

DISCOURSE TOPIC MANAGEMENT SKILLS OF MILDLY MENTALLY RETARDED ADULTS

By

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This study was undertaken to examine the discourse topic management skills of mildly mentally retarded adults. The subjects included 6 mildly retarded males who were clients of sheltered workshops. They were matched with 6 nonretarded males who were enrolled in blue-collar level job training programs.

The experimental tasks were designed to elicit discourse in two conversational settings. In the first setting, each subject was interviewed by the investigator; in the second setting, each subject was engaged in a conversation with a fellow trainee.

Five categories of topic manipulation were examined from the discourse data: topic maintenance, topic match, topic change, topic shade, and topic reintroduction. Four additional measures of topic management were also analyzed. These were average number of topics introduced per minute, proportion of new topics maintained or matched, longest sequence of utterances maintained or matched, and proportion of utterances contributed by each group.

No significant differences were found between groups. Continuous discourse (topic maintenance and topic match) comprised a high proportion of the total number of utterances in both settings. Discontinuous discourse (topic change and topic reintroduction) comprised a much smaller proportion of utterances in both settings. Topic shading, which appears later developmentally than the other categories of manipulation, was present in approximately the same proportion in the retarded and nonretarded samples. The data reflected active participation by subjects in both groups and the ability to successfully introduce and develop new topics. Finally, an analysis of variance demonstrated that subjects in both groups contributed a similar proportion of utterances whether engaged in an interview with the investigator or engaged in informal conversation with a peer, suggesting that context was not a significant factor in this study.

The findings of this study were in agreement with recent investigations which support a competence model of communicative abilities for retarded persons. It appears that certain aspects of communicative competence such as turn-taking, the use of communicative functions, and topic management may be strongly based in social interaction, and may be mastered even in the case of diminished cognitive and linguistic functioning.

CHAPTER I INTRODUCTION

Over the past two decades, the language of mentally retarded persons has been analyzed extensively. The dominant trends of this research may be determined by reviewing various volumes edited during this time period (Schiefelbusch, Copeland, and Smith, 1967; Schiefelbusch, 1972; McLean, Yoder, and Schiefelbusch, 1972; Schiefelbusch and Lloyd, 1974).

During the late 1960s and early 1970s, the emphasis in linguistic research was based on a model of linguistic competence which was rather narrow and traditional in scope. In studying the communication of mentally retarded persons, the main concern was whether these individuals could produce sentences which were phonologically and grammatically well-formed and could understand such sentences when they heard them. Such a determination was based mainly on data derived from tests conducted in clinical settings. This line of research rendered a negative view of the linguistic abilities of the mentally retarded population.

Kernan, Turner, Langness, and Edgerton (1978) point out two important reasons for this restricted focus in the research of that period. To begin with, the ability to produce recognizable sounds,

words, and sentences and to understand them is the necessary foundation upon which all other linguistic and speech skills are built. Accordingly, gathering information concerning these basic aspects of communication is a legitimate endeavor. Secondly, because the primary concern was an understanding of the structure of language and not of its use, there was no analytical or theoretical model upon which research on broader aspects of communication could be based.

Recent developments in linguistics and the behavioral sciences have demonstrated that the linguistic abilities necessary for an individual to function as a fully competent member of society go beyond an individual's linguistic competence, that is the ability to produce and understand well-formed sentences. A broader view of competence has emerged which includes linguistic competence, but also recognizes the need to examine language as it occurs in natural settings, as it is influenced by the contexts in which it occurs, and as it serves the functions that the speaker intends (Kernan et al., 1978).

Not until a recent publication, Bases of Language Intervention (Schiefelbusch, 1978), does one begin to find more than a programmatic bow to interactional aspects in the study of language and mental retardation. In this volume, Miller presented an overview of language assessment which included evaluation of functions and interactions, and Rees encouraged "an organismic approach" to remediation, in which the uses of language formed the basis of language training.

Miller (1978), Rees (1978), and others reflect the theoretical shift that has taken place in speech-language pathology as a result of the focus on pragmatic aspects of language. The term pragmatics was introduced in this field by Elizabeth Bates, a developmental psychologist, who defined pragmatics as "rules governing the use of language in context" (1976, p. 420).

Historically, insights into disordered communication have evolved from knowledge of the normal development and use of language. While the theoretical basis of the current notion of pragmatics must be attributed to philosophers such as Pierce (1878), Wittgenstein (1958), Austin (1962), and Searle (1969), [see Prutting (1982) for an historical review], the field of speech-language pathology has been influenced most directly by recent research in the area of child language. The advent of pragmatic considerations has led to the investigation of "outside" rather than "inside" factors related to the acquisition of language; social as well as cognitive factors are thought to influence the acquisition process.

This investigation represented the natural extension of the study of pragmatic considerations of communication to the adult population. It also recognized the need for data regarding the performance of disordered populations. The discourse topic management skills of mildly mentally retarded adults were examined, in an attempt to provide information concerning the communicative competence of that segment of the retarded population which is most often expected to meet the requirements of community living.

Pragmatics and Language Use of Mentally Retarded Persons

It is estimated that approximately 3 percent of the population, or 6.5 million Americans, are retarded. Within the mentally retarded population, these figures break down into 86.7 percent at the mild level, 10.0 percent at the moderate level, and 3.3 percent at the severe and profound levels (Chinn, Drew, and Logan, 1975).

According to the American Association on Mental Deficiency (AAMD), "mental retardation refers to significantly subaverage general intellect functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period" (Grossman, 1973, p. 180). Significantly subaverage intellectual functioning may be assessed by standardized intelligence tests and refers to performance that is two or more standard deviations below the mean of the test. In the case of the Stanford-Binet, this means an IQ range of 52-68; in the case of the Wechsler Intelligence Scale, the range is 55-69 (Bensberg and Sigelman, 1976).

Adaptive behavior is defined as "the effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his age and cultural group" (Grossman, 1973, p. 180). The AAMD Adaptive Behavior Scale (AAMD, 1969) was developed specifically for the purpose of assessing level of adaptive behavior. Mildly retarded adults are considered to be capable of social and vocational adequacy with proper education and training (Chinn et al., 1975).

Kernan and Sabsay pointed out that "one of the first things one is likely to notice about a retarded person is something about the

way he or she talks" (1981, p.1). This is of particular consequence for mildly mentally retarded adults, as they are more likely to be judged by normal standards than are other levels of retarded adults. Due to current emphasis on deinstitutionalization of the mentally impaired, they are the ones who are often mainstreamed in public schools, and later are encouraged to live independently and find competitive employment. If we accept Mishler's statement that "how one talks reveals who one is" (1975, p. 118), we further realize the significance of a speech or language impairment among this population.

The past few years have seen a growing interest in the relationship of social context to language use in mentally retarded persons. One approach has been to examine language use in terms of the participants' identities (Bedrosian and Prutting, 1978; Bleile, 1984; Owings and McManus, 1980). This method demonstrated that the communicative performance of mentally retarded persons is influenced by conversational roles. A second approach has been to use ethnographic methods to gather in-depth information in a particular social context (e.g., a sheltered workshop) and assess the relationship between behavioral norms in this setting and language use (e.g., Anderson-Levitt, 1983, 1984; Turner, Kernan, and Gelphman, 1982). A third line of investigation has employed ethnographic methods to explore particular aspects of "communicative design, "the ability to design an utterance to fit a communicative situation (Kernan and Sabsay, 1981, 1982, 1984, 1985). All of these

methods acknowledge that in order to use language successfully, speakers must know a system of rules and conventions for using language in a range of settings with various interlocutors. This is the concept that Hymes (1972) describes as communicative competence.

Although knowledge of developmental pragmatics has grown considerably over the past decade, an understanding of the role of pragmatics in disordered language is still in an embryonic stage. Research is particularly sparse for the population of mentally retarded adults. Preliminary investigation in this area demonstrates vividly that our past characterizations of the language abilities of mentally retarded persons were based on too narrow a view of communication. Sabsay stated that

an individual's communicative effectiveness does not depend solely on his linguistic competence (his knowledge of phonology, syntax, and vocabulary). It depends also on his communicative competence--his knowledge of how to use the language he has. . . . (1975, p. 1)

Sabsay proceeded to demonstrate that even severely retarded adults are capable of communication that "is subject to the same basic patterns as that of normally competent adults and children" and is "a great deal more complex" than previous studies would suggest (1975, p. 1).

Review of the Literature on Communicative Competence of Mentally Retarded Adults

Kernan and Sabsay (1981, 1982, 1983, 1984, 1985) have focused on the communicative competence of mildly mentally retarded adults as a unique population. Their work is summarized below, along with two

additional studies involving this population (Abbeduto and Rosenberg, 1980; Bleile, 1984). In a latter section of this chapter, investigations of the communication of lower levels or combined levels of retarded adults are reviewed.

Research on Communicative Abilities of Mildly Mentally Retarded Adults

In three studies, Kernan and Sabsay (1981, 1982, 1983) examined the use of language by mildly retarded adults in naturally occurring conversations and interviews. From their observations, they were able to describe a number of characteristic deficiencies. First, retarded adults often have difficulty conveying intended meanings to their listeners. When telling a story, for example, they are likely to omit important background information, or to confuse the listener with irrelevant details. Additionally, they have problems with the appropriate use of communicative style and content in various situations. For example, they may talk too loudly in public places or give intimate details of their lives to total strangers.

After forming general impressions regarding the speech of mildly retarded adults, Kernan and Sabsay selected two specific types of speech events for more systematic study. These were narrations and directions.

Kernan and Sabsay (1984) tested the ability of retarded and nonretarded adults to give directions to their homes. Eighty-six percent of the nonretarded adults were able to either give accurate directions or to recognize their inability to do so. Only 45 percent of the retarded adults were successful at this task. Of the retarded adults who made errors, 64 percent made the same types of errors as

the nonretarded sample (e.g., one gives what should be a right turn as a left turn), but with greater frequency. These errors do not reflect deficits in what Kernan and Sabsay call communicative design. However, 36 percent of the retarded sample "made errors that were unlike those made by nonretarded adults: errors of communicative competence that involved a lack of knowledge of the structure and function of directions or a lack of ability in communicative design" (p. 36). In summary, retarded adults made errors similar to those of nonretarded adults, but with greater frequency. They also made errors of communicative design which were not evident in the nonretarded sample.

A study involving narrative reports allowed Kernan and Sabsay (1985) to evaluate mildly retarded adults' referential skills. They found that compared to nonretarded speakers, mildly retarded subjects introduced fewer than half as many referents (first mentions) into their narratives, resulting in an incompleteness in their stories. Additionally, the mentally retarded speakers made over seven times as many errors in forms of first mentions (e.g., incorrectly using the man instead of a man) than did nonretarded speakers. Kernan and Sabsay noted that the retarded subjects were successful in adequately introducing at least 85 percent of the referents, suggesting that "task difficulty and incomplete mastery of linguistic forms, rather than some global type of 'egocentrism' accounts for the poor performance of retarded speakers" (p. 2). As in the case of giving directions, the problem is at least partially one of inadequate communicative design.

Bleile (1984) studied conversations between two speech-language pathologists (SLPs) and two mildly retarded men in a university speech clinic and in the subjects' homes. All of the conversations contained episodes of "communicative distress," which was operationally defined as one of the following conditions: 1) a disparity in the speakers' average turn lengths; 2) a disparity in the use of questions and imperatives by the members of the dyad; 3) the presence of metacommunications, that is, a stretch of utterances devoted to analyzing the speech signal; and 4) the presence of vocal or physical mannerisms that could potentially interfere with the conveyance of messages. Specifically, the average turn lengths of the SLPs were longer than those of the retarded men in four of the six conversations. The SLPs dominated the topics in all six conversations. Two of the six conversations contained vocal or physical gestures or mannerisms which interfered with the conveyance of messages. All of the conversations contained metacommunications, implying potential or actual miscommunication. The results also indicated that conversations in the clinic setting were more distressed than those in the home setting.

Abbeduto and Rosenberg (1980) examined turn-taking and the use of illocutionary act types (communicative functions) by seven mildly retarded adults. They concluded that the turn-taking of the retarded adults was as efficient as that of the nonretarded adults. Few communication errors were committed by the retarded subjects, demonstrating that they recognized obligating utterances such as questions and requests and were capable of responding appropriately.

Furthermore, the majority of all subjects' turns functioned as members of adjacency pairs, the majority of which were non-obligating, suggesting that they were actively attempting to gain and provide information and indicate perlocutionary effects by using agreements, denials, acknowledgements, etc. The only aspect of conversational behavior for which there was no evidence of well-developed communication skills was the use of indirect speech acts. In light of previous research which indicates that this skill is acquired by age three years (Dore, 1977), the investigators speculated that the conversational situations employed may have failed to elicit instances of indirect speech acts.

Linder (1978a, 1978b) observed "high-functioning" retarded men (IQ level unspecified) in interview situations. He concluded that they were able to employ a broad range of "normal" conversational strategies in order to avoid trouble in this setting. In a passive mode, they allowed the interviewer to determine the pace, tone, and topics for discussion. In a more active fashion, they feigned understanding, guessed at answers, and relied on ambiguity. Linder noted that the use of these devices often gave rise to trouble rather than ensuring its avoidance.

Research on Communicative Abilities of Lower and Combined Levels of Mentally Retarded Adults

Turner et al. (1982) studied speech etiquette in a sheltered workshop (IQ range = 29-75). They pointed out that a basic cultural value within the workshop is that of egalitarianism. Accordingly, certain aspects of polite speech are evident which are unique to

workshop society and are grounded in the fundamental concerns of its members. For example, any mention of incompetency in others is strictly taboo. Similarly, speech impediments are ignored and fabrications which allow members to build self-esteem are tolerated and even corroborated. The authors contend that this special system of speech etiquette facilitates a secure, harmonious environment for cooperating members.

Anderson-Levitt (1983) examined the ability of three mentally retarded adults (IQ range = 44-61) to resolve peer conflicts. Weekly workshop meetings were structured in such a way that clients could learn the social and cognitive skills of peer problem resolution. Anderson-Levitt concluded that the men displayed some sophisticated communicative skills (e.g., holding the floor through drama and humor) in dealing with their conflicts. She suggested that the next step is to determine whether or not these skills are generalized to other settings.

In a second study, Anderson-Levitt and Platt (1984) used two recurring interactional settings, dinnertime at a group home and a group meeting at a sheltered workshop, to illustrate the impact of social context on the speech of mildly and moderately retarded adults. They found that the participants' definition of the setting had a significant effect on their language use with respect to the organization of turn-taking and the occurrence of typical speech events. Talk during dinner was strictly incidental and involved the residents' display of knowledge about information regarding schedules and commitments. Accordingly, turns at talk were brief. The group

meeting, in contrast, was defined as an "arena of normalcy," where clients discussed personal problems without the intervention of nonretarded participants. In this setting, a richness of speech emerged which was not evident in dinnertime conversation and was characterized by elaborate storytelling, problem resolution, dramatizing, and fantasizing. Turns at talk were extremely variable in length.

Owings and McManus (1980) analyzed nine communicative functions (e.g., commands, questions, repetitions) used by a moderately retarded adult male in a group home. The three conversational settings examined involved subject and counselor, subject and resident peers, and subject speaking to self. The subject used all nine functions, but used them differentially across settings, suggesting that he was aware of the social conventions regulating the use of functions in different speaking situations.

Elias, Sigelman, and Danker-Brown (1980) examined interviews with 88 mildly-severely retarded adults in order to determine which verbal and nonverbal behaviors are associated with making positive or negative impressions. Verbal behaviors were found to be the most potent predictors, with speech intelligibility and responsiveness to questions exerting the strongest influence on ratings of personality characteristics and competence.

The final study in this discussion is a sociolinguistic analysis of severely and moderately retarded adults (IQ range = 29-36) engaged in conversations with their speech-language pathologist, with parents, with peers, and with a normal child. Bedrosian and Prutting (1978) investigated participants' style of interaction (dominant or

submissive) and their expression of control through patterns of questioning (chaining and arching). Three of the four subjects did not hold the dominant position in any of the conversational settings; i.e., the majority of their bids were submissive (speaker in need of information). All subjects expressed control, but the types of control expressed across subjects varied as a function of the interlocutor. The authors recommend the evaluation of retarded adults' functional communicative performance in various natural settings and the teaching of strategies for expressing control.

Status of Current Research Regarding Conversational Abilities of Retarded Adults

With the exception of Kernan and Sabsay's (1985) clinical investigation of narrative reports by mildly retarded adults, and Elias and associates' (1980) examination of interview behavior by mildly-severely retarded adults, all of the studies reviewed relied on naturalistic observation for data collection. Conversations were recorded as participants took part in regularly occurring events such as mealtimes, group meetings, and therapy sessions.

The ethnographic methods employed in these studies have established that context is an important determinant of the language used by retarded adults. As Anderson-Levitt and Platt (1984) pointed out, the terse exchanges of dinnertime talk were in marked contrast to the lengthy debates of the group meetings. Moreover, in some cases the retarded adults were skillful in using strategies to deal with the demands of the situation. For instance, workshop members developed and maintained a code of communication which allowed them to feel competent and worthwhile in that setting.

This new body of research is focused on interactional skills which permit one to succeed in face-to-face situations. Methods derived from sociolinguistics, anthropology, and other related areas have shifted attention away from a deficit model, in favor of a competence model of language use for retarded individuals.

At the same time, it is recognized that the transition from institutions, group homes, and sheltered workshops to independent living arrangements and competitive employment is one that often results in failure for the retarded adult. Documentation is lacking concerning the ability of retarded adults to generalize conversational skills to a variety of settings in order to meet the demands of community living. Observation of these individuals in the community strongly suggests that sociolinguistic deficits may be a factor contributing to their lack of success in this area.

Additional descriptive data are needed to evaluate the conversational skills of retarded adults in a variety of situations. At the same time, comparisons with nonretarded persons are needed in order to identify patterns of successful interaction. This information enables the clinician to select appropriate target behaviors for training.

One area which has not received attention is that of discourse topic management. Recent normative data demonstrate that this skill is essential to the cohesiveness of conversation. The current study proposed to provide information regarding the ability of mildly retarded adults to employ this skill in contrasting settings.

Review of the Literature on Discourse Topic Management

The term discourse topic appears frequently in pragmatic literature. Keenan and Schieffelin defined a discourse topic as "a proposition (or set of propositions) expressing a concern (or set of concerns) the speaker is addressing" (1976, p. 343). Stech (1982) proposed that conversation is organized into topic sequences and that speakers' manipulation of topic helps to arrange groups of utterances into conversational segments. Vuchinich (1977) experimentally demonstrated that discourse topic is a means of establishing cohesion between conversational turns. Thus, discourse topic is not simply a matter of content, but also involves procedures for topic manipulation which make conversations work (Maynard, 1980).

Brinton and Fujiki (1984) examined normal developmental trends of topic manipulation in discourse. Their study included 5-year-olds, 9-year-olds, and young adults. They found that the number of topics introduced and reintroduced within a sampling period decreased with age, whereas the proportion of topics maintained increased with age. Additionally, subjects maintained topics for longer sequences of utterances with increasing age. Topic shading, in which some aspect of the propositional content of an utterance is derived from the preceding utterance, but the topic focus is not strictly maintained, also increased with age. This study provided important developmental data on topic manipulation.

Several investigations have focused on the topic management of mothers and their sensorimotor or early preoperational children (Bloom, Rocissano, and Hood, 1976; Foster, 1985; Keenan and Schieffelin, 1976; McDonald and Pien, 1982; Martlew, 1980). These

studies have shown that the ability to minimally initiate and maintain conversational discourse is established within the mother-child network during the second year of life. Topic initiation decreases, while topic maintenance increases, on the part of both mothers and children, as children advance in age. Byrne and Hayden (1980) found that 3- to 5-year-old children interacting with their mothers were able to maintain between 75 and 100 percent of the topics introduced by either party.

Wanska and Bedrosian (1985) examined discourse participation and topic performance in mother-child interaction with 30 children functioning within the preoperational period. The children in this group shared similar characteristics of conversational participation with their mothers on measures of rate of talking, length of talking, and proportion of talking. In terms of topic performance, mothers played a primary role in facilitating the cohesiveness of discourse. The tendency for mothers to maintain topics more often than their children remained consistent across children's age and mean length of utterance (MLU). However, with increasing age and MLU, children improved in topic management, as demonstrated by a greater proportion of topics maintained, longer sequences of continuous discourse, and the use of topic shading, a more sophisticated conversational strategy.

There has been speculation concerning the possibility of specific topic manipulation problems in language-disordered children. Fey and Leonard (1983) reviewed several studies which indicate that some less assertive language-disordered children may be more hesitant to introduce topics and more dependent on back channel

(acknowledging) responses to maintain topics when compared with normal controls. Data on other disordered populations are not available.

The ability of mildly retarded adults to manipulate discourse topics has not been examined. This line of investigation may prove fruitful in determining why the speech of this disordered population is strikingly different.

Rationale for the Study of Discourse Topic Skills of the Mentally Retarded Population

The ability to introduce and maintain topics is essential to effective communication. A number of factors suggest that the mentally retarded population may lack competence in this area. The most obvious is the question of whether there is sufficient cognitive development to allow for mature topic management. Minimally, an individual must recognize that verbal communication mediates between the minds of different speakers. This implies that in order to successfully initiate a discourse topic, one must be able to express one's unique thoughts in a way that makes them accessible to another person. This involves an understanding of others' minds and the knowledge they may have (see Foster [1985] for further discussion of this issue).

Additionally, psychological processes, such as memory, attention, and hierarchical planning appear to be important to topic management. Mental retardation may result in inadequate development of such processes [see Bates, Bretherton, Beeghly-Smith, and McNew (1982); Foster (1985); Rice (1983, 1985); Siegel, Katsuki, and Potechin (1985) for discussion of the relationship of language and cognition].

Foster (1985) suggests that linguistic factors may also contribute to failure in topic management. Once conceptualized, a topic must receive appropriate linguistic expression. Even among mildly retarded populations, the incidence of language problems has been reported to be as high as 60 percent (Schlanger, 1967). Additionally, if grammar and pragmatics are fundamentally independent developments, then the mastery of discourse topic skills must involve the successful interaction of the two. Therefore either an insufficient language base or an insufficient linkage of grammar and pragmatics may lead to faulty topic management.

A final area of concern which seems particularly relevant for the mildly retarded population is that of social factors. We have little information concerning the role of communication in the socialization of the retarded. Successful verbal interactions in the community involve the use of language which is sensitive to appropriateness of topic, as well as such features as politeness and social status.

As Kernan et al. (1978) point out, life in an institution, a sheltered workshop, or a sheltered family situation may make communicative demands on an individual which may not prepare him to perform acceptably in alternative roles in the community. They hypothesize that causes of ineffective sociolinguistic performance may be "an inability to adapt behavior to different situations (including different interlocutors), an insensitivity to the social cues which govern the use of particular speech forms or modes of behavior, an inability to learn the rules of speech which

obtain in certain situations, or a language learning environment in which individuals are not exposed to or required to learn those rules" (1978, p. 32).

As noted earlier, poor communication skills hinder the individual's entry into community life and affect how he is perceived and treated by others. They may also contribute to negative self-evaluation.

Additional information regarding the communication of mentally retarded individuals is needed. This information must be derived from a variety of settings, with different interlocutors and different communicative goals. Where incompetence occurs, it is important to determine whether it is situationally specific, and whether it is linguistic, social, or cognitive in origin.

Objectives of Current Study

The current study was prompted by the need to study further the conversational skills of mentally retarded adults. Recent studies have caused researchers to grant new status to mentally retarded persons as communicators. However, the majority of these studies offer only a general description of their abilities.

This study proposed a more in-depth investigation of one aspect of communicative competence, discourse topic management. Emphasis was on the interactive nature of conversation in natural settings and the role of the interlocutor in influencing the behavior of mentally retarded persons. Additionally, a comparison group of nonretarded blue-collar level job trainees was included in order to identify normal patterns of topic management. The following questions were addressed:

- A. What patterns of discourse topic manipulation are used by mildly retarded and nonretarded adults?
- B. Do mildly retarded and nonretarded adults demonstrate patterns of conversational participation which vary as a function of participants' identities?
- C. Are there significant differences between mildly retarded and nonretarded adults with respect to the above patterns?

In light of normative data provided by Brinton and Fujiki (1984) which show significant differences in topic manipulation by 9-year-olds and adults, it was hypothesized that the mentally retarded subjects would demonstrate patterns of topic management which were significantly different than those of the nonretarded subjects. Additionally, it was hypothesized that both groups would demonstrate significant differences in topic management behaviors in an interview setting as opposed to a peer to peer conversation.

CHAPTER II METHODS AND PROCEDURES

The current study was designed to investigate the communicative competence of mildly retarded adults by examining their ability to manipulate discourse topics. Patterns of topic manipulation used by six mildly retarded and six nonretarded males in two conversational settings were described and compared. Four additional measures of topic management were also analyzed.

Subjects

Subjects were six mildly mentally retarded and six nonretarded males between the ages of 17 and 50 years. Criteria for selection of the retarded subjects were

1. IQ within the range of 52-75, as indicated by records of the supervising agency;
2. No apparent physical anomalies;
3. Intelligible speech, as judged by the investigator;
4. English dominant;
5. No apparent neuromotor involvement;
6. Hearing within normal limits, as measured by audiometric testing conducted within five years of the current study.
7. Active participation in a sheltered workshop program.

The retarded subjects were all participants in community workshops. Although two different locations were used for the

investigation, the programs were similar in structure. Daily activities included academic, self-help, and vocational training. The vocational portion of both programs involved landscaping and shadehouse maintenance. Four of the retarded subjects lived in group home settings, while two lived at home with their families. Additional information regarding age and IQ is found in Table 2.1.

Table 2.1 Ages and IQs of the mentally retarded subjects.

Subject	Age	IQ
1	23	67 WAIS-R
2	31	67 Bender-Gestalt
3	36	74 WAIS-R
4	43	67 WAIS-R
5	44	72 Bender-Gestalt
6	50	71 Bender-Gestalt

The nonretarded subjects were involved in vocational training programs designed to prepare them for blue-collar employment in a competitive job market. Two subjects were high school seniors who participated in regular academic and vocational skills training for half of the school day and received on-the-job training during the other half. One was learning bicycle repair, while the other was a stockroom worker. The other four subjects were enrolled in a marine propulsion program, which provided instruction in diesel and gasoline engine repairs. This was a certificate program sponsored by a community college. The subjects in this group ranged in age from 17 to 49 years. Three of these men were training for second careers. The other three were training to enter the job market for the first time.

Data Collection

Subjects were audiotaped for 10-15 minutes in each of two conversational settings. A time range was used to accommodate the variability in extemporaneous discourse; some conversations came to a natural stopping point earlier than others.

The first setting involved an individual interview with the investigator. The second setting involved casual conversation with a peer. The subjects in each dyad were previously acquainted and attended classes together. The retarded subjects were audiotaped at the sheltered workshop. The nonretarded subjects were audiotaped at either the high school or the community college.

Each subject was recorded first in the interview setting. Prior to recording, the nonretarded subjects were asked to read and sign an informed consent form (see Appendix A), which explained that the investigator was gathering information regarding conversational skills that are important for a young person who wants to be a successful worker. This same form was read to the retarded subjects by the interviewer and they were asked to sign the form. In addition, the program director or workshop supervisor co-signed the consent forms for the nonretarded high school students and the retarded subjects.

During the interview, the participants were asked to talk about their work, their future plans, and other relevant subjects. The interviewer attempted to provide for a relaxed conversational exchange.

Prior to recording the peer dyads, the two participants were asked to view a 14-minute musical videotape. This was done to

provide the subjects with a means of comfortably initiating a conversation. They were instructed to begin by discussing the videotape, but to feel free to discuss any topic which might come up in the natural course of conversation. The investigator then started the tape recorder and left the room.

Development of Coding System

A system of discourse topic coding developed by Brinton and Fujiki (1984) was used as the basis for analysis of topic manipulation. Following empirical testing, several modifications were made to this system in an attempt to provide additional information concerning conversational style and to eliminate ambiguities found in the original system. The taxonomy which resulted included five major categories of discourse topic manipulation which are described below. Additional examples of utterances within each category are provided in Appendix B.

Topic Maintenance

After a topic was introduced, the topic was considered maintained if the utterance which immediately followed incorporated the topic of the preceding utterance and either added or requested additional information.

Example:

Speaker	Utterance	Topic	Manipulation
1	Tell me about the work that you do here at the nursery.	Nursery Work	Introductory Topic; Requesting Information
2	We have a nursery here and people come in to buy plants.		Topic Maintenance; Adding Information
1	How long have you been working here?		Topic Maintenance; Requesting Information
2	Well, maybe three months.		Topic Maintenance; Adding Information

Topic Match

After a topic was introduced, the topic was considered matched if the utterance which immediately followed satisfied one of these three conditions: 1) The topic of the utterance matched the preceding utterance in content; 2) The utterance acknowledged, agreed with, or emphasized the preceding utterance, thereby passing the turn to the other speaker; 3) The utterance performed a ritualistic function, such as a greeting or a courtesy. A topic coded as topic match allowed for continuity in the conversation and either added or requested a minimal amount of information.

Example 1:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	I see the nursery is open five days a week.	Nursery Schedule	Introductory Topic; Adding Information
2	The nursery is open five days a week.		Topic Match; Adding Information
1	Do you work every day?		Topic Maintenance; Requesting Information
2	Do I work every day?		Topic Match; Requesting Information

Example 2:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	The workshop is really busy.	Workshop	Introductory Topic; Adding Information
2	Yes it is.		Topic Match; Agreeing

Example 3:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	These plants are beautiful.	Plants	Introductory Topic; Adding Information
2	Thank you.		Topic Match; Courtesy

Topic Shade

A topic was considered to be shaded if the utterance met both of the following criteria: 1) The topic focus was not strictly maintained, but shifted from one utterance to the next; and 2) Some aspect of the propositional content of an utterance was derived from the preceding utterance. An utterance coded as a topic shade may either add or request information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	The marine propulsion class sounds very interesting.	Marine Propulsion Class	Topic Maintenance; Adding Information
1	What other classes are you taking?	Other Classes	Topic Shade; Requesting Information
2	I'm taking Computers for Beginners.		Topic Maintenance; Adding Information
1	I have a new computer at my office.	SI's New Computer	Topic Shade; Adding Information

Topic Change

A topic was considered changed if an utterance introduced a topic not previously discussed and either added or requested information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	The nursery has improved a lot this past year.	Nursery	Topic Maintenance; Adding Information
2	Yes, it has.		Topic Match; Agreeing
1	Do you like Miami?	Miami	Topic Change; Requesting Information

Topic Reintroduction

A topic was considered to be reintroduced if an utterance addressed a preceding but not immediately preceding topic, and either added or requested information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	Your plans for the summer are exciting.	Summer Plans	Topic Maintenance; Adding Information
2	I just hope I pass all my exams this spring.	Exams	Topic Shade; Adding Information
1	What's your first stop in Europe?	Summer Plans	Topic Reintroduction; Requesting Information

Additional Measures of Topic Management

Four additional measures of topic management were analyzed. The first was average number of topics per minute. This was computed by dividing the total number of topics introduced (Introductory Topic + Topic Shades + Topic Changes) by the total number of minutes in a discourse sample. This measure supplies information about the ability of a group, a dyad, or an individual to sustain a series of utterances focused on one topic of interest, and also to successfully make transitions from one topic to another. For instance, an experimental group mean which was significantly higher than a control group mean might indicate a pattern of discontinuous discourse for the experimental group, characterized by frequent shifts from one topic to another. Conversely, an experimental group mean which was significantly lower than a control group mean might indicate an inability on the part of the experimental group to develop new topics, due to either linguistic or cognitive deficits.

Secondly, the proportion of topics maintained or matched was computed by dividing the number of topics which were maintained or matched by the total number of topics in a discourse sample. As Brinton and Fujiki (1984) suggested, this measure is an indication of

the success of a speaker's introduction of a topic in discourse, and is related to adherence to relevance requirements in conversation. They found significant differences in the performance of adults and children on this measure.

Thirdly, the longest sequence of utterances which were matched or maintained was determined for each discourse sample. This measure is an indication of the ability to develop a topic over a sustained number of utterances. An experimental group mean which was significantly lower than a control group mean might indicate limitations in this ability for the experimental group, again due to either cognitive or linguistic deficits.

Finally, a measure was employed to investigate the effects of context on the performance of the two groups. The proportion of utterances contributed by each subject in each of the two contexts was computed by dividing the number of subject utterances by the total number of utterances in the discourse sample. Should the retarded subjects contribute a significantly higher proportion of utterances in the Subject:Subject context than in the Subject:Interviewer context, this might indicate that social factors such as learned submissiveness or lack of experience influence the retarded individual's ability to perform well in an interview situation. Conversely, improved performance in the Subject:Interviewer setting might suggest that the added structure of an interview decreases cognitive and/or linguistic demands, allowing for increased participation.

Transcript Preparation and Coding

A transcript was prepared for each discourse sample (see Appendix C). All intelligible discourse was orthographically transcribed and divided into utterances according to guidelines suggested by Brinton and Fujiki (1984) (see Appendix D). Specific transcript notation was used to denote overlap in speech, uncertain transcription, pauses, unintelligible speech, repetition of a word or syllable, and non-speech sounds such as laughter, environmental noises, or notes of clarification (see Appendix E).

The initial utterance in each transcript was identified as an introductory topic. For the purposes of this study, topics were identified at a general level and attempted to capture the "question of immediate concern" or the "center(s) of attention" of the discourse segment (Keenan and Schieffelin, 1976). Three questions posed by Brinton and Fujiki (1984) in their attempt to reliably identify topics proved helpful. They were 1) What are these speakers talking about? 2) What seems to be the central concern addressed? and 3) What is the focus or center of attention of these contributions to discourse?

After a topic was identified, it was then determined whether it was matched, maintained, shaded, changed, or reintroduced. In addition, it was coded as either adding or requesting information.

When topic identification and topic manipulation coding for each discourse sample were completed, a content analysis yielded the following information for each discourse sample: 1) number of topics maintained, matched, shaded, changed, and reintroduced; 2) proportion of topics maintained or matched; 3) longest sequence of utterances

maintained or matched; 4) average number of topics per minute; and 5) proportion of utterances contributed by each subject in each context.

Reliability

A second examiner was used to establish reliability of discourse transcription, topic content labeling, and topic manipulation coding. This examiner was a master's level, American-Speech-Language-Hearing Association certified speech-language pathologist.

To establish the reliability of the discourse transcription, all discourse samples were reviewed by the second examiner, who noted any discrepancies in utterance transcription or utterance boundaries. Agreement between examiners was 99 percent.

The following procedure was used to establish the reliability of topic manipulation coding. A transcript from a pilot study was used to define and identify the coding categories. The two examiners jointly reviewed this transcript during a two-hour orientation session. This was followed by two hours of individual coding of a second trial transcript. A criterion of 90 percent agreement on three consecutive five-minute samples was set as a prerequisite for initiating coding of the study data.

Twenty percent of the discourse was randomly selected to be independently coded by the second examiner. The percentage of agreement according to coding categories was as follows: topic match, 98 percent; topic maintenance, 98 percent; topic shade, 87 percent; topic change, 100 percent; topic reintroduction, 100 percent. Overall agreement between examiners was 97 percent.

The identification of topics resulted in labels such as "future plans," and "other classes." Although slight discrepancies in wording occurred (e.g., "past experience" vs. "previous work"), these were not considered significant; agreement between examiners on topic content was 100 percent.

While agreement was high on all topic manipulation categories, topic shading proved to be the most difficult to identify. In most cases, disagreement arose over whether a topic had been maintained or shaded. This is indicative of the subtle shift of focus of topic obtainable through topic shading.

CHAPTER III RESULTS

The present study compared the topic management skills of mildly retarded sheltered workshop clients with those of nonretarded blue-collar job trainees. The proportions of topic manipulation categories used by the retarded and nonretarded groups were analyzed. Four additional measures of topic management were also used to compare the performance of the groups. Finally, the effects of context were taken into consideration in analyzing the proportion of utterances contributed by each group in the two conversational settings.

Topic Manipulation Categories

In the Subject:Interviewer discourse samples, the retarded and nonretarded groups performed similarly (see Table 3.1). The topic match and topic maintenance categories accounted for the majority of utterances for both groups. Topic shade, a means of changing topics while still providing cohesion within a conversation, accounted for a slightly higher proportion of utterances within the retarded group. Topic change and topic reintroduction, categories of discontinuous discourse, were low frequency codings. A multiple discriminant analysis (P-Stat, Version 8) indicated no significant differences between groups [Wilks Lambda = .58, $F(5, 6) = .89$, $p = .543$].

Table 3.1. Mean proportions of topic manipulation variables for groups together (Common) and for each group separately, Subject:Interviewer context.

	Common	Retarded	Nonretarded
Topic Match	.30	.30	.30
Topic Maintenance	.61	.61	.62
Topic Shade	.06	.07	.06
Topic Change	.00	.01	.00
Topic Reintroduction	.02	.02	.02

There was slightly more variability in the performance of the two groups in the Subject:Subject discourse samples (see Table 3.2). Once again, the topic match and topic maintenance categories accounted for the majority of utterances for both groups. However, in this context, both groups maintained topics more frequently and matched topics less frequently than when interacting with the interviewer. There was a slight decrease in topic shading for the retarded group, and a slight increase in topic change for both groups. Because of the small number of dyads in each group ($N = 3$), only four of the five topic manipulation categories could be included in the multiple discriminant analysis. As in the previous test, no significant differences between groups were found [Wilks Lambda = .00930, $F(4, 1) = 26.62$, $p = .14$].

Table 3.2. Mean proportions of topic manipulation variables for groups together (Common) and for each group separately, Subject:Subject context.

	Common	Retarded	Nonretarded
Topic Match	.20	.23	.17
Topic Maintenance	.68	.64	.73
Topic Shade	.06	.05	.06
Topic Change	.02	.02	.01

Additional Measures of Topic Manipulation

Table 3.3 presents the means for four additional measures of topic manipulation found in the Subject:Interviewer discourse samples, for groups together and for each group separately. The additional measures were as follows: 1) average number of topics per minute, 2) proportion of topics maintained or matched, 3) longest sequence of utterances maintained or matched, and 4) proportion of utterances contributed by each group.

Again, the performance of the two groups was similar on these additional measures. The retarded subjects introduced topics more frequently than the nonretarded subjects. Both groups maintained or matched all or nearly all of the topics which they introduced. Sequences of utterances maintained or matched ranged from 2 to 53 for the retarded group and from 2 to 51 for the nonretarded group. The nonretarded group had a slightly higher mean for the longest sequence of continuous discourse. The retarded group contributed a greater proportion of utterances to their conversations with the interviewer than did the nonretarded subjects. A multiple discriminant analysis indicated no significant differences between groups (Wilks Lambda = .82, $F(2, 9) = .97$, $p = .45$). Because of the small number of Subject:Subject dyads in each group ($N = 3$), these additional measures were not included in the discriminant analysis of dyad data.

Table 3.3. Means of additional measures of topic manipulation for groups together (Common) and for each group separately, Subject:Interviewer context.

	Common	Retarded	Nonretarded
Average Number of Topics/Minute	1.32	1.41	1.24
Proportion of Topics Mnt/Mch	1.00	1.00	1.00
Longest Sequence of Mnt/Mch	34.75	33.83	35.67
Proportion of Utterances Contributed	.49	.50	.48

Effects of Context

To determine the effects of context, a two-way analysis of variance was used to compare the proportions of total utterances contributed by each subject in a) the Subject:Interviewer setting, and in b) the Subject:Subject setting. Table 3.4 presents the findings of this analysis, which revealed no significant differences between groups or contexts, and no significant interaction of group and context. The means presented in Table 3.5 further illustrate the striking similarity found between groups and between contexts.

Table 3.4. ANOVA table for proportion of utterances contributed by each group, by context.

Source	DF	SS	MS	F Ratio	Prob.
Group	1, 10	.66	.66	.06	.81
Context	1, 10	.56	.56	.22	.65
G x C	1, 10	.66	.66	.26	.62

Table 3.5. Mean proportion of utterances contributed by group, by context.

	S:I	S:S	Total
Retarded	.50	.50	.50
Nonretarded	.50	.48	.49
Total	.50	.49	.495

In summary, no significant differences were found between groups with respect to the five topic manipulation categories employed. Both groups used the manipulations in similar proportions in both contexts. Additionally, the groups resembled each other in average number of topics introduced per minute, proportion of new topics maintained or matched, longest sequence of utterances maintained or matched, and proportion of utterances contributed by each group. Finally, an analysis of variance demonstrated that subjects in both groups contributed a similar proportion of utterances whether engaged in an interview with the investigator or engaged in informal conversation with a peer.

It is necessary to interpret these findings as preliminary data on the topic management skills of mildly retarded adults. Studies which include larger numbers of subjects are needed to confirm the mastery of this pragmatic function by the population sampled. However, no significant differences were found between groups on any of the measures of topic management included in this investigation.

CHAPTER IV DISCUSSION

The purpose of the present study was to provide information concerning the communicative competence of mildly mentally retarded adults by examining their ability to manage discourse topics in two conversational settings. The performance of clients in sheltered workshops was similar to the performance of nonretarded subjects in job training programs. These findings were in agreement with recent studies which support a competence model of communicative abilities for retarded persons.

Methods of Investigation

The high interrater reliability obtained for topic coding suggests that the coding system employed in this study is suitable for experimental purposes and has potential value as a clinical tool. The five categories employed were adequate for describing topic manipulation as it occurs in discourse. The fact that topic shading resulted in less agreement between examiners than the other categories reflects the subtle nature of topic shift afforded by this more sophisticated manipulation.

Although the purpose of this study was to describe and compare the patterns of topic management of the two groups, this taxonomy

appears to have potential for discriminating differences in individual style, as well. For example, a person who allows for the continuity of a conversation mainly by use of topic matching may actually be contributing less on a qualitative basis than a person who provides for continuity by use of topic maintenance, as topic match provides a minimal amount of information and is often a means of deferring to another speaker. Similarly, a pattern of maintaining topic by repeatedly requesting information rather than adding information may, in some instances, suggest submissiveness.

An additional aspect of topic management which warrants investigation deals with the appropriateness of topic manipulation. The investigator is in the process of developing a set of rules, in the manner of Gricean conversational postulates (Grice, 1967), for determining whether the five topic manipulation categories employed in the current taxonomy are used appropriately or inappropriately by a speaker.

For example, one rule regarding topic maintenance is the following: Topic maintenance is inappropriate if the information supplied or requested is unnecessarily redundant. The following example illustrates a violation of this rule.

	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
S1	What do you like best about your job?	S2's job	Topic Change; Requesting Information
S2	I like to work outside.		Topic Maintenance; Adding Information
S1	What else do you like about it?		Topic Maintenance; Requesting Information
S2	I like to work outside.		Topic Maintenance; Inappropriate

The mildly retarded subjects in this study did not demonstrate errors such as the one above. However, clinical observation by the investigator has revealed similar errors made by patients presenting with senile dementia and head trauma. It seems likely that memory deficits account for such inappropriate utterances in these two populations. Lower levels of retarded persons may also exhibit this type of redundant response. Should inappropriate topic manipulation prove to be characteristic of certain language disordered populations, the underlying mechanisms necessary for this pragmatic skill may become more apparent.

The ability to successfully introduce and develop topics is a factor which contributes to the cohesiveness of conversation. Vuchinich (1977) enumerates other "unit relationships," or connections between two utterances, which also provide cohesion in discourse. These include ellipsis, conjunction, presupposition, repetition, pronominalization, and anaphoric reference. Kernan and Sabsay (1985) have demonstrated that some mildly retarded adults are deficient in providing referents (first mentions) and in choosing the correct form (phoric vs. nonphoric) of referents. Investigations of other unit relationships may also reveal differences in the speech of mildly retarded adults.

Discussion of Subject Characteristics

Although the mildly retarded adults in this study are thought to be representative of clients in sheltered workshops, many of whom aspire to independent living and working arrangements, the number of subjects employed was not sufficient to rule out the exclusion of mildly retarded adults who might demonstrate topic manipulation

abilities quite dissimilar to the abilities of nonretarded adults. Caution must therefore be taken in interpreting the present data as representative of the capabilities of all mildly mentally retarded adults. Additionally, the small sample size decreases the power of the statistical analysis in determining whether differences do indeed exist.

Discussion of Results

Results of this analysis revealed similar patterns of topic manipulation for nonretarded blue-collar job trainees and mildly retarded workshop clients. All five categories of manipulation were used in the conversations of both groups. Continuous discourse (topic maintenance and topic match) comprised a high proportion of the total number of utterances in both settings (approximately .90). Discontinuous discourse (topic change and topic reintroduction) comprised a much smaller proportion of utterances in both settings, ranging in mean proportions from .02 to .08. While the findings were not statistically significant, the retarded group did have a higher mean proportion of discontinuous discourse in the Subject:Subject setting than did the nonretarded group (.08 and .04, respectively). Topic shading, which appears later developmentally than the other categories of manipulation (Brinton and Fujiki, 1984), was present in the retarded sample in approximately the same proportion as in the nonretarded sample, with means ranging from .05 to .07.

Four additional measures of topic manipulation again revealed similar performance by the two groups. In the Subject:Interviewer setting, the two groups introduced between 1 and 1-1/2 topics per

minute, and either matched or maintained nearly all topics introduced. Both groups contributed approximately one half of the utterances in this conversational setting. The means for the longest sequence of continuous discourse for the retarded and nonretarded groups were 33.83 and 35.67 respectively, indicating an ability for extensive topic development. These findings reflect active participation by subjects in both groups, and the ability to successfully introduce and develop new topics.

While no significant effects of context were evident in this study, empirical evidence, as well as past research, suggest that context may be an important factor in communicative competence (Anderson-Levitt and Platt, 1984; Bedrosian and Prutting, 1978; Bleile, 1984; Owings and McManus, 1980). In this investigation, both sessions were recorded at the job training site, a physical setting which presumably was an asset for the subjects involved. Although the investigator played the role of an interviewer, it is unlikely that the communicative demands of the interaction can be considered equal to those of an interview conducted to determine competence for employment, job promotion, independent dwelling, etc. Situations which bear more directly on these persons' lives may result in differences in performance attributable to context.

Relationship of Findings to Previous Research

The results of this investigation provide further support for a competence model of language use for retarded individuals. Previous research with retarded adults provides evidence of efficient turn-taking and use of communicative functions (Abbeduto and Rosenberg,

1980; Owings and McManus, 1980), the use of "normal" devices for controlling conversations (Bedrosian and Prutting, 1978), the ability to signal communicative distress (Bedrosian and Prutting, 1978; Abbeduto and Rosenberg, 1980), and the use of sophisticated conversational strategies in interactions with interviewers, co-workers, supervisors, and others (Anderson-Levitt, 1983; Linder, 1978a, 1978b; Turner et al., 1982). This study provides preliminary evidence of competent topic management by mildly retarded adults.

In contrast to previous research which has demonstrated the importance of context in conversational competence (Anderson-Levitt and Platt, 1984; Bedrosian and Prutting, 1978; Bleile, 1984; Owings and McManus, 1980), no significant differences were found in the current study with reference to conversational partner. However, the sociolinguistic demands of independent living are many and varied. Encounters with spouses, supervisors, landlords, etc., all have their specific requirements for successful communication. In addition to conversational partners, the speaker's goal may also influence the success of an exchange. For example, a worker may succeed in persuading an employer to give him a job, only to later fail at interacting tactfully with customers or cooperatively with co-workers. Thirdly, physical setting may play a part in competence. A retarded client may perform more capably in an interview conducted in the familiar surroundings of a sheltered workshop as opposed to the unfamiliar surroundings of a counseling center. The analysis of topic management in a variety of settings, with different interlocutors, and different communicative goals may reveal important contextual effects.

Theoretical Implications

Investigation of the pragmatic aspects of language has led to a focus on the interrelatedness of linguistic, cognitive, and social factors in an individual's communicative competence. While cognitive and linguistic deficits have long been recognized as defining features of mental retardation, social aspects of retardation have received less attention. Additionally, studies of linguistic performance have often been conducted in clinical settings, using standardized tests of phonology, semantics, and syntax. Such studies disregard the actual sociolinguistic demands placed on an individual in a dynamic social setting.

A recent trend in studying the communication of retarded persons has been the analysis of discourse in naturally occurring conversations. This line of investigation has revealed communicative capabilities, even among severely retarded persons, which were previously overlooked (Sabsay, 1975).

It appears that an individual's desire to succeed in a world in which verbal interaction is of the utmost importance is a strong motivator in the development of communicative competence. This desire may lead to effective, if not entirely "normal" communication, even in the case of diminished cognitive and linguistic functioning. The development of certain pragmatic features of language such as turn-taking, the use of communicative functions, and topic management may be strongly based in social interaction.

Implications for Future Research

This study provides preliminary data on the topic management abilities of mildly mentally retarded adults. Further investigation,

using larger numbers of subjects, is necessary to confirm that this conversational skill is attained by the majority of the population sampled. Additionally, it seems advisable to evaluate topic management in a larger number of contexts, taking into consideration the variety of interlocutors, communicative goals, and settings which are encountered in community living.

Ethnographic methods such as those employed by Kernan, Sabsay, and their associates have proved to be helpful to the researcher who is interested in forming general impressions regarding the functioning of a disordered population, and in detecting particular areas of concern. Comparison studies, employing both normal and disordered populations, are also needed to successfully identify sociolinguistic norms and deviations from these norms.

Research conducted with individuals in the moderate and severe ranges of retardation, as well as with other language disordered populations, would be helpful in clarifying the cognitive, social, and linguistic factors involved in topic management and other pragmatic aspects of language. Social factors are just beginning to be examined, and initial indications are that they may have a potent effect on the development and use of conversational competence.

Functional communication is widely recognized as a goal for mentally retarded persons. Information concerning the language used in context by this population is in the preliminary stages, but is essential to the development of appropriate clinical goals. A more thorough understanding of the conversational abilities of retarded individuals is needed in order to design programs which enable them to achieve the highest possible level of independence.

It is hoped that this study will serve to prompt additional research in the area of communicative competence of mildly retarded adults. Further investigation with larger samples will be necessary to discover the full range of conversational abilities in this population and to develop clinical strategies for improving areas which may require remediation.

APPENDIX A
INFORMED CONSENT FORM

The purpose of this study is to compare the conversations of two groups of male workers: a) those employed in sheltered workshops, and b) those employed in competitive job settings.

All participants will be tape recorded in two different situations. In one setting, you will be talking with the researcher; she will ask you about your work. In the second setting, you will be asked to view a music video and then talk about the film with a friend. Approximately an hour of your time is required.

Results of this study should tell us more about the conversational skills that are important for a young person who wants to be a successful worker. There are no risks to those persons taking part in the study. All information gathered as a part of this project is strictly confidential. You are free to change your mind and withdraw from the study at any time. It will not affect your job in any way. You will not be paid for taking part in this project.

If there are any questions, please feel free to contact Beverly Goldner at 305-294-6696.

I have read and I understand the procedure described above. I agree to participate in the procedure and I have received a copy of this description.

Signatures: _____

Subject

Witness/Position

Principal Investigator

APPENDIX B
 ADDITIONAL EXAMPLES OF TOPIC MANIPULATION CATEGORIES

Topic Maintenance

After a topic was introduced, the topic was considered maintained if the utterance which immediately followed incorporated the topic of the preceding utterance and either added or requested additional information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	I hate Michael Jackson.	M. Jackson	Introductory Topic; Adding Information
2	He's not one of my favorites.		Topic Maintenance; Adding Information
1	He always dances the same.		Topic Maintenance; Adding Information
2	Can you believe how much money he earns?		Topic Maintenance; Requesting Information
1	No, he's not worth it.		Topic Maintenance; Adding Information

Topic Match

After a topic was introduced, the topic was considered matched if the utterance which immediately followed satisfied one of these three conditions: 1) The topic of the utterance matched the preceding utterance in content; 2) The utterance acknowledged, agreed with, or emphasized the preceding utterance, thereby passing the turn to the other speaker; 3) The utterance performed a ritualistic function, such as a greeting or a courtesy. A topic coded as topic match allowed for continuity in the conversation and either added or requested a minimal amount of information.

Example 1 (A match in content):

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	The Florida Keys have changed over the years.	Florida Keys	Topic Change; Adding Information
2	Yes, it certainly has changed through the years.		Topic Match; Adding Information
1	Did you like it better before?		Topic Maintenance; Requesting Information
2	Did I like the Keys better?		Topic Match; Requesting Information

Example 2 (Acknowledgement, Agreement, or Emphasis):

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	We don't work on Friday afternoon.	Work schedule	Topic Maintenance; Adding Information
2	Oh, I see.		Topic Match; Acknowledgement
1	It makes our week-end a little longer.		Topic Maintenance; Adding Information
2	Mmhm.		Topic Match; Agreement
1	I'm taking next week off.		Topic Maintenance; Adding Information
2	The whole week!		Topic Match; Emphasis

Other frequent utterances which belong to this category include the following: Uh-huh, Right, Sure, Great, Yea/Yes (when not used as a direct response to a question), Oh, boy, Okay, Gee, What? I guess so.

Example 3 (Rituals such as greetings, leave-takings, and courtesies):

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	You've been a big help with my project.	Research project	Topic Maintenance; Adding Information
2	Thank you.		Topic Match; Courtesy
1	Good-bye.		Topic Match; Leave-taking

Topic Shade

A topic was considered to be shaded if the utterance met both of the following criteria: 1) The topic focus was not strictly maintained, but shifted from one utterance to the next; and 2) Some aspect of the propositional content of an utterance was derived from the preceding utterance. An utterance coded as a topic shade may either add or request information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	You should feel competent out on the water with your own boat.	S2's boat	Topic Reintroduction; Adding Information
2	Yes, this program has given me a new understanding of engines.		Topic Maintenance; Adding Information
1	Are you interested in the lobster season that's coming up?	Lobster season	Topic Shade; Requesting Information

Topic Change

A topic was considered changed if an utterance introduced a topic not previously discussed and either added or requested information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	Who's gonna show at the grad night concert?	Concert	Topic Maintenance; Requesting Information
2	Shalimar, Midnight Star, Tina Marie, and Involution.		Topic Maintenance; Adding Information
1	You should see the inside of this yearbook.	Yearbook	Topic Change; Adding Information

Topic Reintroduction

A topic was considered to be reintroduced if an utterance addressed a preceding but not immediately preceding topic and either added or requested information.

Example:

<u>Speaker</u>	<u>Utterance</u>	<u>Topic</u>	<u>Manipulation</u>
1	Did you have any jobs in the past that were connected with marinas?	Past experience	Topic Shade; Requesting Information
2	No, I didn't.		Topic Maintenance; Adding Information
2	In the future, I would like to be a charter boat captain.	Future plans	Topic Shade; Adding Information
1	What kinds of jobs have you had in the past?	Past experience	Topic Reintroduction; Requesting Information

APPENDIX C
SAMPLE TRANSCRIPT

<u>UTT. #</u>	<u>SPKER.</u>	<u>DIALOGUE</u>	<u>TOPIC</u>	<u>MANIPULATION</u>
001	I 001	I've been talking to men who are in different job training programs.	Job Training Programs	Intro Topic Add
002	I 002	I would like for you to tell me a bit about the Marine Propulsion program here.	MP Program	TS;Req
003	JC 001	Okay, uh, the Marine Propulsion program is a two year program.		TMnt;Add
004	JC 002	Uh, you're trained in uh, uh, gasoline engines, diesel engines, and outboard engines.		TMnt;Add
005	JC 003	Uh, it's a pretty complete program, and, uh, very interesting.		TMnt;Add
006	I 003	Mhm.		TMch;Add
007	I 004	Mm, what do you hope to do with the training that you're getting?	Future Plans	TS;Req

ABBREVIATIONS:

TMnt; = Topic Maintenance

Add = Add Information

TMch; = Topic Match

Req = Request Information

TS; = Topic Shade

UTT. # = Utterance Number

TR; = Topic Reintroduction

SPKER. = Speaker

TC; = Topic Change

APPENDIX D
GUIDELINES FOR DIVIDING UTTERANCES

- A. Utterances may consist of major or minor sentences.
 - 1. Major sentences usually have a subject-predicate structure, and may consist of simple or multiple clauses.
 - 2. Minor utterances include stereotypes, social phrases, interjections, vocatives, and back channel responses.
 - 3. Back channel responses include the following:
 - a. murmurs of agreement
 - b. requests for clarification
 - c. brief restatement
 - d. sentence completion
- B. Repetition of phrases within a larger utterance are considered as part of that utterance (i.e., "Yesterday Susie came Susie came over").
- C. False starts are considered as part of the utterance they attempt to initiate (i.e., "John went--John went home later").
- D. Incomplete sentences lacking sufficient information to tell what the speaker was going to say are noted but not counted as utterances.
- E. Speakers' utterances may occasionally overlap (i.e., two speakers talking at the same time.) In this case, each speaker's utterance is counted as a separate utterance.

- F. Utterance boundaries are considered to occur at the end of a phonemic clause also marked by
1. drop in pitch or loudness across the entire clause or the final syllable(s);
 2. a final rise in pitch, or question inflection;
 3. an unfilled pause;
 4. lengthening of the final syllable;
 5. the use of a stereotyped "ending expression," such as "you know," or "or something";
 6. the completion of a grammatical clause with a subject-predicate combination.

(Adapted from Brinton and Fujiki, 1984)

APPENDIX E
TRANSCRIPT NOTATION

[]	overlap in speech	
<	>	transcription uncertain	
.	.	.	pause
<hr/>			unintelligible
*	repetition of a word or syllable		
()	notes of clarification, non-speech sounds, environmental noises	

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BIOGRAPHICAL SKETCH

Beverly Boling Goldner was born in Asheboro, North Carolina, in 1950. After graduating from Myrtle Beach High School in 1969, she attended Columbia College, Columbia, South Carolina, where she received a Bachelor of Arts degree in speech pathology in August 1972.

Ms. Goldner began her graduate studies in speech pathology at the University of South Carolina in September 1972 and was employed as a trainee in the Department of Speech Pathology and Audiology at the Veterans Administration Hospital in Columbia. She earned her Master of Education degree from the University of South Carolina in August 1973.

For one year, Ms. Goldner worked as a speech-language pathologist at the West Virginia School for the Deaf and Blind in Romney, providing services for deaf, blind, and deaf-blind students, primary through secondary grades. She obtained her Certificate of Clinical Competence from the American Speech-Language-Hearing Association in 1975. From 1976 through 1978, Ms. Goldner was employed by the Board of Education, Monroe County, Florida, providing services for school children with communication disorders.

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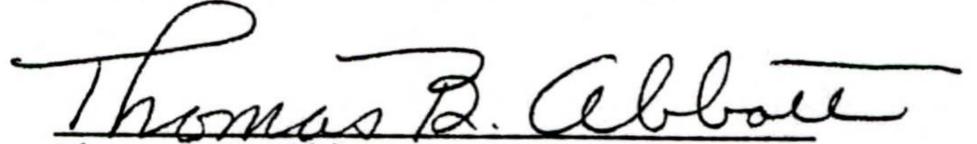
entered the doctoral program of the Speech Department of the University of Florida in 1978. While pursuing her doctorate, she worked as a clinical supervisor and teaching assistant in the department. She was awarded her Doctor of Philosophy degree in August, 1986. Currently she maintains a full-time private practice in Key West, Florida.

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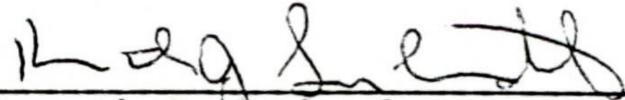
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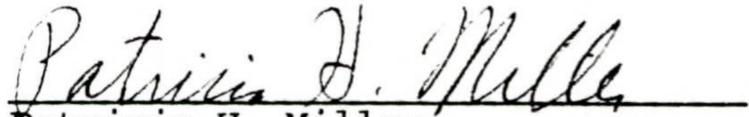
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