 2._____

II. Lengths of conversational pauses (Sampled every 30 secs.)

A. _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ average:_____

B. _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ average:_____

Subject number_____

B. Situation 2. _____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ total:_____

Subject number_____

III. Tallies of Body Orientation

	Situation I	Situation II
Touching +	_____	_____
Leaning Towards +	_____	_____
Turning Towards +	_____	_____
Arms at Rest +	_____	_____
Turning Away -	_____	_____
Leaning Away -	_____	_____
Barrier Created by Arms -	_____	_____
	Total+___Total -____	Total+___Total-___

IV. Frequency of eye contact (sampled every 30 secs.)

A. Situation 1. _____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ total: _____

APPENDIX F

INSTRUCTIONS FOR SCORING

1. Timing begins when the following conditions have been met:

   a) subject has been placed in waiting room.

   b) subject and confederate are alone in waiting room.

   c) subject has been seated comfortably.

2. Initiation of conversation is recorded the first time the subject requires a response from the confederate. Lengths of conversational pauses are sampled every 30 seconds, using a stopwatch. That is, the recorder writes during the first half of every minute and watches the subject the second half. The schedule is as follows:

   a) 30 seconds-- do not watch

   b) 30 seconds-- watch

   c) 30 seconds-- record

   d) 30 seconds-- watch

4. A conversational pause consists of breaks within the subject's speech. If the confederate speaks or interjects with "um hum" or "yea" it is not considered a pause.

5. When recording, time is marked in seconds and the period of recording is marked with an "x". The following is an example of a 3 minute block of time.

Situation 1:	X	3
	0	2
	X	X
	2	0

6. Tallies of body orientation are scored by frequency of occurrence. Definition of terms are as follows:

a) Touching- subject actually makes physical contact with confederate.

b) Forward lean- the subject moves from midline (seated straight up, facing forward) by shifting upper torso or shoulders, reaching or pointing towards the confederate.

c) Turning towards- a turn consist of an entire body shift from midline towards confederate.

d) Arms at rest- Arms are placed in lap or at sides comfortably

e) Turning away- A turn consists of an entire body shift from midline away from the confederate.

f) Lean away- the subject moves from midline by shifting upper body or torso away from confederate.

g) Arms creating barrier- the arms or one arm is placed in a position such that a barrier is created between subject and confederate.

7. Eye contact consists of the subject looking at the confederate. This is measured by frequency of occurrence and sampled every 30 seconds. When recording, the frequency of eye contact is counted for the first 30 seconds of each minute, and recorded the second 30 seconds of every minute. Again, the tape should not be watched during the second 30 seconds. The following is an example of a 2 minute block of time:

Situation 1:	1
	X
	3
	X

NOTE: the sampling schedule is directly opposite from that of the conversational pauses.

SCORING:

8. The tape should be watched once for each measure.
9. A hand-held stopwatch should be used for time measures.
10. Time to initiate should be written using the following format: 0:00
11. Length of conversational pauses: All measures, per confederate, should be summed and divided by the number of pauses.

12. Tallies of body orientation: Two scores are achieved. One includes touching, forward lean, turning towards, and arms at rest. This constitutes the positive score. he others, turning away. leaning away, and arms creating a barrier, constitute the negative score.

13. Eye contact. The frequency of contact, per confederate should be totaled and divided by the number of minutes watched. In this case, the number of minutes is three.

APPENDIX G

LETTERS OF PERMISSION

To whom it may concern:

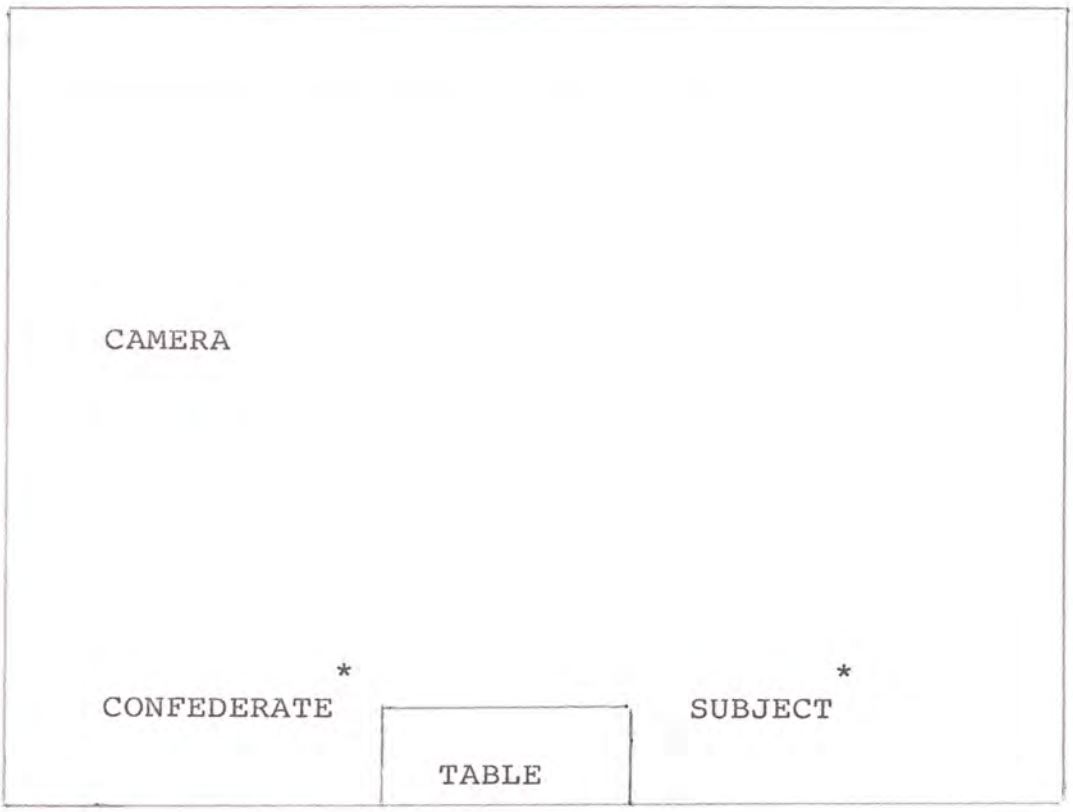
I give permission for this video tape to be used for purposes of research done at the University of Central Florida. I realize that my name will never be used in the final product.

_____

Signature and Date

Research conducted by:
Theresa A. Williams, B.S.
Graduate Student Communicative Disorders
Speech Pathology

APPENDIX H
WAITING ROOM



*
Chairs are positioned towards the center of the room, at a 45 degree angle.

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