

**"PRAGMATIC ABILITIES OF AUTISTIC AND \\
NORMAL CHILDREN - A COMPARATIVE STUDY"**

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**All India Institute of Speech and Hearing
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May 1999

*DEDICATED TO ACHAN, AMMA
& PRATHAP
With Love*

CERTIFICATE

This is to certify that this dissertation entitled "PRAGMATIC ABILITIES OF AUTISTIC AND NORMAL CHILDREN - A COMPARATIVE STUDY", is the bonafide work in part fulfillment for the degree of Master of Science (Speech and Hearing) of the student with Reg. No. M9703.

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This is to certify that this dissertation entitled "PRAGMATIC ABILITIES OF AUTISTIC AND NORMAL CHILDREN - A COMPARATIVE STUDY", has been prepared under my supervision and guidance.

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DECLARATION

This dissertation entitled 'PRAGMATIC ABILITIES OF AUTISTIC AND NORMAL CHILDREN - A COMPARATIVE STUDY', is the result of my own study under the guidance of Dr. Shyamala Chengappa, Head of the Department of Speech Pathology, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier at any University for any other Diploma or Degree.

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INTRODUCTION

The last fifteen years have witnessed a series of ideas and innovations labelled as 'the pragmatic revolution' (Duchan, 1984). One of the major contribution of this revolution has been a re-emphasis on the importance of communication in the context of social interaction. Researchers and clinicians have questioned the soundness of fragmented approaches and have focussed attention on language in the actual settings in which it is used. From this perspective, assessment and intervention within the context of conversation have become increasingly important.

The contemporary term 'pragmatics', has its origin in the early Greek word "Ilpama" which meant "action" and from which the words "practice" and "practical" are derived. Greek philosophers such as Plato and Aristotle were interested in the relationship between the speaker and the audience. Rhetoric, therefore, may be thought as the earliest form of contemporary pragmatics. (Prutting, 1982).

The term 'pragmatics' has been introduced into the field of speech-language pathology by Elizabeth Bates, a psychologist at the University of California at San Diego. Bates (1976) defined pragmatics as the "rules governing the use of language in context". Over the years, this concept has been viewed as an important and promising addition to our conceptual framework in speech language pathology.

During the pre-Chomskian era, pragmatics was mainly the province of philosophers like Pierce (1932), Morris (1946) and Austin (1962), who discussed the ways in which adults used language to communicate. They observed that in

order for communication to take place, the speaker and listener were required to function as active partners in the ongoing process.

In the 1960's, the theoretical focus on child language was primarily on the innate factors related to the acquisition of language. During, the 1970's a theoretical shift occurred to look at both social and cognitive factors influencing the acquisition process.

Pragmatics became the "fashion" of the middle and late 1970's but like so many fashion revolutions, this new interest represented a lesser bold step forward than a return to the pre-Chomskian interest in language as a means of communication. (Woolfolk and Lynch, 1982).

The 1980's indicated a renewed interest in pragmatics. This is in contrast to the focus during the past two decades on the structural aspects of language. It is now realized that in addition to learning the phonologic, semantic and syntactic rules of language, a child must also master the rules that underline how language is used for the purpose of communication. (Hymes, 1971). The acquisition of these rules require a complex integration of linguistic, cognitive and social knowledge.

Focus on pragmatics has broadened our view of communication toward the social dimension. This shifted emphasis from the study of syntactic-semantic features of child language to the pragmatic or social function of communication provides evidence that normal children use language quite early in life so as to be able to direct others, persuade them and for purposes of description, control and enquiry (Dore, 1974; 1977). The normal child, in essence, uses language as a social function for regulating and being regulated by others.

The development of pragmatic skills in handicapped children has not received substantial attention despite the recognition by practitioners that there are children whose social interaction abilities cannot be directly tied to their linguistic skills. (Snyder, 1978; Blank, Gessner and Esposito 1979; Spekman, 1981; Bernard-Optiz, 1982). Numerous clinical reports indicate that these children demonstrate major communication deficits which transcend their problems with form and content and which exist in the presence of normal linguistic skills. The problems exhibited by these children illustrate that linguistic knowledge alone does not guarantee appropriate language use. There are also children who manifest poor social interaction abilities that can be accounted by a primary, linguistic deficit (Brinton and Fujiki, 1982; Fey and Leonard, 1983) or cognitive deficit (Beveridge, 1976; Guralnick, 1978). However, most clinicians and special educators do not have an adequate framework for assessing pragmatic difficulties regardless of their foundation.

As clinicians, in addition to changing linguistic behaviour, we are changing a vehicle by which one initiates, maintains and terminates relationships with others. Goffman(1981) argues against taking a view of communication that is too narrowly linguistic, rather than understanding it as a part of a broader notion of social competence. It is one's social identity that is often affected by having a speech, language and/or hearing disorder. Appropriate communication is being viewed as social competence. (Prutting, 1982).

It is this recognition of pragmatics as an important entity of language, both in terms of assessment and intervention that calls upon the need for extended research in this domain.

Pragmatics, especially in child language still remains unexplored by Indian investigators. The present study therefore is an attempt to make the first move

towards this direction. The study was designed to investigate the pragmatic abilities in autism, a group that is well recognized by their marked impairments in the use of language for interpersonal communication and to compare these findings to the communicative behaviors of their normally functioning peers.

REVIEW OF LITERATURE

When the field of speech language pathology was in its infancy, speech and language impairment was defined as some aspect of comprehension or production that compromised the interaction between speakers. Van Riper (1939) noted that : "Speech is defective when it deviates so far from the speech of other people in the group that it calls attention to itself, interferes with communication, or causes its possessor to be maladjusted to his environment."

Despite the reasonableness of this global view of communication disorders (Gallagher, 1991) much effort during the ensuing 30 years was devoted to separating and defining components and sub components of the communication process. Clinical intervention frequently involved the isolation, identification and habilitation of individual behaviours that did not meet normative expectations. Within the bounds of this clinical philosophy, the actual use of targeted language behaviours to communicate was viewed as the final and often untrained, step in the intervention process.

There are a number of linguistic models of language, but the one that has been most widely adapted for use in describing the nature of language disorders in children is that of Bloom and Lahey (1978). According to Bloom and Lahely (1978), language is " a code whereby ideas about the world are represented through a conventional system of arbitrary signals for communications". The authors identified three major components of language; the content or meaning that is coded or represented, the form that codes the context, and the use or purpose of the code in a particular context. The knowledge of language is viewed as the integration of context, form and use.

THE CONTENT OF LANGUAGE:

Word or signs and the relations between words or signs represents information or meaning in messages. One can conceive of language content in terms of the topics that are represented in particular messages, and categorizations of topics according to how they relate, or are similar to one another in different messages. Language content is the broader, more general categorizations of the topics that are encoded in messages; objects in general; or actions in general; or the possession relation in general. Thus, the content of language is its meaning or semantics- the linguistic representation of what persons know about the world of objects, events and relations. (Bloom and Lahey, 1978).

THE FORM OF LANGUAGE:

The form of utterances can be described in terms of their acoustic, phonetic shape, and the form of signed communication can be described in terms of its configuration properties. Both sound and sign utterances can be described in terms of the sounds or movements that are the parts of segments of an utterance, and the features of stress and intonation and emphasis that form the rhythm of sequences of segments, and are imposed on the segments or are suprasegmental. Form can be described in several ways in terms of the units of sound or **phonology**, the units of meaning that are words or inflections, or **morphology**, and the way in which units of meaning are combined with one another, or **syntax**. (Bloom and Lahey, 1978).

THE USE OF LANGUAGE:

There are two major aspects of the use of language. The first has to do with the goals or functions of language, the reasons why people speak; the second

has to do with the influence of linguistic and non-linguistic context that determines how individuals understand and choose among alternative forms of language for reaching same or different goals. (Bloom and Lahey, 1978).

Pragmatics is a term originally used by Pierce (1932) and further elaborated by Morris (1946) who defined it as "the relationship between signs and their human users".

The renewed interest in pragmatics came about through the realization that semantic and structural analyses of language did not provide an adequate and complete account of language and its development. The complete account is needed to understand the fact that "language is a social event carried out by human beings in realistic communicative contexts" (Bales et al, 1977). The application of principles of pragmatic analysis is not viewed as an ancillary or parallel aspect of the study of language structure but as an integral part of the nature and use of language by man. Bates (1976), states that "all of semantics is essentially pragmatic in nature".

Pragmatics in language refers to the identification and description of factors and rules that affect the structure and use of the linguistic code. The particular choice of structures - their length, complexity grammatically and the fluency and style (casual or formal) with which the structures are used are influenced by factors within the individual and his environment that are extraneous to the linguistic code itself. These factors may be described under two major categories: function and context.

THE FUNCTION OF LANGUAGE: One of the major program factors that influences language form is that of the function the language serves, both in society and in the individual, in general and at any particular time. The most frequently

referred to function is that of communication. There are functions of language that are non-communicative, these are self directed functions (Rees, 1978).

A number of detailed lists of the communicative functions of language exist and have been reviewed by Rees (1978). The following communicative functions of language express a consensus of a number of researchers:

1. To greet and to express various social routines
2. To regulate. This also includes language used to control, persuade, request, convince, nag, correct, criticize, threat, demand etc.
3. To exchange information. This also includes language used to question, inform, describe, assert, state, explain answer etc.
4. To express feelings. This also includes language used to express being happy, excited, sad, frightened, angry, mad, hurt, as well as to protest and to feel good.
5. Imaginative function. This includes languages used in games and fantasy as well as figurative and artistic language.
6. Metalinguistic function. This includes the use of language to talk about language.

Some language is not directed to a listener and has no essential communicative function, although it may be social; such language is known as monologue. A monologue is that form of speech that occurs when the speaker ignores the presence of another person and directs the speech to himself (Piaget, 1955). This unequally personal and non communicative use of language has been outlined by few investigators (Bates, 1976) as that of being a tool used to

- (1) achieve potential and self-regulation (Luria, 1966)
- (2) to develop the cognitive, emotional and personality aspects of self
- (3) develop relations with others
- (4) provide organization for cognitive structures.

The non-communicative functions as described by Rees (1973) includes the functions of

- (1) concept formation
- (2) directive function and
- (3) magical function

Discourse is at a higher level of organization. A discourse may be a dialogue or a monologue. What is crucial is that discourse have a topical structure with successive utterances linked together on the basis of a common topic (Hurtig, 1977). An effective conversation involves rules for turn taking and learning such conventions as presupposition, indirect speech acts and deixes. These conventions are called **conversational postulates** or **rules of discourse**. They concern the quality, relevance and quantity of information contained in the discourse (Gordon and Lakoff, 1976) and constitute the assumptions that humans share about discourse. These postulates are generally and tacitly agreed upon rules and include the following: (1) tell the truth; (2) offer new and relevant information and (3) request only information you want (Bates, 1976; Miller, 1978).

The Context of Language: The recent emphasis on the pragmatic aspect of language stresses not only the function of language, but also the context in which language occurs. The language context refers to the environment in which

utterances are used as well as such listener variables such as age, sex and relation of the listener to the speaker. Environmental variables also include the physical, cultural and social setting in which speech occurs.

The speech of adults and children change when the listener was an infant or toddler. These predictable changes are called codes.

Speech is dependent not only upon the listeners but also upon the social context. Some topics are considered appropriate for parties; while others, like the weather, may be discussed with strangers in waiting rooms or elevators. Appreciation of the effect that the social context has on the topic of conversation emerges only gradually in the child and is related to socialization. Meaning in language, is conveyed through the blending of the words with the social context (Bates, 1976).

The function and intended effects of utterances are also dependent on the environment in which the sentence is uttered. For eg., the function of the utterance. "You must have some of this" varies depending upon the circumstances in which it is used. When used by a hostess to her guest, it is a polite request or social phrase. When used by a mother to her small child, the function of the utterance is to command, and the intended effect would be for the child to eat the designated food.

DEVELOPMENT OF PRAGMATICS

A child acquires language because the usefulness of communication becomes apparent even before he can say any word. Learning to communicate begin with the first social exchange between the infant and caretaker, and

continues until the nuances and subtle rules governing polite forms, humor, and sarcasm are finally mastered late in the school years. (Woolfolk and Lynch, 1982).

The use of language begins, as Leopold (1939) noted, with the intention to communicate. Such intention may be clearly identified in children between birth and 8 to 10 months. Pointing plus vocalization constitute a common first step. Halliday (1975), has studied the functions of language in a child prior to the onset of words. His subject, Nigel, used four identifiable functions before he used words. These included (1) demanding ("give me") (2) regulating ("do that") (3) interacting ("I see you") and (4) personal ("That is nice"). Nigel's language progressed through three identifiable phases. The first was preverbal. The next marked the transition to true verbal language at about 16 to 18 months. In this stage, Nigel learned to use grammar and also began to engage in verbal dialogue. As this phase progressed, Nigel learned to recite rhymes and social routines, tell stories, and provide information. The last phase is essentially the adult system, wherein the speaker controls devices for humor, sarcasm and indirect requests.

The following traces the development of pragmatics in child language (Woolfold and Lynch, 1981).

- 1. Between 2 and 10 months:** Eye contact and gaze exchange used to regulate joint attention on an activity - a prerequisite to learning reference. Eye contact, smiling and attention indicate that the child takes notice of someone or something. Pointing plus vocalization suggests demand for someone or something.
- 2. Between 10 and 16 months:** The regulatory function of language is strong at this stage. Gestures of giving, pointing and showing draw attention to what is wanted. Nonverbal turn taking in play lays the foundation for conversation.

Early words are used to express instrumental ("I want") regulatory ("Do what I tell you") interactional ("hi") and several other functions.

3. **Between 18 and 30 months** : In this time period, symbolic play, use of imaginative speech, beginning of discourse, answering questions, use of description, expressing some feeling, deictic use of pronouns, and ability to change topics are seen.
4. **Between 3 and 4 years:** Switches code when speaking to a baby. Recognizes taboo words. Increases ability to maintain conversation beyond several turns, especially if monitored by an adult.
5. **Between 4 and 5 years:** Can give antonym, synonym and rhyming words. Metalinguistic use of language emerges. Uses indirect requests.
6. **Grade-School age** : Uses at least three language codes. Can tell puns and stories. Follows most rules of discourse.
7. **High-School age:** Artistic use of language begins. Understands jokes, sarcasm and social etiquette, but not necessarily debate and parliamentary rules.

Mumford (1978) gave the developmental stages in proxemics, an important aspect of pragmatics. It is the proximity or physical distance one has while interacting with another. The developmental stages are as follows:

From birth to 3 years: Intimate stage- where children learn the closeness of communication with their mothers, other members of their family and caretakers. They touch, desire hugging and profit from "close" communication.

Between 3 years to 7 years: Personal stage- Where children talk, but much of their activity is self-centered (egocentric), and they have not acquired an understanding of socialization to any great extent.

From 7 years above : Social and Public stage - where children become more social, learn how to behave in social settings and can understand social relationship. Older children acquire an awareness of a "public" type of communication, particularly if the school settings offer the opportunity for performing in a public situation.

A number of investigators have indicated that there is a core set of intentions communicated by preverbal children (Bates, Camaione and Volterra, 1975; Coggins and Carpenter, 1981; Dore, 1974; Escalona, 1973; Greenfield and Smith, 1976, Halliday, 1975), children at the single word stage of development (Dale, 1980; Dore, 1974 and Halliday, 1975) and by children who are beyond the single word stage of language acquisition (Dore, 1977; 1978).

Preverbal Communicative Intentions

1. Attention seeking
 - a. To self
 - b. To events, objects of other people
2. Requesting
 - a. Objects
 - b. Action
 - c. Information
3. Greetings

4. Transferring
5. Protesting / Rejecting
6. Responding/Acknowledging
7. Informing.

*** COMMUNICATIVE INTENTIONS EXPRESSED AT SINGLE WORD LEVEL**

1. Naming
2. Commenting
3. Requesting Object
 - a. Present
 - b. Absent
4. Requesting action
5. Requesting information
6. Responding
7. Protesting / Rejecting
8. Attention seeking
9. Greeting

*** COMMUNICATIVE INTENTIONS EXPRESSED AT THE MULTIWORD STAGE OF LANGUAGE DEVELOPMENT**

1. Requesting information
2. Requesting action

3. Responding to requests
4. Stating or commenting
5. Regulating conversational behavior
6. Other performatives (to tease, warn, claim, exclaim or convey humor).

It can therefore be concluded that as the linguistic sophistication of a child increases, the range of communication intentions also expand.

Leonard et al (1978) conducted two experiments to examine four, five, and six year old children's understanding of indirect requests. The experimental tasks required the children to judge the appropriateness of a listener's response to indirect requests involving an affirmative syntactic construction (Can you shut the door?), requests containing a negative element (Can't you answer the phone?) and requests for the state of affairs mentioned in the predicate to be changed (Must you play the piano?). Even the youngest age group exhibited an understanding of the first two types of indirect requests however, only the six-year olds showed any understanding of requests for a change in the state of affairs mentioned in the predicate. The authors state that only when children reach the age of six years do they possess knowledge that certain indirect requests require a modification of the behaviour specified in predicate. Several factors are accounted for this including : (1) such indirect requests require a different type of response on the part of the listener from most indirect requests, (2) unlike most requests, no parallel exists between the negative and affirmative counterparts for these indirect requests, and (3) these indirect requests differ from most indirect requests in their pre suppositional characteristics.

Reeder (1978) conducted a psycholinguistic experiment to elicit highly reliable judgements from young English-speaking children aged 2 years 6 months

to 3 years about illocutionary force of utterances presented in controlled contexts. The illocutionary acts considered were 'Requests' and 'Offer'. The experimental data bear upon two questions : (1) What set of features, linguistic and pragmatic, constitute cues for the discrimination of illocutionary force by young children ? (2) What is the lower developmental bound of the emergence of discrimination of illocutionary force for requests and offers ? Results indicated that while grasp of illocutionary force for offers was well-established by 2 years 6 months discrimination skills for requests probably continues to develop between 2 years 6 months and 3 years.

The ability to differentiate the directive senses of 'ask' and 'tell' was investigated by Bock and Hornsby (1981) using a production task in an experimental setting with children between the ages 2 years 6 months and 6 years 6 months. Results showed that the children at all ages distinguished the verbs along dimensions sensitive to adult ratings of politeness. There was a trend towards increased politeness with age under 'ask' instructions, but not with 'tell' instructions. Analysis of structural features of the directives produced showed that the interrogative form of sentence was more likely to be used with 'ask' instructions, as was the word 'please', while 'tell' instructions elicited the imperative form of sentence with less frequent use of 'please'¹. The findings suggest that children before the age of 7 years are able to differentiate the illocutionary forces of utterances which have the same communicative intention.

Conversation repair sequences are an important aspect of communication interaction. These sequences may occur in the event of communication failure if a listener requests clarification of a previous aspect of the speaker's message. Langford (1981) analyzed the responses of 4-year-old children to requests for clarification produced by their adult caregivers. He noted that the children were

responsive to the requests, and that they were sensitive to indications from the adults and that the requests had been satisfied.

James and Secbach (1982) investigated the pragmatic function of preschool children's spontaneously produced questions. 24 normal children between and ages of 2 and 5 years were observed in a variety of situations at their day care centers. Questions produced during these observation periods were categorized by pragmatic function. The three functional categories were information seeking, conversational and directive. Results indicated that the three pragmatic functions differed with age. The major function of the questions produced by the 2 and 3 year old subjects was clearly information seeking but the 4 and 5 year olds questions were more evenly distributed among the functional categories. The 4 year olds used a high percentage of conversational questions in comparison to the other age groups. The children's question use appeared to follow the principle of using new forms for old functions and old forms for new functions.

Brinton et al (1986) investigated the repair strategies employed in conversation by a forty linguistically normal children at four age levels : 2 years 7 months to 3 years 10 months; 4 years 10 months to 5 years 10 months; 6 years 10 months. Results indicated that subjects at all age levels complied with the initial request for clarification the majority of the time. However, with increasing age, subjects became more adept at handling the sequence of requests of clarification. Older children were more responsive to the request. A variety of repair strategies (repetition, revision, addition and cues) were elicited and the use of these strategies differed according to subject age, with 9- year-old subjects demonstrating a wider range of strategies on providing repairs.

An overview of all these studies thereby indicates that pragmatics, like syntax and semantics follows a developmental trend, with increasing age and increasing linguistic sophistication.

ASSESSMENT OF PRAGMATICS

Measures of children's comprehension and production skills for vocabulary and syntax are now common, both in clinical practice and in basic research on individual differences. However, it is becoming increasingly clear that adequate mastery of language includes many other skills, particularly ones which contribute to 'communicative competence' (Campbell and Wales, 1970; Garvey, 1975; Gleason and Weintraub, 1978).

The pragmatics of language is of particular interest for several reasons. First, children may have command over a number of pragmatic functions at a time when their vocabulary and syntax are quite limited (Dore, 1974, 1975; Ingram, 1974; Greenfield and Smith, 1976). Ingram, has drawn together several lines of evidence to suggest a rapid expansion of the range of pragmatic functions during the one word and very early two word phases. However, the evidence for this proposal is based on several distinct investigations rather than upon a broad assessment of the same children. Halliday (1975) and Greenfield and Smith (1976) have argued on the basis of intensive studies of one and two children respectively that a relatively universal sequence of emergence of functions can be observed. Thus development may be manifested more in functions than in lexical or syntactic form. Second, there is some empirical evidence that pragmatic development is a (statistically) independent dimension of development. Synder (1978) compared language delayed children with normal children matched for mean length of utterance with respect to their ability to produce declarative and imperative functions in structured elicitation conditions, and found that the language impaired

children were even more delayed pragmatically than they were syntactically. Blank, Gessner and Esposito (1979) provided a case study of a boy with an almost total deficit in the ability to use language socially and appropriately, despite relatively well developed syntactic and semantic systems. Third, pragmatic development is often hypothesized to be the aspect of language most closely tied to cognitive development (Bates, 1976).

Most of what we know about language and its use in children has been gained by observing children's behaviour in spontaneously occurring events (Bloom and Lahey, 1978; Ochs, 1979). For the last three decades, low structured observations have been the predominant research methodology for investigating language and language development in normal and impaired children (Aram and Nation, 1982; Bloom and Lahey, 1978; McNeil, 1970). These assessment techniques include observing children in relaxed naturalistic or seminaturalistic social contexts (Ochs, 1979), having children interact with a familiar person (Cazden, 1970), and allowing children to converse about topics of their own choosing (Miller, 1981). It is widely assumed that the non obtrusive nature of low structured observation provides the best opportunity to obtain a representative sample of the child's language use (Coggins et al, 1987).

Although low structured observations remain the major means of sampling a child spontaneous language, the technique may, provide an incomplete picture of the child's typical language use . Language use has been found to vary substantially as a function of context and this variability appears difficult to control. (Gallagher, 1983).

An alternative method for obtaining information about children's language use is the elicited approach production task (Miller, 1981). In this approach, the experimenter structures the context to elicit a particular behaviour of interest.

Although the elicitation task does not guarantee a response, it clearly increases the probability that a child will produce a desired behaviour in a given situation. The structured elicitation technique has been used with young children to successfully elicit wh -questions, negative structures relational meanings and early communicative intents. (Snyder, 1978; Miller, 1981).

Using structured tasks to assess a child's emerging communicative behaviour has some inherent risks. If, elicitation is the major means of acquiring information, one may compromise the integrity of the behaviour under study (Bloom and Lahey, 1978; Prutting, 1982). Lund and Duchan (1983) maintain that children may perform differently in contrived, structured contexts than they do under natural, unstructured conditions. Thus, when the examiner structures a context, or constraints an interaction, the representativeness of the sample may be jeopardized.

Investigators have used low structured observations (Haliday, 1975) or elicited tasks (Synder, 1978) to examine the reasons or intentions regarding why children communicate. Coggins et al (1987) made a longitudinal study (15 months) of the communicative intentions in 35 normally developing, nine month old children and compared their intentional requests and comments produced during low structured play session and structured elicitation tasks. Results indicated that the majority of subjects produced comments spontaneously in a low structured context by their first birthday, yet few produced spontaneous requests. The structured elicitation tasks were found to be more successful in sampling requests than comments from children during the second year of life. The results of this study suggests that a single method or approach is unlikely to yield a representative sample of children's communication in a clinical setting.

PARADIGM FOR CONCEPTUALIZING PRAGMATIC ASPECTS OF LANGUAGE

There have been few attempts to organize the pragmatic aspects of language for clinical application (Curtiss, Kempler and Yanmda, 1981 ; Mc Tear, 1985; Penn, 1983; Roth and Spekman, 1984). Curtiss et al (1981) suggested a conversational analysis that includes 16 categories representing discourse functions. Prutting and Kirchner (1983) designed a protocol that proposed the use of a speech act theory as a means of organizing pragmatic parameters and offered the following break down: utterance acts, propositional acts, illocutionary and perlocutionary acts.

Penn (1983) developed a profile of communicative appropriateness that takes the following pragmatic parameters into account: non verbal communication; sociolinguistic sensitivity; fluency; cohesion; control of semantic content, and responsiveness to the interlocutor. She examined 40 parameters grouped under these five broad categories for clinical purposes.

Roth and Spekman (1984) constructed an organizational frame work for analyzing performance in the area of pragmatics. Such a framework can aid the practitioner in fulfilling the two major objectives of assessment:

- (a) to determine the effectiveness of a child as a communicator and
- (b) to provide recommendations regarding appropriate intervention strategies.

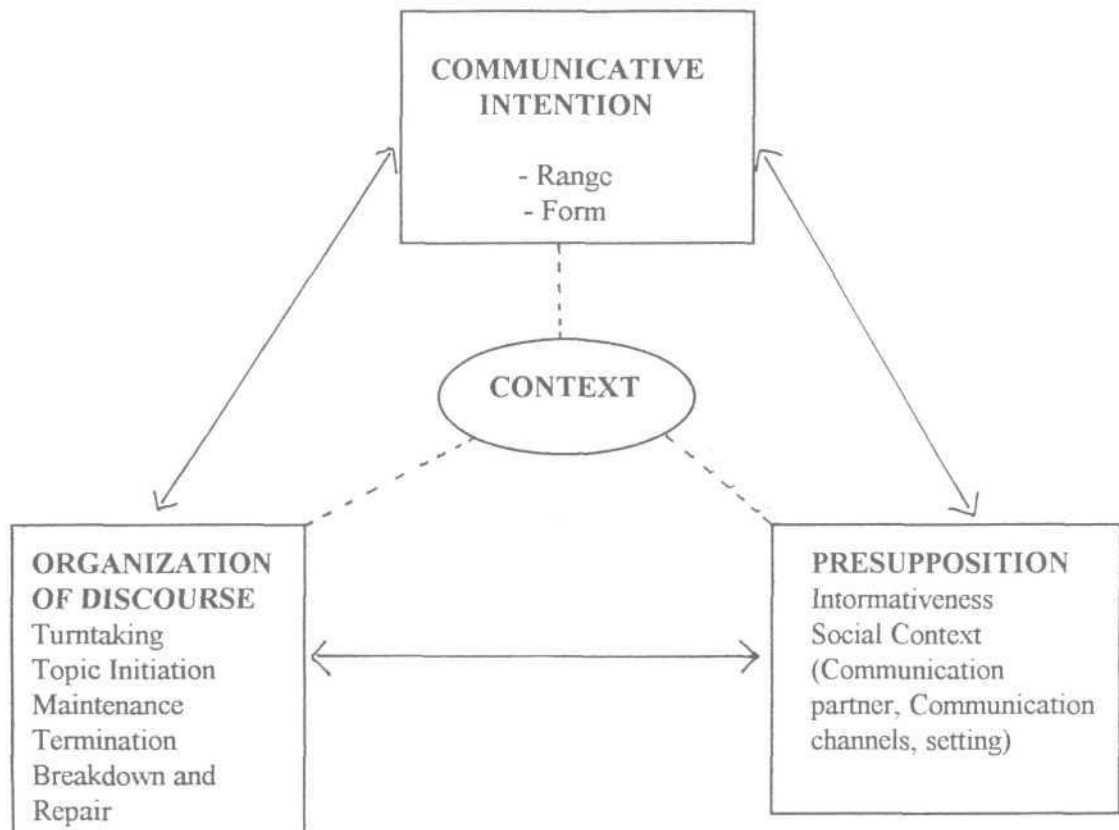
According to Roth and Spekman (1984), there are different levels at which communications skills can be analyzed, and any one message can be classified differently depending upon the level of analysis selected.

- The first level involves an examination of the **communicative intentions** that a speaker wishes to convey. For eg. a message may be used to comment, request, greet, protest or direct the behaviour of others (Austin, 1962; Searle, 1969). At this level of analysis, the focus is on a single message which is encoded by a speaker and /or interpreted by a listener.

- The second level of analysis, **presupposition**, broadens this focus to encompass a speaker's message in relation to the specific information needs of a listener. Presupposition involves that information, which is not necessarily explicit in a message but which must be shared by the communication partners if a message is to be understood (Bates, 1976; Rees, 1978).

- The third area, social organization of discourse, has to do with maintaining a dialogue between and among partners over several conversational turns. This level expands the analysis further to focus on the dynamic and reciprocal nature of an ongoing social interaction.

To analyze the communication behaviour at any one of these level, **the context** in which an interaction occurs must be considered (Bloom, 1970; Halliday, 1975; Keller-Cohen, 1978; Ochs, 1979). The nature of the interaction is influenced for example, by the channels available for communication and feed back, the physical environment itself, and the characteristics of the communication partners. Context is thus viewed as a variable that affects the type and form of communicative intentions conveyed, the information that must be presupposed and the manner in which conversations are organized.



ORGANIZATIONAL FRAME WORK FOR ASSESSING PRAGMATIC ABILITIES (Spekman and Roth, 1982)

McTear (1985) separated the pragmatic aspects of language into an instructional component and a transactional component. The instructional component accounts for turn taking acts and exchange structure where as the transactional component is used to denote the propositional content of discourse such as relevance, cohesion and coherence.

All of the above approaches evaluate the parameters within a conversational setting and/or clinician-constructed task.

The problem with all these approaches has to do with the boundaries that are drawn between intentionally and the necessary presuppositions, propositional

knowledge and social rules of discourse needed to carry out the intentions. (Prutting and Kirchner, 1987). Prutting and Kirchner (1987) have abandoned the discrete classification of parameters under one of the speech act categories and have recognized the lack of boundaries that distinctly separate propositional knowledge from say, illocutionary function. In normal children, the period of one word utterances (very roughly, 12 to 20 months) coincides with major cognitive changes according to Piaget. Pragmatic measures, if feasible, might be much more fruitful for investigating the relationship of language and cognitive development than are measures of vocabulary and syntax. All three of these issues could be investigated more effectively if adequate measures of pragmatic development were available and usable.

COMPARATIVE STUDIES OF PRAGMATICS IN NORMAL AND LANGUAGE DISORDERED CHILDREN

Numerous studies have clarified various aspects of the normal development of discourse skills, however, little is known about the manner in which language disordered children function in conversational interaction. It is well known that children with language deficits also have difficulty with language function. The area of pragmatics has become a focus of some of the more recent research in language disordered children's early communicative development.

Most of the studies focus on conversational repairs, conversational turn taking and politeness. The greatest amount of research in this area has dealt with the performative and presuppositional skills of language- disordered children.

Discourse Characteristics : Revision and Repair Behaviours

Gallagher and Darnton (1978) investigated the revision behaviours in the speech of language disordered children. Subjects were 12 children, four at each of Brown's language stages I, II and III. The results indicated a significantly greater use of revisions than repetitions or no responses at each stage and a pattern of revision behaviour that was uniform across stages and qualitatively different from the previously reported (Gallagher, 1977) patterns of normal children.

Language-disordered children across stages phonetically changed utterances significantly more often than normal stage II and III children. Gallagher (1977) hypothesized that the normal child revised by changing the phonetic shape of utterances when his language system is so primitively organized that other structural options are not as readily available to him and such utterances decreased dramatically at stage II when the child's utterance becomes sufficiently complex to facilitate other structural modifications. Language disordered children, however, revised phonetically at approximately the same frequency across language stages even though their increasing structural knowledge from stage I to III provided successively greater and greater opportunities for other types of structural revision.

Language-disordered and normal children also differed in their use of constituent reduction and constituent elaboration revisions. Language disordered children across stages reduced response utterances significantly more frequently than normal stage I children. Normal children did not employ constituent reduction revisions with this frequency until their utterances had reached the complexity of stages II and III. Gallagher (1977) interpreted the behaviour of normal children as reflecting the structural limitations of state I utterances, on the frequency with which elements could be detected while still preserving the intent of

the message. Language-disordered children did not seem to be sensitive to these constraints.

Comparisons of the constituent substitutions of normal and language disordered children also revealed differences between the two groups. Language disordered children across stages substituted elements significantly less frequently than normal children at stage I. Language disordered children seem to have a great deal of difficulty analyzing semantic and syntactic equivalencies.

The language disordered child, according to Gallagher and Darnton (1978), is therefore employing his language structural knowledge to meet conversational demands in a qualitatively different manner from the normal child.

Van Kleeck and Frankel (1981) investigated how discourse devices used by language disordered children relate to those that have been noted in normally developing children. It was observed that language disordered children use two devices to relate to utterances to on going discourse: focus and substitution operations. Focus operations merely repeat while substitutions repeat part but also alter a previous utterance in some way. Research with normal-language children shows that the predominant device a child uses changes developmentally with focus operations more frequently used early and substitution operations emphasized later. The use of these devices was observed in the spontaneous conversations of three language disordered children. Two were at a lower linguistic level. (MLU's of 1.8 and 2.2) than the third (MLU 3.2). A developmental trend reflecting that of normally developing children emerged. These results indicate that language disordered children are not qualitatively different from normally developing children in their ability to use these particular devices for learning to participate in conversations.

Brinton, Fujiki and Sonnenberg (1988) compared the conversational repair strategies employed by 8 language impaired children (mean chronologic age of 9.2 years) and their linguistically normal age and language matched peers in response to a stacked series of requests for clarification ('Huh ?'; 'What ?'; and 'I didn't understand that'). All subjects seemed to recognize the obligatory nature of the requests and were able and willing to adapt their contributions in discourse according to listener feedback, the majority of the time. However, a number of differences were noted among the three groups, many of which seemed tied to the language level of the subjects. It was noted that the language impaired (LI) and the language age-matched (LA) subjects tended to repair by revising form alone more often than did the chronological age - matched (CA) subjects. The CA matched subjects more often used repairs that supplemented the information in the original message with either an addition or cue strategy. Further, the LI subjects found the task more taxing than did either LA or CA subjects as evidenced by the fact that LI subjects produced more inappropriate responses than did the other two groups. Sometimes, these subjects ignored the second or third request and continued their discourse. Other times, they quit talking altogether for a moment. On other occasions, subjects indicated that they know that some kind of adjustment was needed, but they did not provide it. The authors state that it was not the case that the impaired subjects lacked repair strategies but rather that they lacked persistence in applying them. In addition, the LI subjects failed to compensate for their difficulties with increased use of suprasegmental or gestural uses when compared with normal subjects.

Prather et al (1989) studied the types of repairs used by normally developing and language impaired preschool children in response to clarification requests. It was observed that all the children in this study overwhelmingly used revisions to repair their original utterances. Further, the repair strategies used by the language impaired children in this study did not differ from the normal controls. Previous researchers (Gallagher and Darnton, 1978) suggested that the

types of repairs were different for language impaired children. It may be that differences in pragmatic behaviours between language impaired and normal children decrease with age. Another possible explanation is that differences in the subject selection process between the two studies affected the results.

Purcell and Liles (1992) studied the self initiated repairs produced by 14 normal language and 14 language - disordered children during a story retelling task. When grammatical repairs and repairs to text meaning were analysed, both groups initiated significantly more repairs to text meaning. Results indicated that the normal language and language disordered children appear to share similar strategies for monitoring narrative discourse, but they differ in their abilities to actualize their monitoring attention.

Discourse Characteristics : Speech Style Modifications

The ability to make modifications in speech style on the basis of the listeners age and linguistic abilities is common to all adult speakers. Studies by Shatz and Gelman (1973) and Saxe and Devin (1976) have demonstrated that children as young as four years of age can make relatively consistent modifications in their speech to babies that roughly parallel the modifications of adults addressing young children.

Fey, Leonard and Wilcox (1981) observed six language impaired children in dyadic interactions with 1) normal language children of similar chronological ages and 2) normal language children who were younger but exhibited similar MLU's. Eight measurers analyzing overall sentence complexity, sentence form, and features of discourse were used to compare the subject's linguistic behaviours in the two conditions. Across conditions, the subjects made changes in their speech that were consistent with the speech style modifications made by normal language

children. Lower Mean Pre-Verb length, a greater degree of conversational assertiveness, and a higher frequency of Internal-State Questions were characteristic of the subjects in the MLU matched condition as compared to the age-matched conditions.

Discourse Characteristics : Request - Response Sequences

Brinton and Fujiki (1982) considered several types of request - response sequences of linguistically normal and language-disordered children. These included choice questions, product questions, requests for clarification and the responses elicited by these speech acts. It was noted that the normal children were much more aware of the interactive nature of discourse than language disordered children. Normals often responded within the boundaries of an acceptable adult response. Language-disordered children frequently ignored and responded inappropriately to requests. Their responses were occasionally contrary to fact or totally unrelated to the expected information. Some language disordered children also demonstrated linguistic strategies that facilitated the flow of conversation, but showed no understanding of the content of the communicative interchange.

Discourse Characteristics: Performative and Pre-Suppositional Skills:

Snyder (1975, 1978) was the first investigator to examine the performative and presuppositional ability of language disordered children. She compared the performative and presuppositional behaviour of normal (aged 0:11 - 1:6) and language disordered (aged 1:8 - 2:6) children operating at the one-word utterance level of linguistic development. Snyder's findings indicated that the language disordered children generated both imperative and declarative performatives. However, they are more likely to do so through non-linguistic means such as pointing or showing, whereas normal children expressed performatives more

frequently through words. With regard to presuppositions, both groups of children demonstrated a tendency to encode situationally new (changing) elements rather than old (unchanging) elements.

Skarakis and Greenfield (1977) investigated presuppositional skills in language disordered children who were at a more advanced stage of development than the children studied by Snyder (1975). Normal children were matched to these language - disordered children with respect to the linguistic levels. The results indicated that both normal and language disordered children encoded predominantly new information and that there were no differences in the strategies used to encode this new information.

Leonard, Cole and Steckol (1979) examined prepositional ability in mildly mentally retarded children (aged 2:3 -3:10) with speech limited to single word utterances. Results indicated that these children were more likely to label objects that represented new situational information. When the new situational element was an exemplar that had not been seen before, the frequency of labelling was especially high.

Rowan et al (1983) compared the presuppositional and performative abilities of language disordered and normal children. Subjects were 36 children, 18 normal and 18 language disordered, functioning at single word level of linguistic development. Results revealed that both the language disordered and the normal children showed a tendency to encode changing rather than unchanging situational elements. The two groups of children also demonstrated similar levels of imperative and declarative performative intent. For both groups, performative and presuppositional behaviours were usually in the form of word productions. This study suggested that language disordered children were not particularly restricted

in the way they put their lexicon to communicative use. Further studies are required to support the above conclusion.

Discourse Characteristics : Non Verbal Behaviours

The main channel of communication in prelinguistic children is a non verbal one. Their non verbal pragmatic behaviours have been shown to be systematic and to function to express different intentions (Stern, 1974). These non- verbal behaviours decrease with age as children use the verbal channel of communication with greater frequency and competency. (Poom and Butler, 1972).

Rom and Bliss (1983) investigated the use of six non verbal pragmatic behaviours (distance, physical contact, vocalization, looking and smiling) for three groups of subjects. The experimental group (LI) consisted of twenty language impaired children who were in staged III and IV of linguistic development. One control group. (NSY) consisted of 20 normal - speaking children equated with the experimental group on the basis of MLU. Another control group (NSO) consisted of 20 normal speaking children equated with the experimental group on the basis of chronological age. The results indicated that the non verbal behaviour were not affected by language impairment. One reason may be that all these non verbal behaviours are developed in some form before the emergence of verbal pragmatics. The authors state that language impaired children thus acquire the earliest pragmatic behaviour where as they are deficient in the later developing ones.

Investigators have also identified early manifestations of comprehension monitoring in the non verbal behaviour of young children. Eyecontact, response latency and facial expression have been shown to change following ambiguous versus unambiguous messages (Bearison and Levey, 1977, Flavell et al 1981; Ironsmith and Whitehurst, 1978)

Revelle, Wellman and Karabenick (1985) proposed that if children developing strategies for seeking clarification cannot do so verbally, nonverbal strategies might be employed for that purpose. This may also be true of language disordered children.

Skarakis-Doyle, MacLellan and Mullin (1990) investigated normal and language disordered children's patterns of non verbal behaviour in response to messages varying in degree of ambiguity. Each language disordered (LD) child was matched to two normally developing children: one for comprehension level (CM) and the other for chronological age (CA). Results demonstrated that all subjects increased their non verbal behaviour (eg. eye contact) from unambiguous to ambiguous message conditions, suggesting awareness in these message types at a rudimentary level. Most often non verbal indication was the only signal of ambiguity detection exhibited by LD children and their LM peers. Only the CM children concurrently indicated awareness through more direct means (i.e., verbalization and pointing to all possible referents) in a consistent and accurate manner.

Discourse Characteristics : Humour Comprehension

The ability to comprehend and relate jokes and puns is one of the last stages of pragmatic development, usually by grade school and high school age.

Many language impaired children experience difficulty comprehending puns and riddles because of the sophisticated level of language knowledge required (Kamhi, 1987).

Spector (1990) compared the ability of normally achieving and language impaired adolescents to comprehend linguistic humor in a decontextualised

situation. The two groups of subjects were 12 normally achieving and 12 language impaired high school students from grades 9-12. Results indicated significantly poor comprehension of the humor elements by the language impaired group than the normally achieving group. Especially poor was their ability to grasp the nature of multimeaning words and their ability to segment and redefine phonological strings.

It can be concluded that the area of the artistic use of language is one in which the language impaired population will show consistently poor performance.

AUTISM:

In 1799, a young child was admitted to Bethlem Asylum. He played in an isolated fashion and spoke of himself only in the third person. His description by John Haslam, the hospital apothecary, marks the initial medical report of a disturbed child (Vaillant, 1962). Over a century then lapsed before Kanner published his detailed and comprehensive description of children with the characteristics which we recognize today as infantile autism (Kanner, 1943). Children with autism are a fascinating group of patients who have attracted many investigators. Often beautiful and appearing to be intelligent from their general expression, they usually function at retarded levels in almost all areas except occasionally in "a limited area of excellence" such as superior abilities with jig-saw puzzles or specific types of memory (Coleman, 1976).

'Autism' was introduced into the adult psychiatric literature by Eugene Bleuler as an adjective to describe self-referential qualities of certain pathological thought processes. When introduced into the child psychiatric literature by Kanner (1943), it was also used as an adjective to characterize 'autistic' disturbances of effective contact. During the 1940's and 1950's, the adjective subtly

metamorphosed into a noun and 'autism' became referred to in the literature as a disease or specific illness (Gilliam, 1981). Autism is nowadays, defined as a syndrome consisting of a set of criteria, or necessary, features, all of which must be present for the condition to be diagnosed. The features most commonly used as diagnostic criteria are (a) early onset (before the age of 30 months), (b) abnormal language learning and use; (c) social withdrawal and social learning impairment; (d) repetitive, or rigid, behaviours of various kinds, including stereotyped movements, rituals, obsessions, and resistance to environmental change (Boucher, 1976).

According to the DSM-IV (APA, 1995), the essential features of Autistic Disorder are the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests. Manifestations of the disorder vary greatly depending on the developmental level and chronological age of the individual.

GENERAL CHARACTERISTICS OF LANGUAGE IN AUTISM:

Autism has been consistently described in terms of abnormalities in speech and language. The language histories of these children show considerable variability ranging from a failure to develop, to delayed development or arrest after an early normal set. When language does develop, a wide range of linguistic disturbances have been observed (Baltaxe and Simmons, 1975).

Despite the variety of speech disturbances, certain gross features have been observed to recur in the language behaviour of autistic children. Kanner (1943) reported that autistic children tend to repeat rather than construct original remarks. Repetition could occur either immediately after a verbal stimulus or be removed from it in time. These repetitions were designated immediate and delayed echolalia

and could be used with communicative intent and meaning or occur, without such intent. The term mitigated echolalia has been used to designate situations in which the autistic child alters some aspect of the utterance that he is repeating (Fay, 1967, 1969).

According to Kanner (1946), the speech of autistic children has its 'own, private, individualized references', while to the outside world their utterances appear 'irrelevant, bizarre, and metaphorical'.

Kanner also commented on the extreme literalness with which autistic children interpreted language. Autistic children appear to be unable to use language to fit a new situation, and seem only able to understand words or utterances in their original acquired situational or behavioural sense.

The notion of extreme literalness can be related to what Scheerer, Ruthman and Goldstein (1945) have called an "impairment in abstract attitude which affects total behaviour throughout". According to these investigators, the impairment in abstract attitude in autism is expressed in language by an 'inability to understand or use language in its symbolic and conceptual meaning', a 'failure to grasp or to formulate properties of objects in the abstract', and an 'inability to comprehend or to evolve word definitions, similarities, differences, common denominators, logical analogies, opposites, metaphors, and to conceive of the idea of causality'.

In addition to the specific deficits of language, various disturbances relating to the output itself have been noted. The quality of speech in autistic children is often described as 'wooden'. Distortions of volume, pitch, rhythm, stress, and intonation have been observed (Goldfarb, Braunstein and Lorge, 1956). These children do not seem to reinforce their language output by facial or body gestures. Even when present, the gestures seem inappropriate to the linguistic context.

Goldfarb et al., (1956) showed that autistic children had insufficient change in volume to differentiate information adequately with a stream of thought and that intonation changes were often unrelated to language content. These authors also observed an excessive prolongation of sounds, syllables and words. The latter phenomenon has been called "chanting", and the resulting peculiar singsong effect has been considered characteristic of this clinical group. Specific sound distortion and repetitions of sounds and syllables were also found to be common.

PRAGMATICS IN AUTISTIC CHILDREN:

There is general agreement among researchers that deficits in communication and social interaction are an integral part of the autistic syndrome (DeMyer, Jackson, and Hingtgen, 1981). Leo Kanner's earliest and most vivid descriptions of the unique behaviors of his autistic clients were concerned primarily with patterns of communicative and interactive behaviour. Problems in social relatedness, in insistence on preservation of sameness and severe limitations in language and communication were the three cardinal features of the autistic syndrome as originally described by Kanner (1943). These features remain central to more recent conceptualizations of the syndrome (Rutter, 1978). Yet interestingly, few studies have investigated directly the social-communicative function of autistic children (Layton and Stutts, 1985).

Discourse Characteristics: Echolalia

Echolalic behaviours are probably the most frequently discussed speech and language characteristic of autistic speech most likely due to their high prevalence among verbal autistic persons, as well as their 'ear - catching' quality (Prizant, 1983). Until recently, the predominant position was that echoic utterances are produced automatically, with little or no communicative intent as opposed to

NON-INTERACTIVE

- | | |
|--------------------|--|
| 5. Nonfocussed | Utterances produced with no apparent intent and often in states of high arousal (eg: fear, pain) |
| 6. Rehearsal | Utterances used as a processing aid, followed by utterance or action indicating comprehension of echoed utterance. |
| 7. Self-regulatory | Utterances which serve to regulate own actions. Produced in synchrony with motor activity. |

Delayed echolalia, which has been defined as the 'echoing of a phrase after some delay or lapse of time" (Simon, 1975) has also been since recently, investigated for its functional usage.

Videotape analyses of 400 delayed echoic utterances and co-occurring nonverbal behaviours by Prizant and Rydell (1981) revealed 14 functional categories of delayed echolalia.

Category

Description

INTERACTIVE

- | | |
|---------------------------|---|
| 1. Turn taking | Utterances used as turn fillers in alternating verbal exchange. |
| 2. Verbal completion | Utterances which complete familiar verbal routines initiated by others. |
| 3. Providing Information | Utterances offering new information not apparent from situational context (may be initiated or respondent). |
| 4. Labeling (Interactive) | Utterances labeling objects or actions in environment. |
| 5. Protest | Utterances protesting actions of others may be used to prohibit others' actions. |

Bernard - Optiz (1982), analyzed videotapes of an eight- year-old autistic boy interacting with various communicative partners: child-mother waiting, child-mother interacting, child-stranger waiting, child-stranger interacting and child- clinician discourse. The waiting situation required that the communicative person could not initiate communication but could respond to the child's initiations, while the interacting situation allowed the communicative person to initiate the interaction. The discourse condition required the clinician to engage the subject in conversation. Results of this study indicated that the autistic child responded differently to the various experimental conditions and with different communicative partners. The child communicated more often with the mother and clinician than with the stranger, and tended to use requests more with the mother and statements with the clinician. Also, more overall communicative functions were observed during the 'same partner' situation than during the 'same setting'¹ situation.

These studies, demonstrate, that autistic children do have a sense of social-communicative awareness, which is regulated by the identity of the communicative partner.

Prizant and Wetherby (1985) put forth a review of the communicative intent in children with autism. Intentional communication is the ability to use expressive signals in a pre-planned manner in order to affect the behaviour or attitudes of others.

Cunningham (1966) noted that autistic children provided less information than normal children at the same linguistic level and rarely asked questions of others. Cunningham (1968) compared the language of psychotic (autistic) and 'non-psychotic' retarded children and found that psychotic children used more demands and requests than the retarded children.

Caparulo and Cohen (1977) noted that 'the referential, informative function is missing in the early language of autistic children'.

Curcio (1978) examined how non-verbal autistic children communicate their wants and needs through gestures based on teacher questionnaires and classroom observations. He found that the autistic children displayed some request, protest and greeting gestures, but did not display any pointing or showing gestures to label or comment.

Based on videotaped observations, Prizant and Duchan (1981) and Prizant and Rydell, (1984) have put forth a set of communicative intentions of immediate and delayed echolalia in verbal autistic children.

Pacci-Cooper, Curcio and Sacharko (1981) compared the "speech acts" (Dore, 1974) of eleven autistic children, ages 5 to 12 years old (M = 8.6 years) to eleven normal children, ages 3 to 5 years on the basis of sex and Developmental Sentence Scoring (Lee, 1974).

Results indicated no difference between the autistic children and the normals on the relative frequencies of various initiation types. However, the autistic children did interrupt the adults about twice as often as did the normals. Also, the autistic children's interruptions were inappropriate or irrelevant to the topic, while the normal children's interruptions were appropriate. The autistic children also changed the topic twice as much as did the normal children.

Pacci - Cooper et al. (1981) also analyzed response dialogues in terms of obligatory and optional conditions. It was found that the autistic children used three times the inappropriate responses, as did the normals during the obligatory

conditions. Also, the autistic children were more likely not to respond at all in either condition.

These results suggest that, despite being at a comparable grammatical level, the autistic children differed from the normal children on specific social-communicative functions.

Prizant (1978, 1983) focussed on the acquisition of communicative intent rather than language structure alone in considering the role of echolalia in development. He delineated a series of stages that marked the progression from echolalia produced with no underlying communicative intent, to echolalic utterances produced with communicative intent, with little knowledge of linguistic structure or specific word meaning encompassed in the utterances, to utterances produced with communicative intent and greater appreciation of the internal linguistic structure and specific word meaning produced in such utterances. This progression reflects movement from perlocutionary or pre-intentional communicative acts to illocutionary or intentional prelinguistic communicative acts, to locutionary, or intentional communicative acts produced with some underlying linguistic knowledge.

PERLOCUTIONARY Utterances repeated without communicative intent (frequently as a turn fillers). Unintended effect on listener is due to listener's assigning of intent.

ILLOCUTIONARY Utterances repeated with communicative intent, but with minimal appreciation of internal linguistic structures and semantic functions or relationships.

LOCUTIONARY Utterances repeated with communicative intent with greater appreciation of internal linguistic structure

and semantic functions or relationships. Rule-governed changes are often imposed (mitigated echolalia).

Wetherby and Prutting (1984) studied the communicative behaviour of autistic and language - age matched normal children functioning in the pre-linguistic stage and early stages of language development based on videotape analysis of spontaneous communicative acts. It was found that the autistic children displayed atleast as many communicative acts as the normal children. However, the autistic children showed a more limited repertoire of communicative functions. They found that inspite of variability in level of language development and degree of mental retardation, the autistic subjects displayed a relatively homogeneous profile of communicative functions that was distinct from normal subjects. That is, the autistic subjects showed a much high proportion of communicative acts used to regulate the adults behaviors to achieve an environmental end than the normal subjects, and a lack of or a very low proportion of acts to attract and direct the adults attention to themselves or an object. The authors stated that this aspect may be acquired by autistic children, but at a higher level of language and communicative development.

Wetherby (1986) state that in contrast to the synchronous development of communicative functions by normal children and other language-impaired children (Wollner, 1983), the autistic child appears to acquire the functions of communication one at a time. Wetherby (cited in Prizant and Wetherby, 1985) put forth a model of ontogeny of communicative function in autistic children.

ONTOGENY OF COMMUNICATIVE FUNCTIONS

(Wetherby, cited in Prizant and Wetherby, 1985)

FOR NON-SOCIAL ENDS

1. To regulate another's behaviour to achieve environmental end (non-social motivation)
 - a. Request object
 - b. Request action
 - c. Protest

FOR QUASI-SOCIAL ENDS (focussed on self or self needs)

2. To attract another's attention to one's self
 - a. Request social routines
 - b. Greeting May be learned as ritual/routine.
 - c. Calling May be used as means to obtain environment end.
 - d. Showing off.

FOR SOCIAL ENDS (focussed on interaction / sharing of topic)

3. To direct another's attention to an object / event.
 - a. Interactive label
 - b. Comment
 - c. Request information.

A pragmatic skill discussed in recent research of normal language use is the marking of new information in verbal interactions. The notion of new and old information is based upon the assumption that communicative language is used primarily to impart new information, achieved through lexicalization, or the

selection of the lexical items and through contrastive stress, as a means to highlight new information.

McCaleb and Prizant (1985) conducted a preliminary study focussed upon describing autistic children's verbal performance in regard to the pragmatic ability of encoding new versus old information. Four autistic children with MLU's of 1.96 - 2.82 were videotaped on two occasions in interactions with their teachers or speech-language pathologists. All of the subjects referential utterances, including referential echolalic utterances were categorized as the encoding of new or old utterances. Two prominent means that speakers used for encoding new versus old information were examined: the encoding of new information through single - word utterances (i.e., a lexicalization strategy) and the use of contrastive stress to highlight new information in multi-word utterances.

Results revealed that the 4 subjects did encode new information lexicalization in single word utterances and through contrastive stress in multiword utterances. However, subjects encoded old information almost as frequently as they encoded new information. The encoding of a new action or state change was marked relatively infrequently by the subjects, and they consistently produced repetitions of previously encoded information when they failed to offer new inform to their listeners.

COMMUNICATIVE BEHAVIOUR AND TREATMENT MODES:

It can be stated that the teaching of speech does not appear to be effective with all autistic and other severely dysfunctional, nonverbal children. Since it has been found that nearly half of the autistic children are functionally mute (Rutter, 1978), several investigators have employed manual signs to assist these children to communicate (Bonvillian and Nelson, 1976; Carr, 1979; Layton and Baker, 1981).

Konstantareas, Oxman and Webster (1977) reports on the use of simultaneous communication (gestures and speech) with five functionally mute autistic children. Their results revealed that four of the five children showed marked gains in their ability to communicate over a 5 - week period.

Layton and Stutts (1985) trained sixty autistic children in four treatment modes: speech alone, sign alone, simultaneously, and alternatively between speech and sign. The children were also divided between high and low verbal imitators. Data was obtained from spontaneous language samples during the ninety treatment sessions and scored according to Dore's communicative functions. Results indicated : (a) the high verbal imitators outperformed the low verbal imitators on all of the communicative functions; (b) no specific treatment approach was superior to others; however, communicating by sign was preferred over speech by the low verbal imitators while the high verbal imitatoes preferred speech regardless of the treatment mode; (c) the high verbal imitatoes performed more like normal children while the low verbal imitatoes used mostly requisite as their sole communicative function.

Based on the findings of the above two studies, it cannot be concluded that one mode of treatment is superior to the other, with respect to the functional use of language and further research is required on the issues concerned.

NEED FOR THE STUDY:

Pragmatics, within the Indian context can be aptly described by quoting Ervin - Tripp (1978): "pragmatics is everything we used to throw out when we analyzed language". Although understood as a major entity within the realm of language, pragmatics till today remains a very slightly explored area. Among the few isolated studies on pragmatics are the development of a test of pragmatics in

Tamil (Sundaram, 1994), some aspects of pragmatics in mentally retarded adults (Reddy, 1998).

Research in autism has mostly restricted itself to few morpho-syntactic aspects of autistic language in various Indian languages such as echolalia, vocabulary and pronoun reversals (Asha, 1995; Reetha, 1996; Snehalatha, 1996; Kuruvilla, 1996; Chandel, 1996). The use of language by autistic children, remains an untouched sphere within the Indian research context.

The present work is the first Indian study of its kind, in an attempt to an understanding of pragmatics in autism - a disorder in which deficits in socio-communicative interaction is one of the cardinal features.

The aim of this study is two - fold:

- 1) To compare the communicative behaviours of normal and autistic children who are matched on mental age.
- 2) To note whether the deviancies that are typical of autistic language extends to the area of pragmatics.

METHODOLOGY

AIM: The aim of the present study was to analyse the pragmatic abilities of children diagnosed as Autism and to compare them with the normal population, who are matched on mental age.

SUBJECTS : 10 Subjects, 5 in each group with the following subjects selection criteria were taken up:

GROUP I: SUBJECTS DIAGNOSED AS AUTISM

- a) All cases fell within the DSM IV (APA, 1995) criteria for 'Autism' (Appendix II)
- b) Age range between 4 to 9 years.
- c) Had a mental age range between 3 to 6 years as tested by a clinical Psychologist.
- d) Demonstrated verbal language abilities
- e) Duration of therapeutic intervention ranged from 6 months to 1 1/2 years.

NAME	CHRONOLOGICAL AGE	MENTAL AGE
	CA	MA
A1	8 years 4 months	5 1/2 years
A2	8 years 6 months	3 1/2-4 years
A3	8 years 6 months	5 1/2 years
A4	8 years 5 months	3-3 1/2 years
A5	4 years	3-3 1/2 years

GROUP II : SUBJECTS FROM NORMAL POPULATION

- a) Five children with average intelligence as screened by a clinical Psychologist.
- b) Age range between 3 to 6 years
- c) No associated language, motor or sensory problems

NAME	CHRONOLOGICAL AGE CA	MENTAL AGE MA
N1	3 years 4 months	3 1/2-4 years
N2	3 years 6 months	3-3 1/2 years
N3	3 years 6 months	3 1/2-4 years
N4	5 years 5 months	5-5 1/2 years
N5	5 years	5 1/2 years

PROCEDURE:

The study was carried out in 2 stages.

STAGE I: Consists of collecting information from the clinician and / or parent of the respective child.

A questionnaire of 30 questions was constructed with the purpose of obtaining information regarding the child's pragmatic performance (Appendix I)

STAGE II: Consists of observation sessions of the child interacting for a period of 30 minutes each with

- a) the parent
- b) a stranger who were post-graduate students, not known to the Child.

In addition, the autistic child's interaction with the clinician was also observed.

None of the interacting partners were given the details of the study. They were instructed to engage the child in an informal play situation. All the children were observed within the clinical set up.

Free play was encouraged. In addition, communicative temptations as given by Wetherby and Prutting, (1984) (Appendix-III) were utilised to initiate maximum responses. The samples of communicative behaviour displayed by the autistic and normal subjects were audiotaped on Meltrack Cobalt DR-C90 cassettee using a Panasonic walkman during each session.

PARAMETERS

The parameters considered were adapted from Roth and Spekman (1984) :

* **RANGE OF COMMUNICATIVE INTENTIONS** - The various communicative functions noted were :-

1. **Attention Seeking (AS)** : Acts or utterances that solicit attention to the child or to aspects of the environment (Dale, 1980).

2. **Request Object (RO)** : Acts or utterances used to demand a desired tangible object. Includes requesting consumable and nonconsumable objects. Child addresses object or person and awaits response. (Wetherby and Prutting, 1984).

3. Request Action (RA) : Acts or utterances used to command another to carry out an action. Includes requesting assistance and other actions involving another person or between another person and an object. Child addresses object or person and awaits response (Wetherby and Pruning, 1984)

4. Request Information (RI) Utterances used to find out something about an object or event. Includes wh-questions and other utterances having the intonation contour of an interrogative. Child addresses person and awaits response (Wetherby and Prutting, 1984)

5. Naming (N) : Utterances (common and proper nouns) that label people, objects, events and locations (Dale, 1980)

6. Greetings (G) : Utterances that express salutations and other conventionalized rituals (Dale, 1980)

7. Responding (R) : Utterances that directly complement preceding utterances. (Dale, 1980)

8. Protest (P): Utterances that express objection to ongoing or impending action or event (Dale, 1980)

9. Comment (C) : Utterances that describe physical attributes of objects, events and people; observable movements and actions of objects and people; and words that refer to attributes which are not immediately observable such as possession and usual location. (Dale, 1980). Also include utterances that state facts or rules, express beliefs, attitudes, or emotions, or describe environmental aspects. (Dove, 1978)

10. Other Performatives (Oth) : Utterances that tease, warn, claim, exclaim or convey humor (Dore, 1978)

* **PRESUPPOSITION** - Focuses on the ability of children to take the perspective of their communicative partner, a skill commonly referred to as role taking as given by Roth and Spekman, (1984). The variables considered in this area include -

Social Context Variables - Refers to the sensitivity of the child to listener characteristics, the channels available for communication and the environment in which an interaction is taking place.

* **Social Organization of Discourse:** Refers to the child's ability to function in and contribute to the ongoing stream of discourse or conversation. The variable considered in this are were:

2) Socialized Vs Non Socialized Speech: Speech that is addressed to the listener is considered social speech. It imposes some sort of obligation on the listener to respond and is typically characterized by being clearly produced, adapted to the listener, and by attempted repairs in instances of breakdown. Other verbal behaviors are considered nonsocial in that they are not explicitly addressed to a listener and thus the partner is not obliged to respond. This category may include monologues, songs, rhymes, individual sound play and narratives. Nonsocial speech behaviours may at times serve to initiate conversation but the speaker does not attempt to repair when a reply is not received (Roth and Spekman, 1984).

2. Turn Taking: Appropriate exchange of speaker and listener roles during conversation (Hegde, 1996).

3. Ontopic / Off topic exchange: On topic utterances are those that are related to the topic on the floor. Off topic remarks are those that are only tangentially related to the partner's topic or comments without regard for the topic on the floor. (Roth and Spekman, 1984).

4. Conversational Repairs: An important aspect of communicative interaction, these occur in the event of a communication failure, if a listener requests clarification of a previous aspect of the speaker's message (Brinton et al, 1986).

The linguistic content of the repair strategies proposed by Garvey (1977) were considered in the present study:

- a) Repetition : "I am going to the store". ("What ?")
"I am going to the store".
- b) Confirmation: "I have some cookies"
("Where ? In the closet ?")
"Yes"
- c) Elaboration: "I have some cookies". ("Where ?")
"In the closet".

METHOD OF ANALYSIS

STAGE I: The questionnaires were analyzed for information on each of the above mentioned parameters. This information was used to supplement the information obtained from the interaction sessions.

STAGE II: Each of the audiotaped interaction session was transcribed. The child's stream of behaviour was recorded element by element. A behavioural element refers to an interaction between a participant and the other participant or an object or to any vocalization or verbalization (Wetherby and Prutting, 1984). All vocalizations were transcribed using broad phonetic transcription, and all verbalizations were written out using orthographic transcription.

The next phase of the analysis was to segment the sample into discrete communicative acts. A communicative act began when the child initiated conversation or interacted with the adult and was terminated when a turn was exchanged. Each communicative act was then analyzed in reference to contextual information for attribution of function. Immediate echolalia, was considered as a turntaking behaviour and noted as a response.

The number and percentage of each parameters for both the groups, in each of the communicative situation were tabulated and graphically represented. Wilcoxin matched pair test was carried out to obtain the significant difference for each of the communicative intentions between the two groups. The data was compared to put forth the differences.

RESULTS AND DISCUSSION

The aim of the present study was to analyze the pragmatic abilities of autistic children and to compare them with normal subjects who were matched on mental age.

10 subjects, viz five autistic and five normals were selected. The data was collected in two stage

I Observation sessions of each child's interaction with the parent and stranger (and clinician in case of the autistic group).

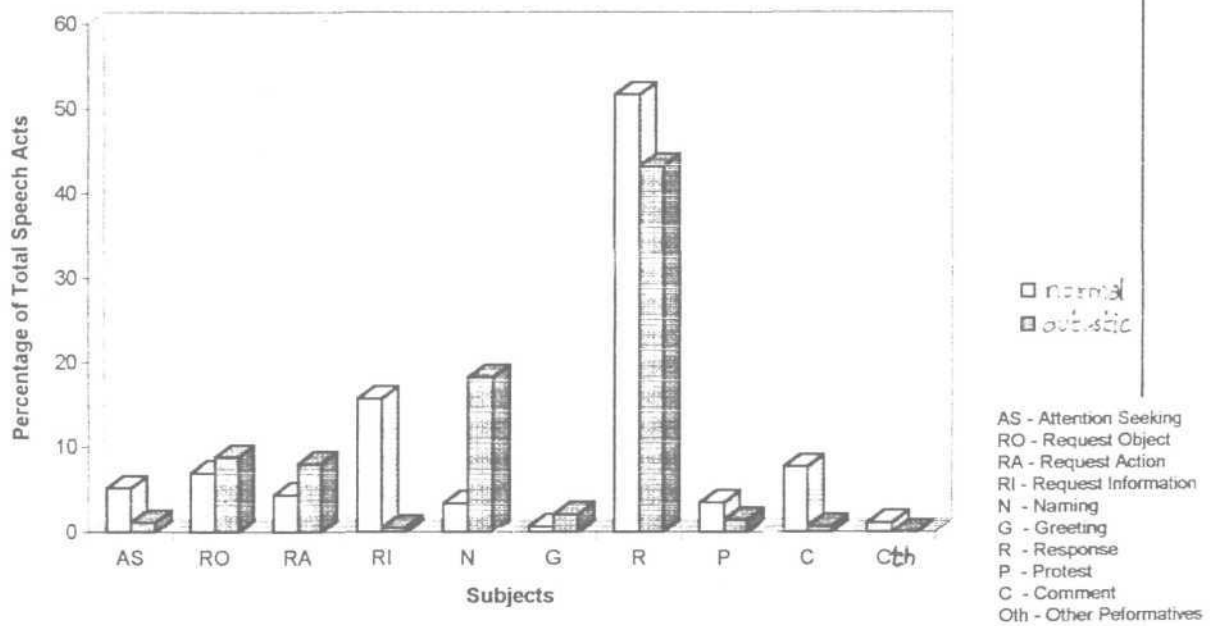
II. Information collected from the parent and or clinician of each child through a questionnaire. The information was used to supplement the information obtained from the interaction sessions.

The data was analyzed and the results of the various parameters were noted for interpretation as follows.

RANGE OF COMMUNICATIVE INTENTIONS

The mean percentage of the communicative function for each group relative to the total number of speech acts used by the subjects is shown in Graph 4.1

GRAPH 4.1: MEAN PERCENTAGE OF THE COMMUNICATIVE FUNCTIONS IN NORMAL AND AUTISTIC SUBJECTS



The autistics as a group displayed a high frequency of response, naming, request object and request action function. One of the autistic subjects (A5) showed a low frequency of attention seeking and request information functions. Two instances of comment function was observed in one subject (A2) and a similar low frequency protest function was observed in the subject A3. Low frequency of greeting function was observed in all the autistic subjects. All the five autistic subjects showed an absence of use of other performatives like warn, tease, claim or exclaim.

The repertoire of the normal subjects indicated the presence of all the speech acts selected in the present study, with individual variations in frequency. As a group the normal subjects displayed a high frequency of responses request information, comment and request object functions. A low frequency of request action, attention seeking, naming, protest and use of other performatives were noted. The social routine of greeting was least frequently observed.

Information obtained from the questionnaires also supplement the above observation. The autistic subjects showed an absence of use of request information, comment and other performatives during their communication interactions. Request object, request action, response and greeting were rated as the most frequent speech acts. Attention seeking, naming and protest were stated to be the used very rarely. The normal subjects were reported to use all the speech acts consistently in their repertoire.

Wilcoxin matched pair test was used to find the statistical difference between the two groups using NCSS computers program. The parent child interaction and stranger child interaction of both the groups were analyzed. It was seen that in the parent child interaction, request information, naming, comment, attention seeking and other performatives was noted to be significant (at 0.05 level

of significance) between the two groups. In the stranger-child communicative interaction, request information, response, comment and other performatives was noted to be significant at the 0.05 level between the two groups.

The consistent presence of response, naming, request object, request action and greeting function in all the five autistic subjects could be attributed to the following factors :

1. All these above mentioned functions are specially emphasized during the therapeutic intervention.

2. The communicative context during data collection was such that the interacting partner was non-directive and their non-constraining nature of the context may have facilitated the subject's use of these functions.

The significant difference in the group on the percentage of the naming function (as represented on the Graph 4.1) can be attributed to the increased usage of this function by one of the subjects (A5) during the parent-child interaction session. This resulted in an overall increase in the percentage of the naming function for the entire group.

The findings of the present study is comparable to the study of Curcio (1980) whose non-verbal autistic children displayed some request, protest and greeting gestures, but did not show any gestures to label or comment.

It was observed that as a group the autistic children did not show any change in specific communicative functions with change in the communicating partner, although individual variations were noted. The subjects A1 and A3 (both with MA of 5 1/2 years) showed increase in requests functions while interacting

with the parent and predominantly responses while interacting with the stranger. The protest function was also noted to be more during the interaction with the stranger. Similar results were noted in Bernard - Optiz's (1982) single subject study, where in the child tended to use request more with the mother and statements with the clinician.

The profile of speech acts obtained by the present study is similar to that obtained by Wetherby and Prutting (1984), in all parameters except labeling naming and protest. The difference on the protest function may be due to the difference in position taken during the data analysis. Where as aberrant behaviors such as self-injury and aggression were demonstrated to be intentional and communicative by Wetherby and Prutting (1984), the present study considered such behaviour as uncommunicative.

It is noted that the autistic children demonstrated more limited repertoire of communicative functions than the normal children. Normal communicative development does not preceded from unitary to multidimensional, but rather progresses in the complexity of structural dimensions mapped onto a variety of functions that are present from the very outset of intentionality (Wetherby and Prutting, 1984). The autistic group therefore shows a deviation from the normal communicative development in this aspect. Further, the relative homogeneous profile of the speech acts exhibited by the autistic group irrespective of the chronological age and mental age may also be a support to the deviation form the normal development of speech acts.

SOCIALIZED AND UNSPECIALIZED UTTERANCES

Table 4.1 shows the proportion of socialized and unsocialized utterances of the two groups of children, in each of the communicative situation tested. Speech

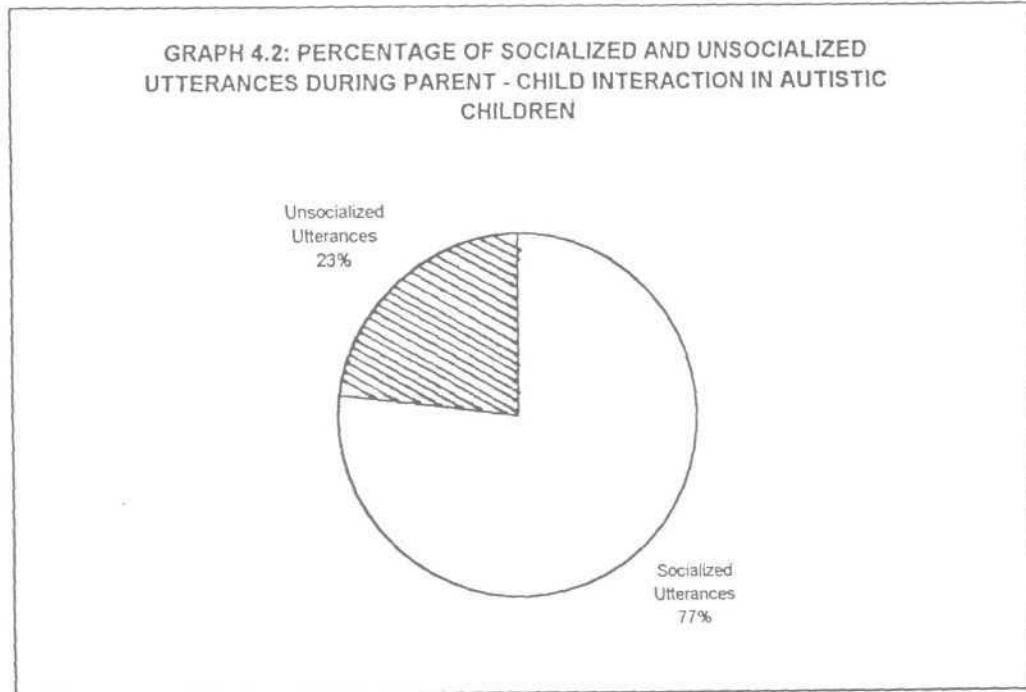
that is addressed to the listener wherein the listener is obliged to respond is considered socialized. (Roth and Spekman, 1984) Non socialized speech is that, which is not explicitly addressed to a listener and thus the partner is not obliged to respond (Roth and Spekman, 1984).

<u>SUBJECTS</u>	<u>SOCIALIZED</u>	<u>UNSOCIALIZED</u>
NORMALS	847	Nil
Parent-Child	847	
Stranger-Child	467	Nil
	467	
AUTISTICS	495	148
Parent-Child	643	643
Stranger-Child	232	158
	390	390
Clinician-Child	316	180
	496	496

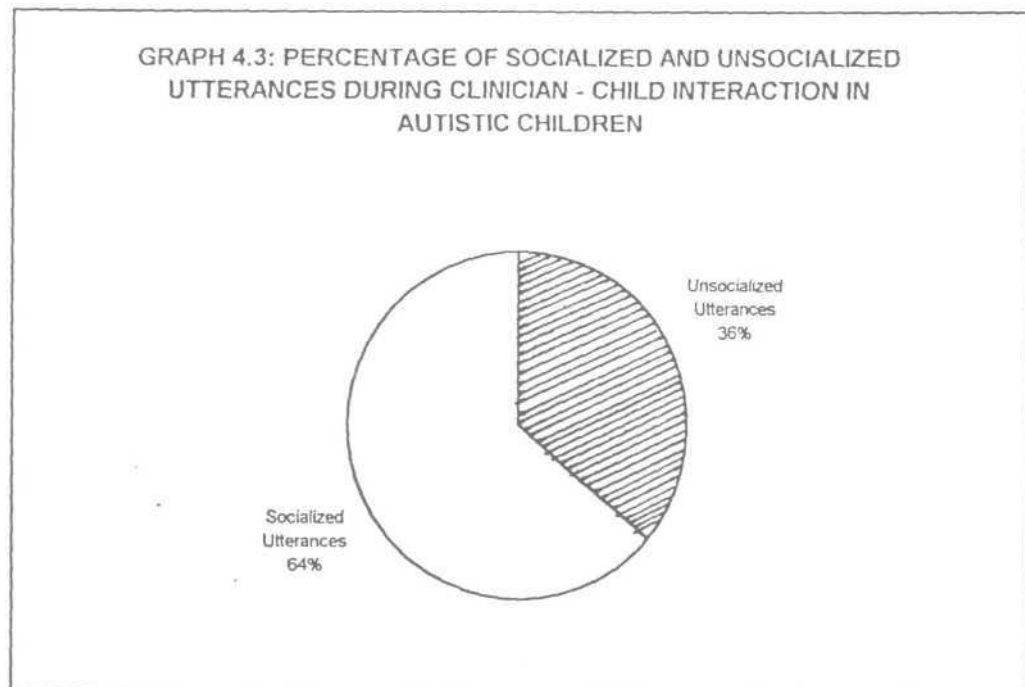
TABLE 4.1 : SOCIALIZED AND UNSOCIALIZED UTTERANCES IN NORMAL AND AUTISTIC SUBJECTS

The normal children did not produce any unsocialized utterances with either of the communicative partners. In contrast to this, unsocialized utterances formed a substantial portion of the autistic childrens total productions. In the parent child interaction session, a total of 495 out of 643 utterances (76.9%) were

socialized and 148 out of 643 utterances (23.1%) were unsocialized utterances (Graph 4.2)



In the clinician-child interaction, a total of 316 out of 496 utterances (64%) were noted to be socialized and 180 out of 496 utterances (36%) comprised the unsocialized utterances (Graph 4.3)



increasing familiarity with the communicative partner. Similar results were observed by Bernard-Optiz, (1982) It was also noted that the frequency of the unsocialized utterances increased when the communicative demand on the child was increased.

TURN TAKING

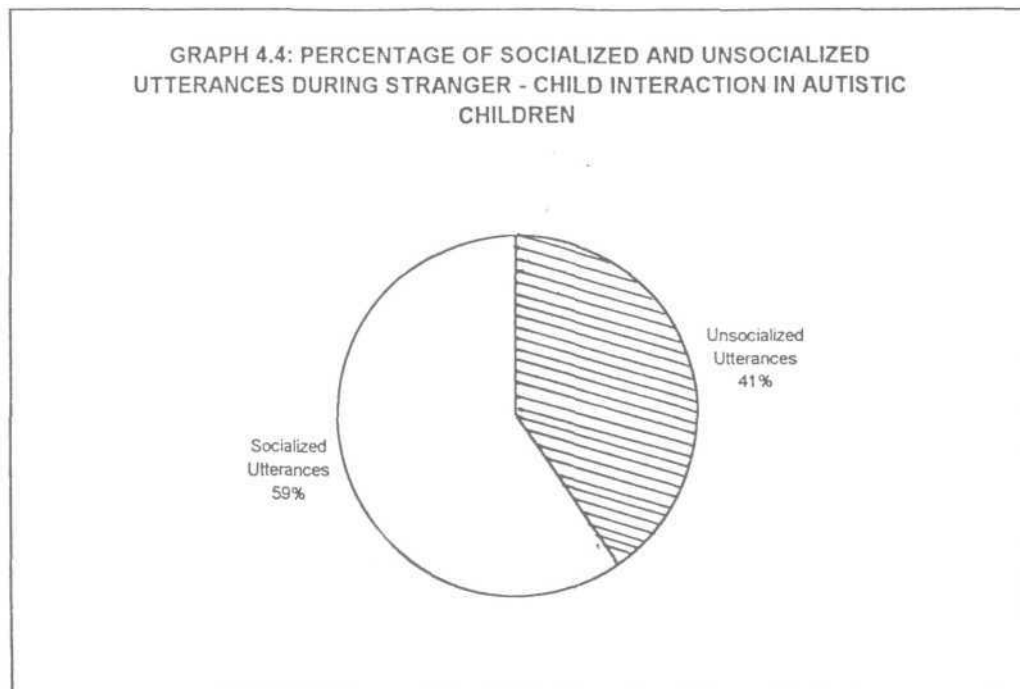
The frequency of turn taking behaviour of both groups in each of the three situations (parent-child, stranger-child, and clinician-child) was noted. Table 4.2 contains the frequency and the percentage of the turn taking behaviour for each group.

TURN TAKING BEHAVIOUR

<u>SUBJECTS</u>	<u>FREQUENCY</u>	<u>PERCENTAGE</u>
NORMALS		
Parent-Child	847	64.5%
Stranger-Child	467	35.5%
AUTISTICS		
Parent-Child	643	62.3%
Stranger-Child	390	37.7%
Clinician-Child	496	---

TABLE 4.2 : FREQUENCY AND PERCENTAGE OF TURN TAKING BEHAVIOUR IN NORMAL AND AUTISTIC SUBJECTS.

In the stranger-child interaction, total of 232 out of 390 utterances (59.5%) were noted to be socialized utterances and a total of 158 out of 390 utterances (40.5%) were unsocialized (Graph 4.4)



The information obtained from the questionnaires also supplemented this observation that unsocialized utterances are a significant portion of the autistic children's verbal repertoire as compared to the normal subjects in whom this behaviour was absent.

The above finding that the autistic children's interruptions were inappropriate and irrelevant, while normal children's interruptions were appropriate finds support in the study by Pacci-Cooper et al (1981).

An interesting observation was that the percentage of the unsocialized utterances was least in the parent-child interaction followed by clinician-child and maximum during the stranger-child interaction. Aggressive and hyperactive behaviour was also noted to be more during the interaction with the stranger. This indicates that there is a decrease in the non-communicative behaviour with

increasing familiarity with the communicative partner. Similar results were observed by Bernard-Optiz, (1982) It was also noted that the frequency of the unsocialized utterances increased when the communicative demand on the child was increased.

TURN TAKING

The frequency of turn taking behaviour of both groups in each of the three situations (parent-child, stranger-child, and clinician-child) was noted. Table 4.2 contains the frequency and the percentage of the turn taking behaviour for each group.

TURN TAKING BEHAVIOUR

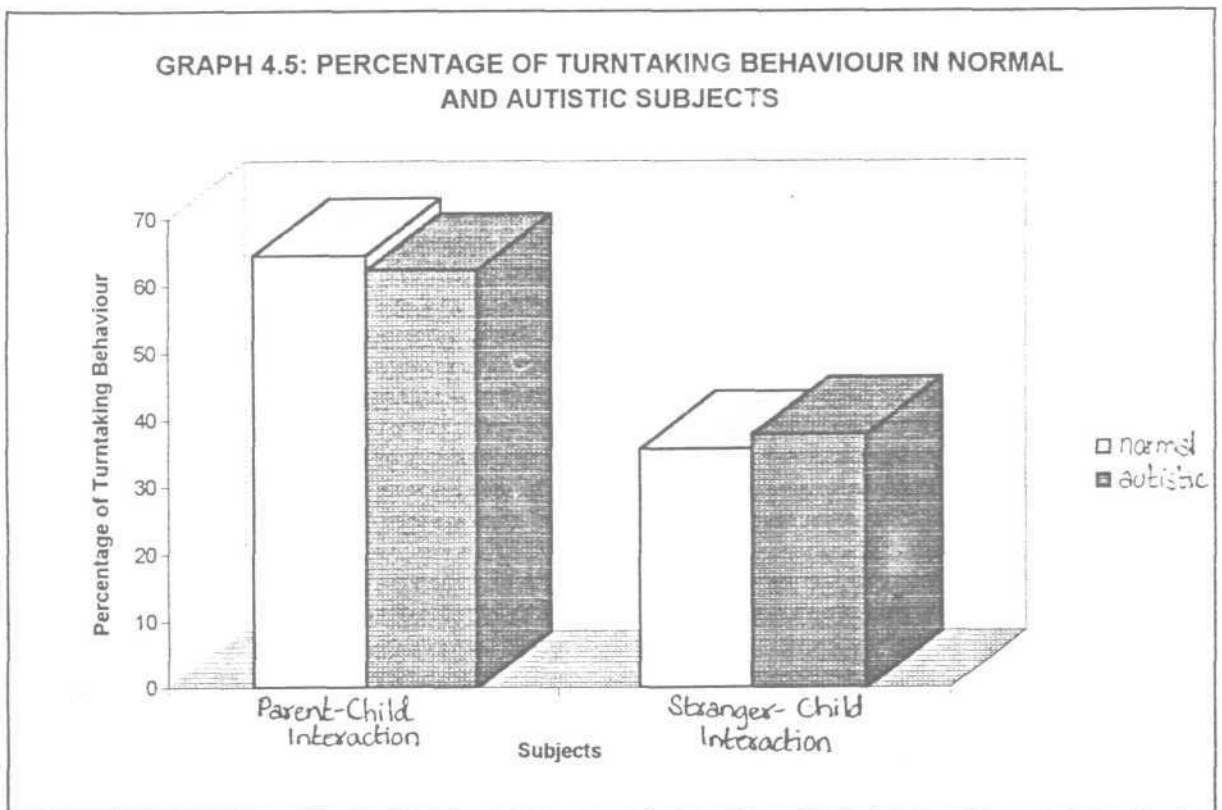
SUBJECTS	FREQUENCY	PERCENTAGE
NORMALS		
Parent-Child	847	64.5%
Stranger-Child	467	35.5%
AUTISTICS		
Parent-Child	643	62.3%
Stranger-Child	390	37.7%
Clinician-Child	496	

TABLE 4.2 : FREQUENCY AND PERCENTAGE OF TURN TAKING BEHAVIOUR IN NORMAL AND AUTISTIC SUBJECTS.

The normal group had a total of 847 turns (64.5%) during the parent-child interaction and a total of 467 turns (35%) during the stranger-child interaction. A total of 643 turns (62.3%) were observed during the interaction of the autistic children with the parents and 390 turns (37.7%) during the stranger-child interaction. In addition a total of 496 turns were noted during the autistic children's interaction with their clinicians.

The analysis indicated that:

- 1) The autistic children did not differ markedly from the normal children in the percentage of turn taking behaviour, as represented in Graph 4.5



The above information was in contrast to the information obtained from the questionnaires of both the parents and the clinicians. This can be accounted for by the fact that the turn taking function of the echolalic behaviours (albeit being a non-normal behaviour) which are a significant part of the autistic childrens utterances most often tended to be ignored and this particular function of echolalia was noted as a positive turn taking behaviour during the observation session. The qualitative difference in this turn taking behaviour however, needs to be noted and further explained.

- 2) The autistic children like the normal children, responded differently with different communicative partners. All the children communicated most with the parent followed by clinician and least with the stranger.

Similar information was obtained from the questionnaires of the parents of both groups and the clinicians of the autistic children.

These results are in concurrence with the studies on the influence of a social partner with the communicative behaviour of autistic children (Me Hale, Marcus, Simeonsson and Olley, 1980 ; Bernard Optiz, 1982) indicating that autistic children do have a sense of social-communicative awareness which is regulated by the identity of the communicative partner.

ON TOPIC AND OF TOPIC UTTERANCES

Table 4.3 contains the proportion of on topic and off topic exchanges for the two groups of and children in each of the three communication interactions.

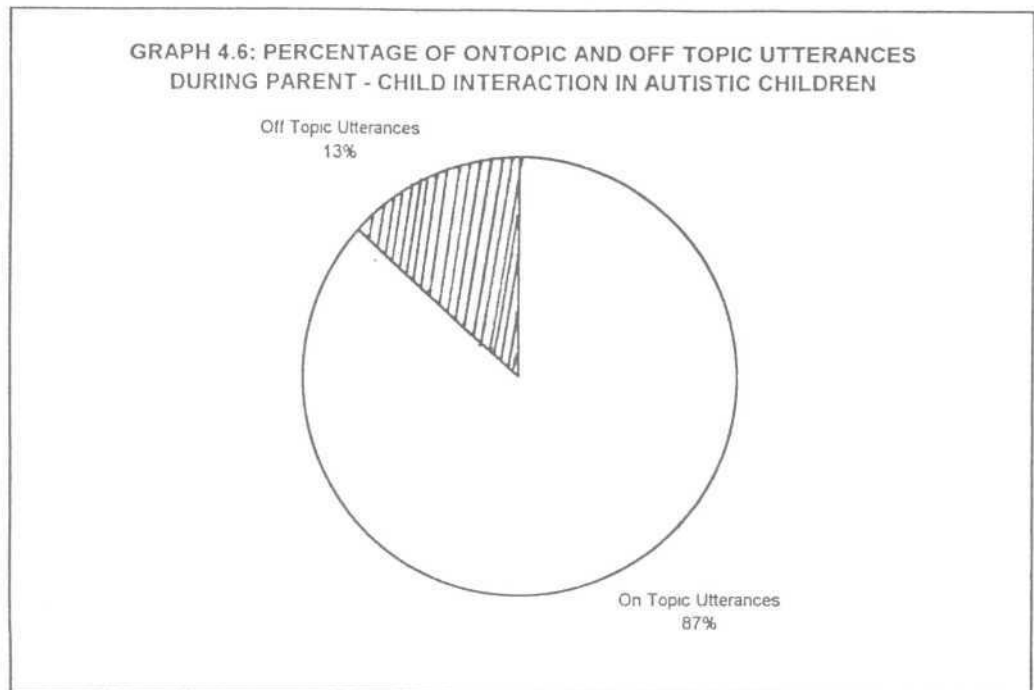
On-topic utterances are those that are related to the topic on the floor. Off topic utterances are those that are only tangentially related to the partner's topic or comments without regard for the topic on the floor. (Roth and Spekman, 1984a)

SUBJECTS	ONTOPIC	OFF TOPIC
NORMALS	846	1
Parent-Child	847	847
Stranger-Child	467	Nil
	467	
AUTISTIC	430	65
Parent-Child	495	495
Stranger-Child	199	33
	232	232
Clinician-Child	279	36
	316	316

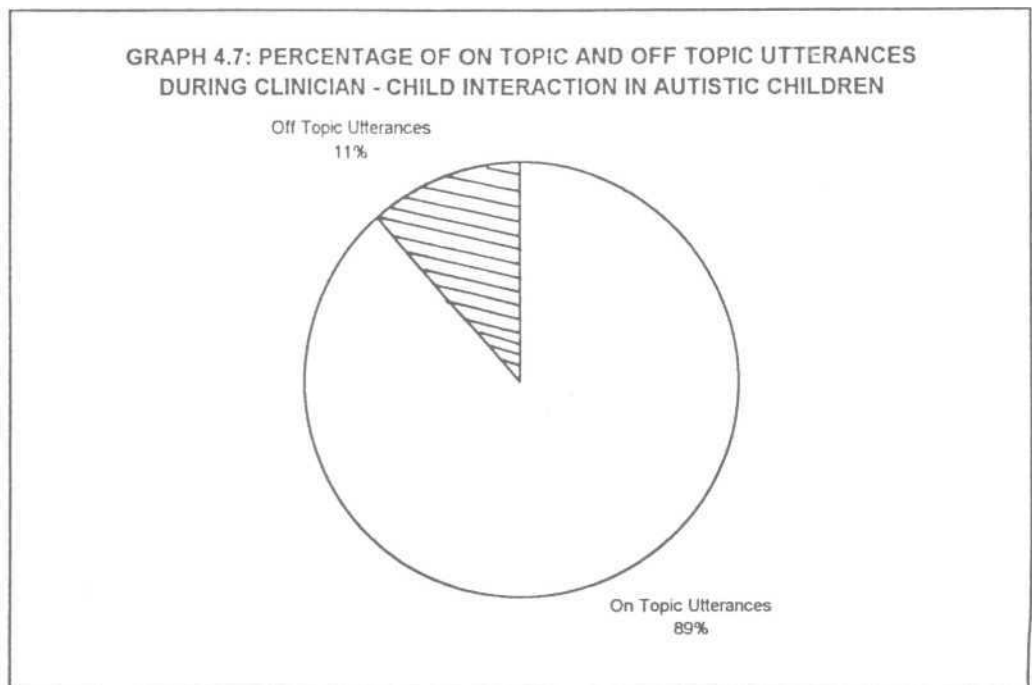
TABLE 4.3 : ON-TOPIC AND OFF TOPIC UTTERANCES IN NORMAL AND AUTISTIC SUBJECTS

In the case of the normal children, it was noted that all the children produced utterances that were related to the topic and context. There was only one instance of an off- topic utterance by the subject N2, during the parent child interaction. A total of 432 out of 495 utterances produced by the autistic children during the parent child interaction were on topic (86.81%) and the off topic

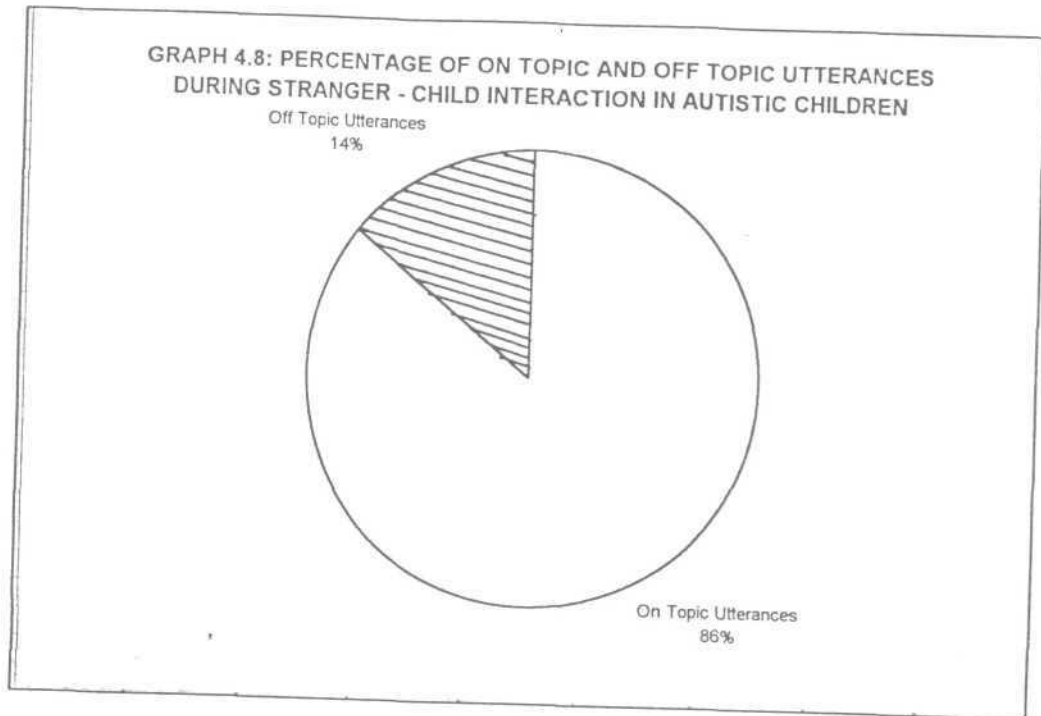
utterances were a total of 65 out of 495 utterances (13.2%)(as shown in Graph 4.6)



During the clinician-child interaction, 279 out of a total of 316 utterances (88.0%) were on-topic while 36 out of 316 utterances (11.4) consisted of off-topic utterances. (Graph 4.7)



During the stranger-child interaction, 199 out of 232 utterances (85.7%) were on topic while 33 out of 232 utterances (14.3%) were off-topic as shown in Graph 4.8



The information obtained from the questionnaires of the parents of the normal subjects indicated that off-topic utterances were occasionally present in the productions of the younger age group subjects aged 3-4 years (N1, N2, N3) although this was not seen in the older children (N4 and N5). With regard to the autistic group, this feature was reported to be present throughout the group, with no difference with an increase in the mental age.

The presence of off topic utterances in normals may be developmental, with the child showing a decrease in this behaviour with increased language used and mental maturity. This finding is also supported by an earlier case study of a bilingual child Shyamala, (1994; 1996). Within the autistic group, such a developmental trend was not noticed. Further, there has been no marked change

in the frequency of the off- topic utterances with change in the communicative partners. It may therefore be concluded that the presence of off-topic utterance may be considered as a specific feature of the communicative behaviour of the autistic population, with the autistic group tending to persist at this level of communication development for an extended period than the normals. Such persistent differences in normal and deviant child language finds support from several earlier studies as cited by (Shyamala 1994; 1996).

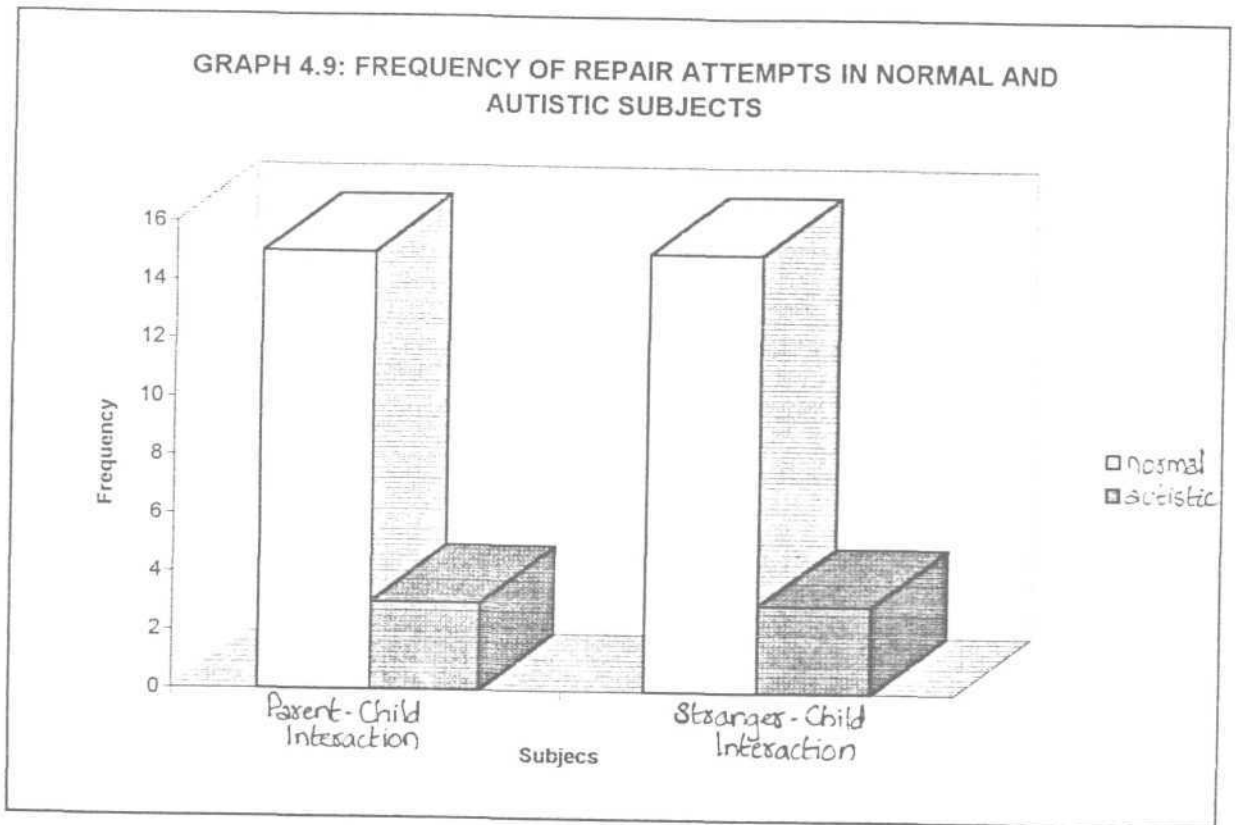
V REPAIR STRATEGIES

The frequency of usage of repair strategies by both groups of children in each of the communicative situations is represented in Table 4.4.

SUBJECT	FREQUENCY
NORMAL	
Parent child	15
Stranger child	15
AUTISTICS	
Parent child	3
Clinician child	3
Stranger child	1

TABLE 4.4 : FREQUENCY OF REPAIR STRATEGIES EN NORMALS AND AUTISTIC SUBJECTS.

The normal children used a total of fifteen conversation repairs during both, the parent-child and stranger-child communicative situations. The autistic children used three conversational repairs during the parent-child and clinician child interaction and 1 repair during the stranger child interaction (Graph 4.9).



This occasional use of conversational repairs by the autistic children observed during the interaction sessions was contrary to the information obtained by questionnaire from both the parents and clinicians who stated that conversation repairs were never used by the group of children. This variability could be due to the tendency of the elders to over look the occurrence of any such behaviour.

With regard to the linguistic content of the repair strategies, it was observed that the autistic children used only repetitions as a means to clarify listener misunderstandings. The normal children consistently used elaborations and confirmations along with repetitions to aid the conversational repair. The repair strategies could thus be qualitatively differentiated. Their findings was similar to the findings of Van Kleeck and Frankel (1981) whose study on language disordered children stated that children who were at lower linguistic levels used more of repetitions than the linguistically more mature child who used more of

confirmations and elaborations. The present study also noted that in spite of similar mental ages, the normal children performed significantly better than the autistic children on conversational repair behaviour, both in terms of the frequency of their usage as well as their linguistic content.

In the light of the above findings, it appears that the autistic children do show qualitative and quantitative differences in their pragmatic abilities when compared to the normal subjects. In contrast to the synchronous development of communicative functions by normal children, the autistic children appear to acquire the functions of communication one at a time in an imbalanced manner. (Wetherby, 1986). The autistic subjects of the present study tended to use language predominantly for non-social and quasi-social ends unlike the normal subjects who used language for a social end. The consistent presence of non-socialized utterances is also indicative of a deviance from the pragmatic abilities of the general population. This observation finds ample support from earlier studies. (Wing and Gould, 1979; Frith, 1989).

The presence of off-topic utterances and use of repetition as the major repair strategy indicate that the autistic children tend to function at a lower level of communicative development than the normal subjects. Further, the changes in communicative behaviour, with respect to the frequency of turn taking and occurrence of non-socialized utterances, with change in communicative partners, reveal that the autistic group do have a sense of socio-communicative awareness albeit, at a much lower level. These findings are on par with the findings of Curcio (1978); McHale et al (1980), Pacci-Cooper et al (1981); Bernard-Optiz (1982); Wetherby and Prutting (1984) and Wetherby (1986).

Thus the present study confirms the presence of qualitative and quantitative nature of deficits in the pragmatic behaviour of autistic children.

SUMMARY AND CONCLUSION

The study of child language has with the advent of the pragmatic revolution (Duchan, 1984) taken a turn towards an understanding of the rules governing the use of language in a social context. It is now realized that in addition to learning the phonologic, semantic and syntactic rules of language, a child must also master the rules that underlie how language is used for the purpose of communication (Hymes, 1971). Pragmatics has always been a sphere of language that is most neglected while dealing with the clinical population, inspite of the understanding that even a minimal language impairment has a direct influence on the communication between the speaker and the listener. Research in autism (a clinical group in whom impairments in socio-communicative functioning is an essential diagnostic criteria), is devoid of any work in this very area, within the Indian context. The present study, is the first attempt to explore the pragmatic aspects of the autistic syndrome.

The aim of the study was to compare the pragmatic abilities of subjects with autism and normal subjects, who were matched on mental age. 10 subjects namely 5 autistic and 5 normals with MA ranging from 3 to 5 ¹/₂ years were taken. Data was collected by means of:

(1) a questionnaire containing a total of 30 questions, to be filled by the parent and/or clinician of each child and

(2) observation sessions of each child interacting for a period of 30 minutes with the parent and stranger. The autistic children's interaction with their respective clinician was also observed. All observations were carried out in the clinical set up.

The data obtained was analyzed for the following parameters (Adapted from Roth and Spekman, 1984).

- Range of communicative functions.
- Social context variables.
- Socialized versus unsocialized speech.
- Turn taking.
- On topic and off topic utterances.
- Repair strategies.

The results indicated that:

1. The autistic group showed a homogeneous profile of communicative functions, with a predominance of request object, request action and response and greeting functions, irrespective of the mental age. This was in contrast to the normal subjects who showed a heterogeneity in the communicative functions used, with individual variations. It could be concluded that the autistic children used language for non social or quasi-social ends in comparison to the normal children who utilized language for a social function (Wetherby, cited in Prizant and Wetherby, 1985).

2. Within the social context variables, the effect of the communicating partners on the interaction was observed. It was noted that the autistic children do show socio-communicative awareness as was seen by the differences in the number of turn taking behaviour (maximum during the parent-child interaction and least during the stranger- child interaction) as well as in the percentage of the non-socialized utterances (least during the parent-child interaction and maximum during the stranger child interaction). As a group no qualitative difference in the communicative functions was noted with change in the communicating partner, although two of the autistic subjects showed a

predominance of request functions during the interaction with the parent and response functions during the interaction with the clinician.

3. In contrast to the normal subjects, the autistic group showed a significant proportion of non-socialized speech which varied with the change in the interacting partner (i.e. more non-socialized speech was noted during the stranger-child session than the parent-child session).
4. It was observed that the autistic children did not differ markedly on the number of turn taking instances. Also, the number of turns differed with change in the interacting partner.
5. Off topic utterances in the normal group was reported to be occasionally present within the lower age group (3 to 4 years). In comparison to this, the autistic group consistently showed the presence of off-topic utterances, irrespective of the age. Further, no marked change in the percentage of off-topic utterances was noted with change in communicating partner. It may be concluded that the off-topic utterances are a specific feature in the use of language by autistic children and these children tend to function at a lower level of development.
6. The presence of occasional repair attempts was consistently noted within the autistic group. The linguistic content of these repair attempts were however at a much lower level than the normal children. The autistic group used only repetition as the repair strategy in contrast to the normal subjects who used elaboration and confirmation along with repetition during the course of avoiding a conversation breakdown.

The results obtained indicate that the autistic group differ from the normal group on the pragmatic aspects and this difference is both qualitative and

quantitative. It may be stated that the deviances that are observed in the other spheres of language (syntax and semantics) extended to the realm of pragmatics also, however further research is warranted before such a generalization can be made.

LIMITATIONS OF THE STUDY

1. The number of subjects studied is limited
2. All the autistic children had attended an average of 8 months - 1 year of therapy, and this influence of therapy could mask the actual pragmatic performance of the autistic syndrome.
3. Although all the observations were carried out within the clinical set up, the autistic subjects were more familiar with the clinical set up than the normals and this could have influenced the performance.

IMPLICATIONS FOR THERAPY

It was observed that the autistic group tended to show a prominence of those communicative functions such as responding, greeting and requesting, that are most commonly worked upon in therapy. It is therefore suggested that the clinicians gradually guide the children towards more socialized speech such as attention seeking, comment and monitor the child's progress in these areas.

The frequency of non socialized utterances could be decreased with lesser emphasis on activities like rhymes and serial naming which depend more upon rote memory skills.

The clinician should be observant to the occurrence of repair attempts and should gradually attempt to increase their linguistic complexity from repetition to elaboration and confirmation.

RECOMMENDATIONS

1. A study of a larger population will be useful.
2. A similar study can be conducted by comparing two clinical populations, autistic and MR's who are matched on IQ.
3. A similar study can be conducted by matching the two groups on the language age.

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APPENDIX -1
QUESTIONNAIRE

We are collecting information on how your child uses his language. Please answer the following questions about your child by ticking (/) the most appropriate answer. If your choice is (b), fill in the specific details in the remarks column.

Name:

Age:

1. The main mode by which the child expresses his needs is

- a) Using gestures b) Using speech c) Both speech and gestures.

Remarks of any

2. Does the child attempt to seek attention towards himself (eg. pulls your hand to get your attention)

- a) Always b) Sometimes c) Never

Remarks

3. Does the child attempt to draw your attention towards other objects or other people, (eg. shows you something that has interested him).

- a) Always b) Sometimes c) Never

Remarks of any.....

.....
.....

4. Does the child attempt to name people, objects and events, (eg. "Dog, Ball, His playing" etc.)

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

5. Does the child attempt to comment on people, objects and events, (eg. "Fat, Big, Mine, This is a car, She cannot do it" etc.).

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

6. The child request for an object he wants

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

7. Does the child ask for something he wants at meal times

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

8. The child request for an something he wants you to do. (eg: to carry him)

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

9. The child request information about an object, action, person or location, (eg: "What's that ?")

- a) Always b) Sometimes c) Never

Remarks.....

.....
.....

10 The child responds appropriately to questions, (eg: "Do you want to go outside?")

"Yes"

- a) Always b) Sometimes c) Never

Remarks.....

.....
.....

11. The child expresses greetings, (eg: "hello, bye-bye, good night" etc.)

- a) Always b) Sometimes c) Never

Remarks.....

.....
.....

12. The child expresses an objection to some action or event, (eg: "No" child pushes away unwanted food).

- a) Always b) Sometimes c) Never

Remarks.....

.....
.....

13. The child informs you about an object, person or event, (eg: shows the wheel of a toy to indicate that it is broken).

- a) Always b) Sometimes c) Never

Remarks ..,.....
.....
.....

14. What the child attempts to inform is vague or ambiguous

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

15. The child attempts to tease, warn, claim or convey humor.

- eg: "You can't catch me"
 "Look"
 "Its my turn" etc.

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

16. The child uses the words (I/you; this/that; here/there; before/after; come/go; bring/take) appropriately in his speech.

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

17. The child specifies relationships between the words in a sentence.

- (eg: The boy went to the shop. He bought sweets.
 I was sick. So I didn't go to school),

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

18. The child talks differently with different communication partners, eg: Familiar persons Vs unfamiliar person)

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

19. The child makes modifications that reflect awareness of the channels available for communication, (eg: face-to-face conversations Vs telephone conversations)

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

20. The child makes modifications in his speech that reflect an awareness of different social environments, (eg: home, playground, therapy etc.)

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

21. The child directs his speech to the listener

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

22. The child uses speech and/or vocalization or oral sounds only for individual/solitary play, narration, songs, rhymes

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

23. The child demonstrates appropriate turn taking behaviour

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

24. The child initiates a conversation with others

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

25. The child can maintain a topic as well as add on new information without sounding irrelevant

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

26. The child can adequately terminate a conversation

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

27. The child can repair a conversation if and when a breakdown occurs broken,

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

28. The child requests for a repair when he misunderstands a statement,

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

29. Does the child request/ask you to clarify something he has not understood,

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

30. Does the child ask you to repeat something he has not understood,

- a) Always b) Sometimes c) Never

Remarks.....
.....
.....

APPENDIX II

DIAGNOSTIC CRITERIA FOR AUTISTIC DISORDER: DSM IV (APA, 1995)

- A. A total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3).
1. Qualitative impairment in social interaction, as manifested by at least two of the following:
 - a. marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction.
 - b. failure to develop peer relationships appropriate to developmental level.
 - c. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)
 2. Qualitative impairments in communication as manifested by at least one of the following:
 - a. delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime).
 - b. in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others.
 - c. stereotyped and repetitive use of language or idiosyncratic language.
 - d. lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level.

3. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
 - a. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus.
 - b. apparently inflexible adherence to specific, non functional routines or rituals.
 - c. stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements).
 - d. persistent preoccupation with parts of objects.
- B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.
- C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

APPENDIX III

COMMUNICATIVE TEMPTATIONS (adapted from Wetherby and Prutting, 1984).

1. Eat a desired food item in front of the child without offering any to the child.
2. Activate a wind-up toy, let it deactivate, and hand it to the child.
3. Give the child four (4) blocks to drop in a box, one at a time, (or some other action that the child will respect, such as stacking the blocks or dropping the blocks on the floor), then immediately give the child a small animal figure to drop in the box.
4. Look through a few books with the child.
5. Open a jar of bubbles, blow a bubble, then close the jar tightly. Hand the closed jar to the child.
6. Place the child's hand in a cold, wet or sticky substance.
7. Initiate a familiar social game with the child until the child expresses pleasure, then stop the game and wait.
8. Hold a food item/toy that the child dislikes and hand it to the child.
9. Blow up a balloon, deflate it and hand it to the child/place it again near the mouth and wait.