

UNIVERSITY OF LONDON

(INSTITUTE OF EDUCATION)

THE DEVELOPMENT OF CONVERSATIONAL BEHAVIOUR AND
SOCIAL UNDERSTANDING IN YOUNG CHILDREN

by

Ioanna Dimitracopoulou

Thesis submitted for the Award of Doctor of Philosophy
in Psychology (Child Development) in the Faculty of Science

1986

This thesis is dedicated to my father

ANDREAS T. DIMITRACOPOULOS

ABSTRACT

The present thesis investigates language development and social functioning. It concentrates on the development of one aspect of language, namely conversational competence in children between the ages of three and half and seven. A main assumption is that language is an aspect of social life and must be understood accordingly. In the empirical research, nineteen children were observed interacting with their mothers. The study had two aims. The first was to find out the extent to which children at different developmental ages were able to successfully communicate with their mothers. Here, two aspects of language use were investigated: the relevance of the child's comments to ongoing conversation and the orientation of the child's speech to the listener's perspective. The results indicate that children's language use is not as egocentric as the Piagetian perspective indicates. The second aim was to link the children's use of language with their social functioning. For that purpose, the same children were tested on several socio-cognitive tasks. The analysis showed that children's scores on the socio-cognitive tasks were related to several parameters of their language functioning.

ACKNOWLEDGMENTS

The author wishes to thank in particular:

1. Mrs. Angela Hobsbaum, Lecturer at the London University, Institute of Education, for her professional skills as supervisor and her continuous interest and encouragement.
2. Dr. John Versey, Senior Lecturer at the London University, Institute of Education, for his helpful advice on the statistical analyses.
3. Mr Peter Jobbins, at the London University, Institute of Education, who generously gave his time and expertise in the use of computers.
4. Dr. Susan Ervin-Tripp, Professor at the University of California, Berkeley, for her initial helpful discussions and encouragement.
5. Dr. Peter Culicover, Professor at the University of Arizona, for his comments and correspondence.
6. Dr. Jonathan Mendilow, Visiting Professor at the University of Southern California, for his continuous interest, encouragement and expert evaluations of the first draft of the manuscript.

7. Janet Campagna, research student at the University of California, Irvine, for the helpful comments on the statistical work.

8. Equally, I would like to express my gratitude to the Headmistress of the Mona-Liza School at Laguna Beach, California, for allowing access to her school and her pupils.

9. My greatest debt is to the children and mothers who participated in the present study. The mothers' general enthusiastic co-operation and their useful comments in interpreting their own interaction were of immense value.

And finally, I would like to thank my husband,

Shawn Rosenberg.

Without his help and support, this dissertation

would never have been completed.

TABLE OF CONTENTS

	Page
Chapter 1 - Introduction.....	1
Chapter 2 - Speech Acts and Conversational Analysis.....	27
Chapter 3 - Language Usage and Social Functioning.....	48
Chapter 4 - Methods.....	84
Chapter 5 - Results.....	121
Chapter 6 - Discussion.....	175
Chapter 7 - Concluding Remarks.....	237
Appendix 1.....	244
Appendix 2.....	251
Appendix 3.....	260
Appendix 4.....	301
Bibliography.....	304

CHAPTER 1

INTRODUCTION

The aim of the present thesis is to investigate language development and social functioning. The study adopts a pragmatic approach to the study of language. It is assumed that to give a full account of language, it is necessary to consider how language is used. Thus, the focus is on how language functions as part of a system of symbols which can be used in a variety of ways to make assertions about the world, to plot strategies for social exchange and to achieve particular purposes.

Although much research has been done on the way children acquire grammar and syntax, little is known about the development of the child's ability to use language in an everyday context. The use of language requires more than an adequate knowledge of grammatical and semantic rules. The child must also acquire knowledge of how the adult community uses language and how language structures their social lives. He must be able to discern the relevant context of discourse, what is assumed and what must be made clear. Similarly, he must know how to initiate and terminate a conversational exchange and know how and when to say what he wants so that his intentions will be understood. Furthermore, successful linguistic communication requires that the child be sensitive to the rules of conversation (e.g. turn-taking rules) and shape his speech accordingly.

Some of the complexities of language use are illustrated by the production and understanding of such speech as sarcasm, hints or

metaphors. If one observes adults in their everyday environment, one will note how adults often conceal their original intentions and communicate in indirect and non-literal ways. Consider the indirection often dictated by the rules of politeness. When you stop someone on the road, you usually say "Do you have the time?" as you are looking at his watch, since you know that to just ask for the time is considered impolite. Assuming that the other person obeys the same rule of politeness you are fairly sure that he will tell you the time, rather than just replying that he has the time and walking away. Similarly, "Oh great!" uttered upon dropping one's china on the floor, does not necessarily signify actual happiness, but rather may convey annoyance. Indeed, one supposes that a listener will interpret the utterance as being sarcastic. In this thesis, an attempt will be made to explore how and when children are able to go beyond the information given by language in order to make sense of its indirect and non-literal uses.

A central orienting assumption of the present thesis is that language is an aspect of social life and must be understood accordingly. Language is embedded in dialogue, group interaction and a larger social context. To effectively use language, these social factors must be understood. Given this assumption, we view language acquisition and language development as one aspect of the growth of effective social functioning. The child's understanding of language develops gradually. To begin, the child is tied up in the "here and now" of his personal environment. The sentences he uses involve simple objects and events of his everyday environment. Eventually, the child must enter into a more public world. He must possess the concepts that the adult community shares and recognize other people's points of view. Communication through language

helps the child to see others as people who have their own wants and intentions yet share a common form of life and mode of linguistic expression. With time, the understanding of personal intentions, conversational conventions and social knowledge expands and new linguistic and social concepts are formed to orient communication in various contexts and social situations.

In this first chapter, a theoretical discussion of pragmatics is presented. The aim of this discussion is to justify the present concentration on the development of the child's linguistic behaviour rather than on the child's grammatical or semantic development. First, the various theories put forward to account for the place of language in our lives will be presented. Included are Lockian, behaviourist and Wittgensteinian accounts of language. Second, the argument will be made that language is best seen as a rule governed system embedded in social interactions. Given the social basis of language, the child's learning of the meaning of words depends on his learning how words are used by the adult community as part of purposive social activity. Third, two main types of pragmatics, empirical and universal, will be examined. Here, the claim is made that it is justifiable to adopt a framework which assumes universal principles of linguistic communication. To understand the process whereby children acquire language, we need to examine those universal principles and see how these can be translated in terms of the child's developing abilities.

(ii) Theorizing about language

How does language function? What is its place in the child's thinking and development? To answer these questions, two further

questions must be addressed: What is the nature of the "mind" and for what is language needed? Since the function of language and its development will depend on one's view of mental happenings in general, both questions are interrelated. To address them, we will discuss two popular theories of language. In so doing, we hope to illustrate the advantages of a pragmatic theory of language as the only theory which does justice to the complexity of linguistic communication and its development.

According to the Lockian tradition, mental happenings occur in isolated fields known as "minds". Given that there is no direct knowledge of other minds, the function of language is to communicate these invisible ideas and to make them known to others. This tradition has given rise to several mentalistic approaches to account for meaning. All such attempts have been characterized by a radical separation between the words in which thoughts are expressed and the thoughts themselves. There is said to be a world of mental experience to which thought belongs which is personal and individual. It is not shared. In the private world of mind, thinking is said to consist of a number of mental acts or processes which underlie intelligent use of speech. In simple terms, words stand for or refer to the inner processes of thought. The medium in which thought occurs is defined here in terms of images and ideas, both simple and complex. Meaning is thus "mental". What are the implications of the Lockian tradition for language acquisition and development? The child, it may be argued, learns the meaning and usage of each word through experience. By working on what it is given, the human mind is therefore capable of producing new ideas by comparison, composition and abstraction.

In the second popular tradition, the Chomskian tradition, meaning is again mental. However, mental ideas are innate. There are innate syntactic abilities that determine the conceptual categorization of reality for the child. Although meaning is mental, the human mind is not capable of picking up the whole range of language. For Chomsky (1965), the child is genetically predisposed to acquire the syntactic rules that underlie our sentences. Chomsky's theory of language is therefore a competence theory and his aim is to account for one of the most complex aspects of language, namely the acquisition of its syntactic aspects.

Several important criticisms of the two traditions are worth mentioning. The first concerns the concept of "meaning" that they propose. For both traditions, meaning is a mental phenomenon. What the present thesis wishes to argue, however, is that meaning is not mental. Meanings do not exist independently of language use. They have no separate existence either mental or physical. Given that language is needed to translate into words our inner and private "ideas", we can, in the true Lockian tradition, postulate that "meaning" stands for "ideas". However, one cannot easily explain meaning in terms of the concept of "ideas", for the term "idea" is derivative or resultant from an activity. Thus, to say "I get the idea" simply means "I understand the meaning of that statement" (be it verbal or nonverbal). Such a statement, however, does not explain or point to a particular mental process. The same may be applied to "thought" or "conception" as used in an explanatory fashion. For example, S. Langer (1965) writes that in talking about things, we have conceptions of them, not the things themselves, and it is the conceptions, not the things, that symbols directly mean.

While it would be difficult to deny that we have some kind of private mental experiences, there are several unacceptable claims made in mentalistic accounts of language. Firstly, as we have noted, in so far as a medium of thought can be identified, it can be said to occur largely in words or symbols of some kind. Yet the leap from this point to the claim that we think in some alternative medium to language before we make utterances is unwarranted. Indeed, it seems more reasonable to argue that when we do think before we speak, we do so in words. That is to say, that to have a specific thought is synonymous with having a set of symbols which possess a specific meaning. Thus, when we look for words in which to express what we want to say, it is not necessarily the case that we have the precise thought in ideas which we cannot adequately code. Rather, it is that we have not yet got the appropriate thought because we have not yet formulated it into words. We can only have a particular thought if it is formulated in relevant terms, for to have a specific thought is to entertain a set of symbols that have that specific meaning (Hirst, 1975). What every symbol does for us is to serve as the focus for a whole mass of understanding which does not have to be made explicit. Without this symbolic language, that understanding would have to be made explicit if it were to be used at all. In effect, this would make any abstract thinking impossible (Hamlyn, 1978). That is to say any thinking that presupposed a body of knowledge or understanding which is divorced from the circumstances in which it ordinarily gets application would be impossible.

Secondly, the nature of mental processes can only be known or described in relation to their achievements as symbolically expressed; we can know nothing directly about the nature of the mind itself, as if this

was the label of a directly inspected object. As Hirst (1975) rightly writes, "...we cannot specify any medium in which the process of thought occurs.....All intelligible thought involves the use of symbols, and most frequently the use of words." (p.71) Implicit in any mentalistic theory of meaning is a negative account of meaning. If, contrary to the assumption that words represent or stand for thought, one assumes that thoughts occur in words, then the answer to the question as to the meaning of words cannot be the thought for which they stand.

A further question to be raised concerning a mentalistic theory is, "how would one account for the possibility of shared meaning through language?". If the meaning of a word is said to exist in private thought, and the word is merely its overt statement, how can one account for the existence of a common language which could at specific instances be guaranteed to produce the same thoughts in all listeners and speakers?

Worse problems are encountered when we attempt to understand the process of language acquisition. Any account which shares the Lockian tradition and involves a supposition that concepts are acquired by abstraction presents problems. How, for example, would it be possible to form a concept by reflection on common features of experience, when the recognition of these common features is only possible after one has already established the criteria for recognition of a relevant instance of a given concept? If a child sees a tree and, on reflecting upon its common features, comments "this is a tree", then the child must have already established the concept of tree-ness in order to recognize the tree as such. That is to say, such an account cannot offer an adequate solution to the problem of how concepts arise in the first place.

At this point one can draw on the Chomskian tradition. Given that Chomsky (1965) assumes the existence of innate ideas, we can say that the child is genetically predisposed to acquire our language. Addressing the question of the acquisition of linguistic competence, Chomsky sometimes refers to a "language acquisition device". It is a device, no doubt part of our physiology, which is capable of utilizing the information received by a process of structuring, perhaps in the way that a programmed computer can utilize information fed into it. It is best understood as a device which describes the syntactic structure of language and the rules that underlie sentences. Thus, the child is conceived as testing particular grammars against the linguistic inputs and selecting the appropriate grammar which is the most compatible with the language heard. Influenced by this theoretical framework, studies by Braine (1963) and Brown and Fraser (1964) attempted to investigate language development by concentrating on two central problems: (1) describing the child's acquisition of grammatical structures and, (2) discovering the rules used by the child to generate utterances. A specific characteristic of the child's language - the one word period - was treated as representing "holophrases", which had the underlying representation of a full sentence (McNeill, 1970).

However, Chomsky's assumptions of language were soon called into question. Specifically, the main assumption, that transformational grammar functions as a model of speech production, has proved to be fruitless for studying early language. Bloom (1970) attacked the accounts of early speech development in terms of pivot grammars as failing to acknowledge meaningful distinctions which the child can appreciate cognitively but cannot differentiate linguistically.

Moreover, Schlesinger (1971) argued that the underlying structure in children's speech is mainly semantic rather than syntactic in nature and reflects the child's ability at each developmental point to perceive the world. Thus according to this view, grammar is a learned and semantically based system of general conceptual categories of the world (agents, objects, actions, and so on).

Performance Theories of Language

The above criticisms lead one to consider performance theories of language acquisition and development. Underlying such theories is the assertion that "meaning" is not a kind of "thing" nor does it (in either mental or physical form) exist per se. The concept of meaning can be understood only by concentrating on the social context, that is, only by an examination of the way the particular word is used by people. Differences in the meaning of words can therefore make sense only in terms of differences in their uses. Likewise, similarities of meanings can make sense only in terms of their uses.

Before embarking on a brief analysis of the philosophical position behind the slogan "meaning is use", an alternative theory of language, "performance theory", will be discussed briefly. Although its focus on behavior makes a discussion of performance theory an appropriate point of departure, it is important to remember that it does not share the philosophical tradition of the "use theory". Basically, a behaviourist theory of language holds that for an expression to have meaning, its utterance must elicit certain behavioural responses in the listener and/or be produced in relation to certain stimuli. Therefore, for two expressions to be synonymous, they must produce the same responses and/or

be produced in response to the same stimuli. The question of meaning, then, is a matter of examining the behaviour connected with the utterance of expressions. Thus, the meaning of an expression is the situation in which the speaker utters it and the responses which it calls forth in the observer. From this perspective, language acquisition is explained in terms of the conditioning of the response which an expression calls forth.

The objections to the crude version of such a theory are somewhat obvious: Does the meaning of the word change each time we respond differently to it? How is it possible to find any justification for a theory which claims that a word minus its response is meaningless? However, there are some very sophisticated versions of the behavioural tradition which avoid ridiculous suppositions. For example, C. Morris (1946) postulates a theory according to which all meaningful symbols or signs (sentences may be included) serve the function of preparatory stimuli, that is to say, they set up a disposition in somebody to respond to future stimuli. The meaning of a sign is said to have two components: the denotatum defined as "that which would complete the response sequences to which the interpreter is disposed", and the significatum, or essential properties which are significant of the sign. A sign is synonymous with another if the two signs have the same significatum. "Thus for something to be food and serve as the goal we are disposed to achieve by the buzzer or by the word 'food' it must be edible. So edibility is part of the significatum of the buzzer or the word 'food'." (Morris, 1946).

Although, this version of the theory avoids the obvious criticisms it is nevertheless equally problematic. The assumption, that each word which has a distinct and clear-cut meaning has also a distinctive

clear-cut goal directed response sequence towards which it disposes the listener, may be plausible in the case of words which stand for concrete objects (i.e. for names of objects). However, abstract nouns present problems - let alone words such as "if" and "only". Nonetheless, children at about the fifth year of age are in a position to fully understand hypothetical statements. Furthermore, there is no logical connection between the meaning of a sentence and the disposition which it is supposed to set up. Consider, for example, a case of a sentence uttered with the intention of frightening somebody who has an obscure phobia of X. By indicating the presence of X one may induce fear. Yet the utterance "Oh, look there is an X" itself does not carry such a function in its commonly accepted meaning. A behaviourist account would surely need to distinguish meaning as connotation and meaning in terms of personal uses (e.g. "He means a lot to me").

A further problem arises from the failure to distinguish between preparatory stimuli which are signs, and those which are not. To be able to do so, one must establish a non-behaviourist criterion to identify the distinctive features of the two. An account which describes meaning in terms of behaviour is problematic in so far as one cannot avoid raising the question as to whether it is possible to identify behaviour independently of one's prior knowledge of the meaning of words descriptively associated with it. If the term behaviour denotes movements and gestures involving intentionality and effect in a social context, then the crucial point would seem to be that it is the linguistic interpretation of a particular action, or the categorization of labelling it, which gives it a particular meaning. One may, for example, perform a bodily gesture which carries with it a variety of

interpretations of intention which are culturally or historically relative. In this case, it is the implicit message accompanying a particular gesture which renders the actual movement meaningful. Thus, it would seem that to determine what behaviour is, one would have to understand the given language of a given culture wherein a description of a particular action within such a culture will be attributed its meaning. As Cooper (1978) writes in concluding his example of the anthropologist studying a strange tribe, "No doubt studying their behaviour can be used to confirm or disconfirm hypotheses about how they mean their words; but it is difficult to see that we can explain the meaning of their words in terms of their behaviour." (p.61)

Such criticisms as are made here apply equally when one considers synonymy. How, for example, could one explain the synonymy of words lacking associated distinctive types of goal directed behaviour, such as "black" and "noir"? Nor can one deem two pieces of behaviour to be the same unless one knows that their respective descriptions mean the same. Unless one has some criteria for synonymy it is impossible to say which differences in behaviour are necessary to meaning. Because one knows that two words are synonymous on some independent ground (i.e. they are used to denote the same object), some difference in responses to the two expressions in question may be counted as irrelevant. One is presented with a circular argument: "If this is so, it follows once more that any appeal to responses in explication of synonymy will be circular since we do not know which responses to look for unless we already know something about what words mean" (Cooper, p.33).

The pragmatic approach to language

Having acknowledged that both mentalistic and behaviourist accounts do not offer adequate explanations of "meaning" and its development, we turn to the perspective adopted in the present thesis. Two points have become central in our discussion so far. First, meaning is not an entity, but can only be understood in terms of the social context and the use to which people put their words. Second, in accounting for meaning one has to take into consideration the subjective elements of the user. There must exist essential connections between meaning and the use of language. As has been pointed out before, if these connections do not exist, it is a curious contingent fact that the rules of language are "public rules" accessible to all speakers. To make these connections explicit one has ultimately to move towards the view that meaning can be understood only in terms of the speaker's beliefs and intentions as these direct acts of communication in specific contexts of social interaction involving discourse.

As an ordinary language philosopher, Wittgenstein (1958) began to chart the features of everyday discourse in terms of patterns known as "language games". He showed how slight and subtle differences in the use of language would alter its meaning; hence the plea "Don't ask for the meaning, ask for the use". He maintained that words enter the very structure of our experience and what is known of reality is a function of the system of representation which humans bring to bear on it. In other words, the categories we impose on the world are linguistic. Learning the names of objects is preliminary to the use of language and not an example of it. In Philosophical Investigations (1958), he claims: "Naming is not so far a move in the language game any more than putting a

piece in its place on the board is a move in chess."(p.6). Wittgenstein maintained that learning to attach labels to certain objects cannot be called "understanding" a language but, on the contrary, is simply a process of copying and repetition. One could argue that learning to attach labels to certain objects cannot be seen as understanding, particularly in the case of coming to know or understand abstract conceptions. Even for observable concepts, the idea that we learn the objects by learning to attach labels to them, is not satisfactory. In many cases, correct identification of an object by the appropriate name relies on further understanding the conceptual assumptions over and above perceptual evidence. Mercury, for example, looks like a liquid. One can attach the label "metal" to it only having understood the attribute such a label gives to it.

So, as Hamlyn (1978) has argued, such a theory becomes the denial of various forms of mentalistic and referential accounts. Indeed, it is this very denial that lends it much of its initial appeal. Distinctive in its rejection of the conception of meaning as an abstract entity and in its assertion that life situations or human interactional contexts are fundamental to the notion of meaning, it also offers a solution to the problematic task of explaining the meaning of words such as "if" (Cooper, 1973). The pedagogical implications of such a view of meaning would also seem to contribute to its feasibility. We teach children new words, by encouraging them to learn their applications in appropriate situations rather than by encouraging them to conjure up mental images or be taught through observing the responses of others.

A useful distinction to be made at this point would perhaps be that between language and speech. For example, if one takes a simple phrase,

like "Good morning", as seen in the context of the written word, its meaning has limited possibilities. It may tell us something about the time of day and it functions as a greeting or acknowledgment. If one considers Wittgenstein's example of the thief saying "Good morning", then one is likely to assume that in such a situation the effect which the "good morning" has upon the hearer is different. It may induce fear or surprise because it is the context in which it occurs which contributes to its meaning. It can be argued, therefore, that if one wishes to avoid any implicit behaviourist claims, one is wise to make a distinction between the effect of an utterance and its meaning. An account of meaning in terms of its use needs further elaboration if it is to be accepted. As exemplified above, there are types of contexts in which meaning cannot be extrapolated in terms of use alone. Some social outcomes are relevant to meaning as is also the intentionality of the user in certain contexts. Hence, if one considers meaning in terms of use, it is speech rather than simply language with which one will be concerned.

The study of language and the study of speech acts are not two independent studies. In principle, they are one and the same since every meaningful sentence in virtue of its meaning can be used to perform a particular speech act and since every possible speech act can in principle be given an exact formulation in a sentence or sentences (assuming an appropriate context of utterance). (Searle, 1975). Speech-Acts are thus characterized by the speaker's specific intention (illocutionary act) to produce a desired effect on the audience (perlocutionary act). At the same time, they are characterized by an intention to produce that response by means of the audience's recognition

of the intention to produce that response. Using language properly, a speaker assumes that this recognition will be achieved because of the association between the rules of using the expression he utters and the production of that effect. A clear relationship, therefore, exists between the intentionality and the conventionality element in using and comprehending language. In learning to use language, the child must not only have a clear intention to produce a desired effect on the hearer but must understand that a certain word stands for a concept. In other words, he must acquire that conventional form of behaviour which is involved in giving a concept a name and thereafter treating it as the concept's name.

In sum, the key assumption adopted here is that to understand language, one has first to understand what people do with the use of language and how this system functions in social interactions. Our utterances have a form, but they also perform several functions (i.e. the function of requesting, or informing, etc.). More importantly, a particular form can perform several functions. The questions we are concerned with are: What sort of behaviour is linguistic behaviour? What are the rules or principles that underlie successful linguistic communication? A number of different answers have been put forward. Some theorists have concentrated on analyzing the kind of speech acts we perform with language (see Searle, 1976; Dore, 1977, etc.). Others have directly examined the context of linguistic behaviour - namely by examining conversational behaviour (Grice, 1975; Sacks, Schegloff & Jefferson, 1974). However, before embarking on a discussion of these we shall first address a more general issue.

Universal vs Empirical Pragmatics

The attempt to understand linguistic communication and the rules behind it poses the main dilemma of whether there are general universal rules or principles underlying linguistic communication. This dilemma is closely linked with a more specific and practical question of the sort of correspondence between the form of an utterance and its context. Is this a one-to-one correspondence, or does the actual context affect the form-function relationship in a radical way so that the possibility of discovering universal principles of language usage is severely minimized? The question is worth pursuing, raising as it does important methodological considerations. If we argue that universal principles governing linguistic communication do exist, then we have (a) to analyze structured contexts and develop a theory of contexts and their relation to the forms of communicative exchange and (b) to develop a theory to account for those contexts which are themselves inherently meaningful or structured and thereby allow the individual to make certain types of rational inferences and to choose the means that most satisfy their desired goals. On the other hand, if we argue that social variability is socially conditioned, then (a) the speech community must form the starting point for linguistic competence of individuals, (b) we need to concentrate on the forms and types of verbal interaction in connection with the concrete situations of particular speech performances as elements of a closely linked interaction.

The two alternative answers represent different kinds of philosophical views of the nature of knowledge and of man. The first is linked with the work of British analytical philosophers (e.g., Brown & Levinson, 1978; Shotter, 1980). These take the speech acts phenomenon as

a unit of human action and they attempt to arrive at a model where human linguistic reasoning can be described in terms of universal logical processes which are independent of the way in which propositions are expressed in particular languages and cultures. The second approach, on the other hand, is associated with the work of sociologists who concentrate directly on verbal strategies of speaker-listener coordination as revealed in the practices of conversational management.

The latter approach will be examined first since some of its criticisms will help us explain the first one. Ethnomethodological work argues against the tendency to take for granted the claim that the ability to converse and use language successfully exists at all times, that interlocutors are cooperating and that interpretative language conventions are always shared by the members of the community. As Gumperz (1982) argues, "the experience of modern industrial society with its history of communication break-downs, of increasingly intricate constitutional and legal disputes and its record of educational failure, suggests that such assumptions may not fit the facts of modern urban life."(p.4). Instead, in order to communicate, conversationalists rely on indirect inferences which build on background assumptions about context, interactive goals and interpersonal relations. From these, they derive frames in terms of which they can interpret what is going on. A general theory of discourse strategies must, therefore, begin by specifying the linguistic and socio-cultural knowledge that needs to be shared if conversational involvement is to be maintained and then go on to deal with what it is about the nature of conversational inference that makes for cultural, subcultural and situational specificity of interpretation. In other words, the grammatical and lexical knowledge

are only two of several factors in the interpretation process. In addition to the physical setting, the participants' personal background knowledge and their attitudes towards each other, socio-cultural assumptions governing role and status relationships as well as social values associated with various message components play crucial roles.

Adopting this perspective, most of the ethnomethodological work concentrates on the participants' ongoing process of interpretation in conversation and on what enables them to perceive and interpret particular constellations of cues in reacting to others and pursuing their communicative ends. Speakers with differing backgrounds are the rule rather than the exception and signalling language conventions vary from situation to situation. Hence, the approach makes no assumption about sharedness of rules or evaluative norms. Consequently, language acquisition and development is seen as a matter of the child's acquisition of particular social and conventional rules which enable him to use language and to converse in different social situations. The emphasis lies on discovering the importance of different social roles in acquiring language (e.g. mother-child and teacher-child conversations) and in analyzing changes that take place in language functioning across differing social contexts (e.g. home vs school context). The task of socio-linguistic analysis, then, is that of specifying the interrelations of social variables in events characteristic of particular social groups; the principle role is to show how social norms affect the use and distribution of communicative resources. The researcher records the everyday speech of speakers selected according to criteria of sociological sampling as representative of a particular group or community. He, then, attempts to describe the various values, beliefs

and attitudes present at that particular moment and then examines how everyday situations define the underlying assumptions with respect to which participants infer what is intended.

Basically, the ethnomethodological account focuses on the impact of particular contexts on the actual form of language. We wish to argue that this direction is somehow sterile. It limits one to making claims about the rules governing a particular situation at a given moment. The child is faced with the almost impossible task of having to acquire the language usage of every individual situation in every particular moment in time. The logic of this position allows for no general claims of understanding. As Brown and Levinson (1978) rightly argue, norms, being specific to particular social populations, have a severely limited explanatory role in comparative research.

A far more important point, however, stems from the realization that conventions and norms have a rational origin. This rational origin sets the boundaries of the potentially infinite development of language conventions and its norms and social values. For example, Brown and Levinson (1978) have analyzed in great detail the phenomenon of "politeness". As they have argued, the phenomenon can be seen as falling under several universal principles which are used by participants to produce verbal interaction. In particular, the strategy of the speaker's willingness to cooperate and the strategy of "keeping on good terms" with the hearer in interpreting politeness phenomena derive from the universal mutual knowledge assumptions of interacting individuals: that they are rational and that they have a "face" (wants, desires, means). Discovering the principles of language usage may, therefore, be largely coincidental with discovering the principles out of which social

relationships, in their interactional aspects, are constructed: both are dimensions by which individuals manage to relate to others in particular ways.

The doctrine of absolute cultural relativity in the field of human interaction and linguistic reasoning presents problems. Human linguistic reasoning can be described in terms of universal logical processes. What in fact Searle (1969, 1971, 1976), Grice (1975, 1978) and Bach and Harnish (1979) have tried to delineate are the conversational principles and the various speech acts that exist and are necessary for the application of the concept of language in the first place. Their argument is essentially an epistemological one dealing with the nature of knowledge which is unchangeable for all times and cultures. In other words, it assumes a kind of knowledge that participants require in order to use linguistic means to converse.

It is true that there are important differences in the way different cultures and epochs come to conceptualize and justify their experiences. One can say that these ways are connected with many other factors, such as needs, interests, and social conditions. However, can one infer that all knowledge is social and thus no universal claims can be made? There is in fact a very trivial sense in which one can claim that all concepts are social given that they embody rules for classifying experience and are publicly accessible. In that case, then, one can argue that there are no a priori limits to the number of ways in which we might organize our experience. Any conceptualization of experience, however, would need to respect fairly basic rules of intelligibility and these should be made rather explicit. We may give a sociological account of the reasons we make such discriminations as we do, but we cannot end the matter here.

There must be something about the world itself that makes possible certain discriminations rather than others. In other words, certain features of the world and of what human beings are, put certain constraints on our conceptualization.

The search for universal rules is well exemplified in the work of Grice (1975). He attempted to analyse certain general features of linguistic communication necessary for identifying the existence of conversations. He claimed that for a "conversation" to take place, both participants must behave according to some maxims. Both must observe the "co-operative" maxim, must "make contributions which are relevant", and must have "an intention to communicate". These features must be seen as being closely related to the very nature of conversations. Thus, Grice is directing our attention back to these general patterns of human activity with which our collective intellectual conceptions come to be given their standard significance.

There is another important sense in which ethnomethodological explanations of language functioning are unwarranted. It concerns the ethnomethodological emphasis on the social as opposed to the individual parameters of language. Meaningful language creativity on the speaker's part is simply out of the question. However, linguistic communication involves human agency. As Shotter (1980) points out, social psychological enquiries must be grounded in a full understanding of human agency in action processes: "Human action would seem to be unique not because, from an external observer's point of view, no other behaviour is quite like it, but it is only about human behaviour that we are able to make and sustain certain assumptionsin observing people's motions we still ascribe their trajectories to them, we still think of them as

controlling their own movements in relation to their own thoughts and feelings. "(p.49). In other words, an adequate understanding of linguistic communication must take into account the "actor as operator", as the constructor of his line of action. Thus, an adequate description of face-to-face communication must take into account both the structure, that is, the social forms for that communication, and the individual operating within that structure.

As soon as we introduce the concept of human agency into our model of linguistic communication, we need to raise specific questions related to the structure of human action. A fundamental issue concerns the way in which people come to construct their paths of action. Shotter (1980, p.56) regards the concept of "intentionality" as the key generative mechanism here - "intentionality is a fundamental and irreducible feature, a presupposition of all thought, all conceptual activity, and all action." Although a person's action can be just situationally reactive, nevertheless it is intentional all the time. This means that intentionality is both a person's characteristic and it is socially constructed. Human beings have the ability to adapt to specific social situations and to influence the outcomes of such situations. They are both controlled by and in control of their social milieu. Theorists adopting this orientation address questions such as: What are the universal principles that lie behind the construction of social behaviour? What are its functions as action and interpretation? How can we propose a general schema for deriving actions from goals? In relation to language acquisition and development, our aim should be to identify the universal parameters of language use and then to study the means

whereby the child picks these up and becomes able competently to deal with conversations.

To summarize the discussion so far, we have argued that language is best understood as a system embedded in social implications where dialogue, group interaction and social context are significant for learning. Words acquire their meaning by the way people use them. We have to come to think of language as a publicly available social reality and not a kind of essence whose nature we can work out in our heads. Speaking a language is part of an activity, a rule-governed activity embedded in social interaction. Having made the claim about the importance of viewing meaning as use, Wittgenstein was not prepared to commit himself to the production of positive general theories of language, maintaining that generalizations would give rise to distortion. However, his tradition gave rise to two main paths of reasoning. The first, a relativistic one, proposed that we can only argue in favor of language specificity. Thus, the study of language becomes the investigation of its use in particular historical and cultural settings and particular situations. We have argued, however, that this reasoning does not take into account the "user" of language. Superficial diversities in language use can emerge from underlying universal principles of linguistic communication and are satisfactorily accounted for only in relation to them. There are underlying principles of linguistic communication which, despite their being socially bounded in their specific application, are universal in the extent to which they are related to what humans do in communications. Pragmatic elements in communication are equally important. We propose that language theory

will benefit from a coherent account of pragmatics and semantics embedded in a more inclusive theory of purposive behaviour. The interest, therefore, lies in analyzing the content of communication (linguistic utterances), its contextual domain and finally the speaker's intentions and the hearer's recognition of them.

There are several models put forward to account for parts of linguistic communication (i.e. Bach and Harnish's model, the model of speech-acts proposed by Searle, and Grice's model of conversational participation). An analysis of these models and their relationship to our study of language acquisition and development is the focus of the next chapter. What is immediately important is to emphasize once again the advantages of viewing language functioning in terms of a universal pragmatic tradition. These advantages can be summarized by stating that:

1) In any language, we find words whose meaning-specifications can only be given by reference to context or usage. For example, the meaning of words like "well", "oh" and "anyway" cannot be explicated simply by context-independent statements. One has to refer to pragmatic concepts like relevance, or "shared assumption" of communication to understand them.

2) Such an approach provides us with models of linguistic communication directed to explain language "uses", language "users", and "social contexts". With such models, we can adequately account for certain speech characteristics (e.g., for "metaphors", "hints", "irony") which can not be accounted for by linguistic theories alone.

3) Children have greater facility with language than has been suggested by researchers who have concentrated on traditional linguistic theories. During the early stages of language acquisition children

establish an interactional matrix for language learning and then slowly utilize linguistic means for promoting interaction (Bruner, 1975, 1978; Bates, 1976). By employing a pragmatic approach to the study of child language, we are able to distinguish more easily the interactional structure of the child's language from the language itself. Thus, we can understand the linguistic competence together with the communicative competence that children possess at different developmental periods.

4) Such an approach to linguistic functioning broadens the scope of our investigation. Our interest is directed towards understanding the functions that language performs in social contexts and how these are performed along with understanding the most powerful social context of language, namely the context of conversations.

Chapter 2

SPEECH ACTS AND CONVERSATIONAL ANALYSIS

As we have pointed out in the previous chapter, the practical meaning of the slogan "language in use" is that the only way to explicate the meaning of a term is to give an account of what can be done with it. The meaning of the term depends on how it functions as part of a symbol system which we can use in a large variety of ways to make assertions about the world and achieve our purposes in it. This shifts the emphasis from questions relating to the linguistic structure of speech to the pragmatic functions of our utterances which convey particular intentions in given social contexts.

There are two important implications of the pragmatic approach to the study of language. First, the study of language must concentrate on discovering the functions (speech acts) performed in social contexts. Second, the study of language must have as its focus the various strategies employed by people in their interactions. Conversational analysis becomes an important way to investigate the kinds of interactions that go on between participants and the background knowledge which is necessary for understanding each other. In terms of language development, our aims then should be the understanding of 1) how children become competent conversational partners and 2) how they learn to carry out certain linguistic acts and 3) what kind of speech acts are characteristic of children at different developmental points?

(i) Speech-Acts Analysis

The question addressed here is: "What sort of behaviour is linguistic behaviour?". In adopting such a framework, one must engage in a

speech-acts analysis of what "speakers do with words" and how people relate words to the world (Austin, 1962; Searle, 1971).

Of all the issues in the general theory of language usage, the speech-acts theory has aroused the widest interest. Psychologists have suggested that the acquisition of the concepts underlying speech-acts may be a prerequisite for the acquisition of language in general (e.g., see Bruner, 1975; Bates, 1976). Literary critics have looked to speech-act theory for an illumination of textual subtleties or for an understanding of the nature of literary genres (e.g., Levin, 1976), and philosophers have seen potential application to, among other things, the status of ethical statements (e.g., Searle, 1969). This interest has partly been aroused because the speech-acts theory is the only one so far to attempt to formulate models of "how" to deal with subjective phenomena, speaker's intentions and the hearer's shareable assumptions about the world. The force of the theory of speech-acts lies in its suggestion that language use is governed by a system of public rules and criteria capable of being stated. Aided by conceptual classifications, these rules may be investigated empirically by observing language in action in identifiable socio-linguistic contexts. For the purposes of language acquisition and development, the speech-act theory forces us to take into account two main parameters of children's language: (a) the child's intentions in communicating with others, (b) the context of inter-subjectivity or shared understandings within which speech-acts occur.

Before embarking on the discussion of speech-acts theory and its relation to children's language, some explication of the theory itself is in order. In this chapter, we can not review all the voluminous

literature on the subject. Instead, we offer a brief sketch of the philosophical origins, a lay-out of the different positions that have been taken on the crucial issues, and a short discussion of the implications of these positions for a study of language acquisition and language development.

Austin (1962) was the first to note that some sentences like "I object" or "I apologize" are not used merely to say things (i.e. describe states of affairs), but also to do things. Isolating such utterances, he termed them "performatives" and contrasted them to statements, assertions and utterances which he called "constatives". Whereas constatives are truth-conditionally assessed utterances, performatives were utterances assessed in terms of felicity conditions. A major shift in Austin's work was his realization that from the original distinction between constantives and performatives one can in fact consider a whole family of speech acts of which constatives and the various performatives (e.g. explicit or implicit performatives) are particular members. As Levinson (1983) writes, Austin began by expanding the class of performatives to include implicit performatives. The utterance "Go", for example, may perform an advice, or an order, doing, entreating or daring according to context. However, simple statements or constatives were omitted. The question then arose whether such statements are really different. Could they too have a performative aspect? Once the doubt was raised a few observations could confirm the insubstantial nature of the performative/constative dichotomy. For example, there is clearly no real incompatibility between utterances being truth-bearers, and performing

actions at one and the same time. Thus, "I warn you the gun may fire" seems both to perform the action of warning and to issue a prediction which can be assessed as true or false. Austin consequently came to reject the dichotomy between performatives and constatives in favor of a full-blown general theory of speech acts.

If the notion that in uttering sentences one is also doing things is to be clear, the ways in which one might be said to be performing actions in uttering a sentence must be specified. Austin isolated three kinds of acts that are performed simultaneously:

- (i) Locutionary act : the utterance of a sentence with determinate sense and reference.
- (ii) Illocutionary act: the making of statement, offer, promise, etc. by virtue of the conventional force associated with the sentence.
- (iii) Perlocutionary act: the bringing about of effects on the audience by means of uttering the sentence, such effects being special to the circumstances of utterance.

It is the second kind, the illocutionary act, that became the focus. Indeed, the term "Speech-act" came to refer exclusively to that kind of act.

The above seem to be Austin's main contributions to the subject. In his attempt to systematize Austin's work, Searle (1976) proposed that there are just five basic kinds of action-carrying utterances:

- (1) Representatives: utterances which commit the speaker to the truth of the expressed proposition (paradigm cases: asserting, concluding).

- (ii) Directives: utterances which are attempts by the speaker to get the addressee to do something (paradigm cases: requesting, questioning).
- (iii) Commissives: utterances which commit the speaker to some future action (paradigm cases: promising, threatening, offering).
- (iv) Expressives: utterances which express a psychological state (paradigm cases: thanking, apologizing, welcoming, congratulating).
- (v) Declarations: utterances which affect immediate changes in the institutional state of affairs and which tend to rely on elaborate extra-linguistic institutions (paradigm cases: declaring war, christening, firing from employment).

Several criticisms have been raised in relation to this typology. By elaborating on these, we aim to justify the particular model of linguistic communication adopted in the present study and our belief that speech-acts analysis must always go hand in hand with conversational analysis. The criticisms may be summarized as follows:

(1) As Levinson (1985) argues, the above typology lacks a principled basis. Contrary to Searle's claims, it is not even built in any systematic way on felicity conditions (which speech acts must meet if they are to succeed). Consequently, there is no reason to believe it to be definitive or exhaustive. Applying the typology to the study of the child's development, we can never be sure whether the lack of certain speech acts can be attributed to the child's immaturity or to the typology's indefinite and inexhaustive nature.

(2) Curiously enough, Searle failed to define illocutionary acts. Moreover, he never explained what an illocutionary act is relative to his analysis of the felicity conditions of speech-acts. As Levinson rightly wonders, will every illocutionary act have an essential condition? Furthermore, will this condition be essential for the acquisition of the illocutionary act in the first place?

(3) Like Austin, Searle distinguished between perlocutionary and illocutionary acts in terms of what is done IN saying something and what is done BY saying something. This, however, does not help us understand the differences between illocutionary and perlocutionary acts, since it does not explain the distinction it marks. Strawson (1974) suggested that effective illocutionary acts require the hearer's recognition of the speaker's intention. The speaker intends the hearer to identify the very act he intends to perform and successful communication requires fulfilment of that intention. But if this is the case, then, generally speaking, we can not rely on our vocabulary of verbs of action to mark off illocutionary and perlocutionary acts. For acts like ordering, warning, informing and assuring we must distinguish the ultimate illocutionary effect the speaker is trying to achieve from the illocutionary effect of the hearer uptake. The present criticism is fundamental and one can argue that it underlies the basic Searlean thesis. Illocutionary acts are a matter of conventional behaviour. More importantly "meaning" is conventional. But, as we have argued so far, language is far more complex and creative. Meaning is as much a matter of conventions as it is a matter of people's communicative intentions. As Grice (1957) put it, meaning presupposes the idea of people meaning

things in a social context. Furthermore, for X to have meant anything, not merely must it have been uttered with the intention of inducing a certain belief, but also the speaker must have intended an audience to recognize the intention behind the utterance. Thus, to summarize Grice's point of view, "A meant something by X" is roughly equivalent to A uttered X with the intention of inducing a belief by means of the recognition of this intention. As soon as we introduce the concept of intentions as being of vital importance for linguistic communication, then we need a model which directly addresses the inferential process that the hearer undertakes in discovering his partner's communicative intentions at each point of their linguistic communication. It is the intentional element in communicative exchanges that makes one understand not only synonymous or ambiguous utterances but also non-literal and indirect performances of illocutionary acts.

Bach and Harnish (1979) have offered a similar taxonomy of speech-acts. They have argued that our utterances can be seen as falling under the five main categories of: constatives, directives, commissives, expressives, and acknowledgements. This is very similar to Searle's taxonomy.

Having a model of language which concentrates on isolating different speech-acts and offering detailed descriptions for each language function has clear advantages. Guided by such a model, we can detect the different functions that the child at different developmental periods performs with language. We can isolate the "form" from the "function" of an utterance and see how the child gradually learns to use the same form to perform various functions. It has been suggested (Dore, 1979;

McShane, 1980) that some speech-acts are far more complicated than others and require semantic and syntactic complexity to be carried out and realized as such. In particular, commissives are sophisticated language uses. They require fairly specific conversational uses of words to realize their intentions. If this is so, such a model enables us to see what acts develop at what age and what they require. In so doing, it expands our knowledge of the conditions required for speech-acts to be realized and successfully carried out.

However, as soon as we concentrate on speech-acts, it would take us just one minute to understand that language is "rich" in meanings and communication (or rather the study of it) is a complex affair. Both adults and children can use utterances to perform various functions. The power language has in a social context is far more complicated. Whatever functions it can be said to serve are not fixed, but are flexible in order to fulfil the real purpose. Thus, language can operate on several levels at the same time. For example, the child's classic utterance, "mummy sock" (Bloom, 1970), can be seen both as a statement of a proposition conveying the speaker's attitudes to both propositions to the listener and, at the same time, as a device used to control the discourse and constrain the listener's behaviour. Interpretation will depend to a great degree on the assumptions the listener will share with the child, his interpretation of the child's intention, and the context of the child's utterance. In short, one needs a model of linguistic communication which attempts to account for the context of our utterances together with our interpretative processes whereby we understand the intentions behind each other's utterances.

Bach and Harnish (1979) have offered an extremely important contribution to the study of language usage. Firmly believing that meaning must be seen in terms of conventional as well as intentional behaviour, they devised a model for speech-act communication which takes into account contextual information. Given that the realization of the utterance's meaning depends, at least partially, on the realization of the speaker's intentions, one obvious problem is how to arrive at a model of linguistic communication which attempts to decode the speaker's communicative intentions. They proposed a speech-act schema which offers a schematic account of the way the hearer identifies the expression uttered, the meaning it has in the language, what the speaker meant by it, and to what things he is referring. Once the hearer identifies these various items, he has identified what is said. This, together with certain mutual contextual beliefs, allows the hearer to proceed to the identification of the speaker's illocutionary act. Bach and Harnish's schematization of this inference is called a speech-act schema. Their intention and inference approach contrasts sharply with Austin's view of illocutionary acts as conventional and with Searle's notion of constitutional rules (i.e. the rules that create or constitute the activity itself, like for example, the rules that create the activity of warning someone).

Following Bach and Harnish (1979) the different aspects of a speech-act are:

Utterance act: S utters E.

Locutionary act: S says to Hearer that so-and-so.

Illocutionary act: S does such-and-such in communicating E.

Perlocutionary effect: S affects the hearer in a certain way.

These acts are intimately related. The success of the perlocutionary act depends on the hearer identifying one of the other acts.

The speech-act schema proposed by Bach and Harnish is an inferential one. In other words, they were interested in elaborating the inferential process whereby adults understand direct, indirect, literal and non-literal expressions. The inference the hearer makes is based not just on what the speaker says. It is also based on certain "mutual contextual beliefs" and on three presumptions which are shared not just between the speaker and hearer, but by the members of the linguistic community at large. These three presumptions are:

(i) The linguistic presumption: members of the linguistic community share a common language (L) and that whenever any member S utters E in L to any other member H, H can identify what S is saying, given that H knows the meaning(s) of E in L and is aware of the appropriate background information.

(ii) The communicative presumption: whenever a member S says something E to another member H, he is doing so with some recognizable illocutionary intent.

(iii) The presumption of literalness: the belief in the linguistic community that whenever any member S utters any E in L to any other member H, if S could (under the circumstances) be speaking literally, then S is speaking literally. If it is evident to H that S could not be speaking literally, H supposes S to be speaking non-literally and seeks to identify what that non-literal illocutionary act is.

Some elaboration of the schema is in order. The locutionary act, the act of saying something provides the hearer with the core of information from which to infer the speaker's illocutionary (communicative) intent. Even when the speaker (S) speaks literally, such that his illocutionary intent is made more or less explicit by what he says, his intent has to be inferred by the hearer. As Bach and Harnish assert, this inference works as follows. Speaker (S) utters expression (E).

1(a) E meansin Language
(L)

Basis: Hearer (H) hears S
uttering E.

(H) Has knowledge of L
(Linguistic presumption) .

2(b) S meansby E

Assuming the existence of
the linguistic presumption (H)
understands expression E.

Hearer H at 1(a) of the SAS(speech act schema) realizes that S has uttered E. Assuming S meant anything at all by E, to reach 2(b) H must determine what S meant by E, that is, the operative meaning of E. However, in as much as ambiguity is rampant in natural languages, H is likely to need more than the linguistic presumption and the identity of E to determine what S meant by E. It would seem that he must reject all but one of the meanings of E as contextually inappropriate and rely on certain mutual contextual beliefs to do this. Accordingly, his inference would take the following form:

- | | |
|----------------------------------|---------------------------|
| 1(a) S is uttering E: "Let's go" | hearing S utter E, |
| (a) E means "let's go" in L | knowledge of L. |
| (b) S means "let's go" by E | Communicative presumption |
| (c) The literal meaning of E is | Mutual contextual |
| contextually appropriate. | belief: the speaker and |
| | hearer are just about to |
| | start a basketball game. |
- 2(b) S means "Let's go" (let's start)
by expression E.

Bach and Harnish do not claim that contextual selection always represents a psychologically real process nor do they argue that selection necessarily proceeds in the precise sequence specified. In fact, we usually seem just to hear and understand the expression in the contextually most appropriate way.

The above example emphasizes certain important issues of linguistic communication. First, it stresses the fact that any communicative exchange involves an interpretative process. Second, utterances occur in a special social context - the conversational context - which is crucially important for the interpretative process. In turn, the analysis emphasizes two important outcomes: (1) that conversations and conversational behaviour should be the ultimate focus of our analysis of speech-acts, (2) that in our study of language development, we need to concentrate not only on the literal meanings of an utterance, but also on the meaning this utterance may acquire by virtue of its position in the

specific conversational context it was uttered (i.e. its conversational meaning).

(ii) Conversational Analysis

"Conversations" are considered to be the most important dynamic contexts of language. There are important elements in the communication situation that are relevant considerations in understanding what message is being sent and what intentions the speaker had in sending it. Utterances must be organized so that they are consistent with various social conventions. They must be relevant to the general topic and account for the fact that a listener might need extra information for sufficient comprehension of the speaker's intention. In ordinary conversation, people must follow certain specific rules (e.g., the rule of "one party at a time"). This suggests that, at least, conversational behaviour might be seen as a rule-governed behaviour. By "rules", we refer to structures for generating or interpreting speech, reports of beliefs about practices and standards of correctness. The researcher's aim is therefore to discover how the rules of conversation and address can be discovered and adequately stated. His object is then to explain how the child acquires and develops these rules.

The Gricean (1975) analysis is an attempt to understand and codify the pragmatic rules for the conversational use of language. It is an attempt to find sets of principles or strategies for arriving at inferences about the intentions an interlocutor has in saying what he says. Grice (1975) offered three characteristics which apply to all conversations: (1) Conversations occur against a background of shared knowledge and assumptions (e.g., a shared assumption that the hearer

shares a common language). (2) The utterances exchanged in a conversation and their meanings have conversational goals. There is an important distinction between the "literal" meaning and the "conversational" meaning (conversational implicature) of an utterance. The realization of this difference is perhaps the most important idea in pragmatics. The notion of conversational implicature provides an explicit account of how it is possible to mean more than what is actually "said" (i.e., more than what is literally expressed by the conversational sense of the linguistic expression uttered). For example, consider the following:

A: Can you tell me the time?

B: Well, I just saw the postman.

All that we can reasonably expect a semantic theory to tell us about this minimal exchange is that there is at least one reading that we might paraphrase as follows:

A: Do you have the ability to tell me the time?

B: The postman has come. (An irrelevant response)

Yet it is clear to native speakers that what would ordinarily be communicated by such an exchange involves considerably more:

A: Do you have the ability to tell me the time?

B: No, I don't know the exact time at the present moment, but I can provide some information from which you may be able to deduce the approximate time, namely the postman who usually comes at 1:00 has come.

An important issue that emerges as soon as one concentrates on conversational meaning in the study of child language is how children

acquire and develop not only the "literal" meaning of X but also the conversationally implied or conveyed meaning of X. To answer this question, one has to introduce Grice's third characteristic of conversations: (3) A conversational contribution is a message having a cooperative function (i.e., it is an integral part of a jointly entered activity intending to make sense). The introduction of the idea of cooperation with a partner is of crucial importance for understanding conversations. Grice (1967) spelled out certain principles of cooperation ("Be relevant", "Be clear", "Contribute only the information needed") and argued that participants in a conversation actively assume each other's cooperation. They assume that contributions are relevant and are intended to follow from verbal and/or from the situational context. It is this notion that allows speakers and hearers to go beyond the literal meanings of utterances to an understanding of the meanings intended. For example, the utterance "I'll close the window" in response to a statement "It's cold in here" can be understood as a true response to the speaker's statement only when the hearer assumes the maxim of relevancy.

Similarly, Bach and Harnish's model allows one to understand the process whereby people come to terms with and comprehend many complex instances of speech such as indirect or non-literal utterances. Consider the following exchange:

A: I am willing to be patient

B: The door is over there!

In this example, speaker A makes a declaration of his willingness to go on cooperating with his partner. However, hearer B responds with an

utterance that one might classify in the beginning as irrelevant. The utterance B produces is a statement which in terms of semantic or grammatical analysis of the exchange can not be considered as a follow-up of A's utterance. But when we analyze the above exchange with a pragmatic approach in mind, we understand that both A and B are involved in an argument. A is willing to be more patient and somehow to start the interaction from the beginning. B, however, is unwilling to do so. He chooses a statement to perform an indirect speech act and inform his partner that it is time for him to go. In relation to complicated speech-acts, Bach and Harnish's model works as follows:

L1 S is uttering E

- (a) E means "The door is over there" by E in L
- (b) S means "The door is over there"

- (c) The supposition that S means "The door is over there" by E is inappropriate given the context.

L2 S means " The door is over there and you should leave the room", by E

hearing S uttering E,
L1, knowledge of L

Linguistic presumption

Contextual information: A statement concerning the whereabouts of a door is not the issue of the present context of discourse.

Communicative presumption:
Speaker A can not MERELY mean E.
Mutual Contextual Beliefs:(i)
Both participants have a fight. (ii) Doors are used for the purpose of entering or leaving

This interpretation is contextually relevant.

(iii) Applications to the study of child language:

a) Speech-Acts:

As we have already pointed out, a speech-act theory provides us with a specific taxonomy of speech-acts. Applied to the study of the child's language, the aim becomes one of finding out the kind of knowledge (both social and linguistic) which allows the child at each developmental point to engage in purposive socio-linguistic acts. These speech-acts are embedded in complex interactional settings. In fact, the production of speech-acts may be instrumental in shaping the nature of the social interaction. This suggests a second aim for the study of the child's language, the exploration of the ways in which speech-acts are embedded in the context of the mother-child interaction. By examining the different kinds of speech-acts used by both the mother and the child, we may better understand how interaction is shaped at each developmental point. This will require examining how specific speech-acts are used by both mother and child to control, direct and maintain conversation.

b) Conversational Analysis:

One of the main purposes of applying a conversational model to the study of children's language is to examine in detail what children have to acquire in order to become mature conversationalists. The work that follows views conversation as being essentially social and interpersonal. Thus, the first question we shall address is the question of communicative competence. We will examine the development of conversational ability in young children by asking what is involved in learning to participate in conversation. No less important for the study of child language is the issue of how children acquire and develop not only the literal meaning of an utterance, but also its conversationally

implied or conveyed meaning. According to Grice's (1975) and Bach's ^e *Harnish's* (1979) accounts, the various meanings which are implicated by the speaker and inferred by the hearer in conversational discourse follow from general principles which govern all aspects of human interaction. In other words, one can trace the chain of inferences from the literal meaning to the meaning in context on the basis of reasonable assumptions about the world and people's interactions in it. At each developmental point, the child's capacity to obey these general principles in his conversation will reflect his intellectual grasp of various assumptions about the world. In this context, the aim of research becomes that of discovering the child's use of language and that of investigating how he uses conversational rules to process the correct meaning of the linguistic utterance in question, at each developmental stage.

As regards the cooperative activity, it is true to say that the child acquires a whole mass of behaviours of this kind in a gradually developing way. It has often been assumed that newborns lack any basic social skills and that their requirements are purely physiological. A number of recent studies on the neonate's behaviour tend to refute this view. In fact, it is now claimed that infants are biologically predisposed for communication from the moment of birth. As Fantz (1965) pointed out, moments after birth, infants display an interest in the human face which is prior to any interest in objects. The ability to cry is another element which carries clear social connotations. Gaze behaviour taking place between infant and adult is identical to that found in adult-verbal conversations (Jaffe, et al, 1970) and, as Fogel (1977) found, mutual gaze is present from three months onwards. However,

it is important to distinguish such early behaviours from later ones which are used with a clear intention to communicate. As Sugarman (1984) points out, communication involves more than the emitting of a behaviour with a high social potency. Communication involves the intention to convey an idea to someone else. This distinguishes communication from the production of mere expressive or other interpretable behaviours. Hence the main question becomes "How do babies develop the ability to use these behaviours intentionally?" Most researchers (Keenan, 1974; Snow, 1977; McTear, 1984; Sugarman, 1984) have pointed out that communicative behaviour develops as a result of the child's social experiences, in particular his interactions with his caretaker. Perhaps the most obvious point is that adults treat and behave towards their children as if they have clear intentions and as if they are full participants in a conversation, while in fact the children are only gradually becoming so. As indicated by Clark (1978), caretakers will respond selectively to their infant's gestures and vocalizations, focusing on those which are meaningful in adult communication. Later on, caretakers will create and maintain the discourse structure for their children, teaching them in a sense how to participate in that structure and eventually appropriate it. But, most importantly, the caretaker responds to some of the child's actions as if they were communicative (Clark, 1978). Thus, as Clark (1978) points out, human babies become human beings because they are treated as if they are already human beings. An interpretation of the possible importance of mother-child interaction for language development is given by Bruner (1975). As Bruner claims, one of the earliest principles of communication to be acquired is that particular behaviours

receive predictable responses. Examining games like "give and take" and "peekaboo" Bruner shows how such games help the child learn to make correct responses to the caretaker's elicitations, or take turns, anticipate actions and eventually initiate episodes.

Around the ninth or tenth month we can begin to attribute to the infant's behaviours the intention to communicate meanings. Bates (Bates, et al., 1979) suggested that around the tenth month we can see the first clearly intentional acts - the acts of requesting and of stating. The child begins to understand the role of adults as agents and the role of his own signals in affecting that agency. Thus, the child can use an object to attract his mother's attention (proto-declaratives) or the gesture of "pointing" to make a proto-imperative. The following is an example of an imperative sequence from a child aged 12 months:

C. is seated in a corridor in front of the kitchen door. She looks towards her mother and calls with an acute sound "ha."
M. comes over to her, and C. looks towards the kitchen twisting her body and upper shoulders to do so. M. carries her into the kitchen and C. points towards the sink. M. gives her a glass of water, and C. drinks it eagerly." (Bates, 1979, p.121)

Bruner (1981) has found that by the 15th month the act of requesting becomes more sophisticated. The child has specific vocalizations which accompany different nonverbal behaviours. At that age Snow (1977) found the mother's expectations towards their children increase. Mothers expect their children not only to take a turn but also to provide appropriate responses. By the age of two, the child can use language and some elements of conversational ability are evident. The child is able

to maintain continuity (Keenan, 1974) and to respond to most questions addressed to him appropriately (de Villiers, 1979). However, there are still severe limitations in the child's ability to converse. The child is egocentric in his use of language and has major problems in placing speech in the right context and comprehending speech which is not relevant to the topic at hand. After the fourth year of life, knowledge about the social environment, the particular language communities and the context in which concepts are understood expands and imposes specific socio-linguistic constraints on how reality can be interpreted.

Chapter 3 gives an elaborate review of the literature on children's language abilities.

CHAPTER 3

LANGUAGE USAGE AND SOCIAL FUNCTIONING

This chapter will focus on the analysis of language performance and production and will examine what the development of language entails. Two main parameters of language are of interest: (a) the development of speech-acts, and (b) the development of conversational competence and the understanding of "conversational meaning". An underlying consideration throughout will be the end of language development. The adult model of linguistic communication suggests the following points:

- (a) Speech-Acts:
 - (i) Speech-Acts are well differentiated and serve many purposes.
 - (ii) A highly developed ability to maintain and control interaction and conversation with the use of specific speech-acts (e.g. with the use of requestives).
- (b) Conversational Competence and Conversational Meaning
 - (i) An understanding of intentional communication.
 - (ii) An understanding of the social context of an utterance.
 - (iii) An understanding that for the successful comprehension of some utterances, the hearer needs to make certain inferences.
 - (iv) An understanding that speech contributions must be relevant to the discourse at hand and must be coordinated with the listener's perspective.

AIMS OF THE PRESENT STUDY

The present study attempts to find out what children can or cannot do at different developmental periods. This entails the following:

(a) Investigating both the kinds of social functions language performs in a social context at different developmental periods and the ways in which speech acts expand to serve a more complex and more sophisticated interaction. Furthermore, given that speech acts are embedded in social situations, we are also interested in investigating the nature of the interaction that children are able to engage in at different developmental periods.

(b) Examining the interpretative process that occurs in conversational exchanges. Here, we are interested in a developmental analysis of linguistic communication and the inferential abilities which help young children to see conversational acts as accomplishments of social episodes. We will examine the degree to which the child is able to cooperate with his conversational partner and infer communicative intentions. The main belief of the present study is that because this understanding depends on the child's developing ability to take the perspective of the others and of the social situation, it is more social than linguistic. To understand how such an ability develops, both language and social functioning in general will be examined. At this level of analysis, the focus will be on one particular speech-act - the act of asserting. How assertions are performed and to what extent the child's responses are relevant to ongoing conversation will be examined. At the same time, the analysis will concentrate on examining what kind of assertions are performed and how successful they are.

REVIEW OF THE LITERATURE ON CHILDREN'S LANGUAGE

(i) Speech-Acts

As we have seen in the previous chapter, we can attribute the intention to communicate meanings to the child's behaviour around the ninth or tenth month. Around that period, we have the first isolated words (Dale, 1972). In most cases, these are two syllable approximations of adult words. At the same time, we have comprehension of highly specified speech discriminations of word pairs (e.g. "bet", "pet") (Nelson, 1973). It is at the eighteenth month that one-word utterances appear in the child's behaviour. Usually these are meaningful expressions of person and object names and some relational words (e.g. "up", "no", "more"). We also see the beginning of the comprehension of simple instructions and questions and the participation in simple conversations and naming games. Around the eighteenth month, Snow (1977) found that mothers start correcting their children's speech both in terms of content and pronunciation. Furthermore, Rodgon (1979) found in her study of children's comprehension of questions that most questions addressed to eighteen month old children require yes-no answers. She also found that all children at this age were able to discriminate such questions from wh-questions and respond appropriately. By the age of two, the child is able to combine words to express semantic relations (e.g. agent, action).

At the beginning of the emergence of language, the child is very tied up with the "here and now" environment. The sentences he uses are very simple and involve objects and events that take place within his immediate personal experience. Most of his assertions are labellings of

events or objects. At that age, the child's speech seems to be mainly of a responsive type. This is not surprising given that the literature suggests that adult's speech to young children has been consistently found to contain a high proportion of questions (Snow, 1977; McShane, 1980). This prevalence of questions can be viewed as part of the caretaker's attempt to construct a conversational interaction with the child (Snow, 1977). Questions are a powerful means of turn allocation (Sacks, 1974). By the age of two and a half, children's language contains fewer instances of labelling. With an increase of vocabulary, the child's assertions become far more complex than simply labels of objects. As McShane (1980) has found, at the end of the second year, a "doggie" becomes "doggie on table" or "I like doggie". By the age of three, the child begins to further exploit the semantic potential of language to refer beyond the "here and now". By that age Ervin-Tripp (1977), found instances in children's language of recall of events, whether prompted or not, which made reference to potential events.

Another main category of speech acts found in child language at that early age is that of requests. In particular, the development of requests for action can be traced back to the early prelinguistic stage. From about the age of nine months, children's gestures and vocalizations can be interpreted with some reliability as intentional requesting schemas. Based on a detailed and careful observation of one child between twelve and sixteen months, Carter (1978) describes a range of different communicative schemata, including requests. One of the most common was the request for action. This was realized by an open-handed gesture towards an object along with a vocalization of an (m) initial monosyllable. Similarly, Halliday (1975) reports the use of

vocalizations such as (na) at 0;9-0;10 and (mnn) at 1;1-1;3 months, which he interpreted respectively as "I want this" and "Give me that".

Ervin-Tripp (1977) reviews a number of accounts of the early use and development of verbal requests. Early in the second year, the first requests are realized by combinations of gestures with names of desired objects and words such as "more", "want" and "gimme".

By their third year, children's language ability expands enormously and both their assertions and requestives become more differentiated and complex. Ervin-Tripp and Miller (1977) found at this age many instances of pretend play which were verbally defined and conversational episodes which were longer. Similar developments occur in the child's responses. As language matures, replies are minimized in length, being focused on the crucial element in question (Ervin-Tripp and Miller, 1977). At this age, children could usually give categorically appropriate replies to what questions and could answer with animate objects to who questions (Ervin-Tripp and Miller, 1977). However, all children had difficulty with how, when, where from and why questions. Indeed, most children require a full year to comprehend the above forms of wh-questions. Children's requestives are also developing. The children progress from the primitive "gimme" of the previous stage to more subtle and diverse requesting which is more characteristic of adult speech. As Ervin-Tripp (1978) reports, it is after the third year that one can see socially biased requests, embedded imperatives (e.g. "would you") and polite markers (e.g. "please", "could you") accompanying direct requests.

So far, no study concentrates on any other speech act category as it might be used in the child's repertoire. Regulatives and performatives

are relatively sophisticated language uses which, following the speech-act model, require fairly specific conventional uses of words to realize their intentions. For example, the criteria for performing a performative include: stating a claim, issuing a warning, or making a joke. The ability to perform these seems to develop only during the school years.

Parallel to the acquisition of speech-acts, the child becomes capable of using language for other diversified purposes. By his third year, the child is able to use language to initiate conversation (Ervin-Tripp, 1977; Keenan, 1978;) and maintain its flow by producing adequate and appropriate responses (Dore, 1977; Ervin-Tripp, 1979; McTear, 1985). The child also becomes increasingly able to control the information received by querying or by using tag constructions (Garvey, 1977; Berringer and Garvey, 1981).

CONVERSATIONAL COMPETENCE AND THE DEVELOPMENT OF CONVERSATIONAL MEANING

Apart from the need to learn more differentiated and complex speech acts, the child must learn to become a better conversationalist. In other words, he must learn to produce relevant discourse, to construct coherent sequences of dialogue and to adapt his speech to the listener's needs. Moreover, the child must be able to discern when the standing questions have been answered or the topic has been resolved and learn how to get attention and initiate a conversation. As Ervin-Tripp (1979) points out, a two year old cannot do the above, so that "jumping" properly into adult conversation, for example, is for him a very difficult task. Ervin-Tripp and Gordon's (1980) work on naturalistic

videotapes taken in four families, found that when other people were talking, 89% of the time the two year-olds just blurted out requests. But only 31% of the school age youngsters did that. The older children interrupted conversations by using polite markers or excuses. Moreover, they not only tried to get attention more often, but used more effective attention getters (e.g., calling out "Hey Joe", instead of just "Hey", etc.)

As already mentioned, another important ability that the child has to develop is the construction of coherent discourse. Participants in conversation rely on certain cohesive devices such as anaphoric reference (e.g. he, she, etc.) or discourse connectors (e.g. as a matter of fact, actually, etc.) to illustrate the relevance of one sentence to another. However, as McTear (1980) rightly points out, participants rely on more than surface markers of cohesion in their construction of relevant discourse. Utterances are related to another. Usually the first utterance sets up certain expectations as to what utterance will follow. Thus, a request for action predicts a response related to the request which can be either compliant or non-compliant. Responses are therefore inspected for their relevance in the light of the discourse expectations set by preceding initiations.

How then does the child develop the ability to understand one utterance as being related to another and to produce coherent discourse? At the beginning of language development, the child is too immature to keep track of coherence. His language is tied up to the immediate environment and it is usually the adult who provides the links from one utterance to another. By age three, we see one of the first instances of the child's attempt to set up expectations concerning the type of

utterance which follows a question. As Ervin-Tripp (1979) and McShane (1980) have found, the child replies to questions even when he does not understand what precisely is being asked. Thus, the expectation that a request must be followed by a response is present. As McTear (1985) points out in his review of the literature on the development of cohesion in conversation, one of the earliest cohesive devices used by young children involves repetition of all or part of the preceding utterance. Development from such immature to more adult-like conversational strategies has been investigated by Keenan (1974) and Keenan and Klein, (1975). As they report, the strategy of repetition was used at age two years and nine months as a means of responding to adult's questions. By age three, however, strategies such as substitution were used. McTear (1985) quotes the following example:

A: flower broken, flower

B: many flowers broken

At the same time, by age three, the children investigated by Keenan started using anaphoric pronouns instead of repeating preceding utterances. Ervin-Tripp (1978) reports the following developments in children between the age of two years and nine months and three years and six months:

(1) The appearance of auxiliary ellipses in responses. For example: "Mary was", "I did it".

(2) The use of pronouns in replies to refer back to previously mentioned nouns.

(3) The use of conjunctions to connect sentences across turns. Here, development reflects the cognitive difficulty of the relationships indicated. In particular, addition is the first to be expressed (e.g.,

and, also). This is followed by connectives denoting temporal change (e.g., then), adversative contrast (e.g., but, though) and finally condition. Furthermore, McTear (1985) found the use of because present in his daughter's speech at around age three. Between the ages of three and a half and four, both the children McTear investigated started using well, sure, anyway and otherwise as cohesive devices. However, the children did not use any discourse connectors judged to be more mature ones, like mind you, frankly, actually or as a matter of fact. McTear's belief is that these devices develop later on and are representative of children's language at school age.

The child's ability to link utterances and produce relevant discourse marks another major development in his language, the development of a more open conversational structure. McTear looked at the structure of the children's dialogue and found a development from the tendency to use more closed exchanges consisting of initiation and response sequences to the tendency to use more open exchange structures (where exchanges are linked by utterances with a dual function of responding to a preceding utterance and initiating a further response).

So far we have pointed to evidence that at age three, children are quite competent in their language usage. By that age, the child already has a good vocabulary and can communicate successfully with people in his immediate environment. As a conversational partner, however, he is still severely limited. The conversational exchanges he is engaging in are necessarily short and the cohesive devices he is using are not elaborated. Furthermore, the child often fails to take the perspective of another person adequately and to adapt his language accordingly (deVilliers & deVilliers, 1979). It is after the third year that we can

observe the beginnings of such developments.

The child's egocentrism has been investigated by studies on referential communication. Most of these have been influenced by Piaget's (1959) theory of egocentrism. Piaget (1959) himself has concluded that the pre-school child is egocentric. Because he cannot take into account the listener's perspective when structuring the content of his messages, his early communication is necessarily deficient. However, recent studies conflict with this position. Most studied children's conversations in naturalistic settings and found that children are able to take the perspective of another person much earlier than believed by Piagetians. For example, Shatz and Gelman (1973) tested children aged four and a half and found an ability to adjust their speech to the listener's demands. The four and a half year-olds treated two year-olds quite differently from adults. Speech directed to the two year-olds was devoid of any statements about mental states and any requests about complex information. The children's main goal was to get the two year-olds' attention to which end they employed speech which was of a repetitive kind, containing many attention getters and what-questions.

However, a point worth remembering is that the foregoing are not all or nothing abilities. Development of successful communication is a gradual process. As we saw, at four and a half years, we have the first conscious attempts to adjust the speech to the social context. Yet, children at this age still have problems. Spilton and Lee (1977) studied the speech adaptations of five year-olds to a peer listener's adaptations during free play. The authors found that the language used seemed very adaptive, but also that most questions occurring during the peer

interaction were of a highly general nature. As Spilton and Lee argued, the high frequency of general questions (which are not very predictive of an adaptive response) suggests that five year-olds might not be very competent as listeners and adopt that strategy in order to minimize the chances of unsuccessful communication. Of course, it may equally be the case that this strategy is the only strategy available in the five year old's language repertoire. Peterson et al (1972) studied the developmental changes in children's responses to three indications of communicative failure. Both four and seven year old children readily reformulated their initial messages when explicitly requested to do so by the listener and both failed to do so when confronted only with nonverbal, facial expressions of listener's non-comprehension. In contrast, only the seven year-olds tended to reformulate their messages in response to an implicit rather than an explicit verbal request for additional help (such as " I don't understand"). There was evidence that the four year-olds did interpret the latter type of feedback as a request for help, but did not understand what kind of help was needed.

CONVERSATIONAL MEANING: THE CASE OF INDIRECT AND NON-LITERAL UTTERANCES

As we have already pointed out, children must eventually develop the ability to go beyond the form of an utterance and to understand that a particular utterance can perform many different functions. Depending on the circumstances, children have to develop the ability to interpret an utterance in constative form, not only as a constative but also as a complaint, a question, an accusation, an attribution of negative qualities or possibly an invitation to contradiction. As we have argued,

in order to understand the communicative intent of an utterance, the hearer must be able to perform certain kinds of inferences concerning the other person's intentions and the appropriateness of the present context of discourse. Although much research has been done on children's language abilities, little is known of the ways in which children develop a concept of communicative intent and understand not only what is said but also what is implied. To be able to interpret the speaker's communicative intentions the hearer must have: (1) An understanding of the direction of discourse and of the mutual knowledge which underlies the context of discourse. (2) An understanding of the fact that the speaker performs a particular utterance with a given intention in mind. (3) An understanding that some situations are in need of an inference if communication is to be successful.

Let's examine in detail what the child must know in order to perform and understand the act of asserting successfully. The first condition is the "preparatory" condition (Searle, 1969). This condition states that: The device X is to be used only if the hearer is or might be in a position to understand the desired effect and the speaker believes that the hearer is in such a position. Translating the above condition in terms of the performance of assertions, the child needs: (1) A specific linguistic knowledge. This consists of understanding the conventional form of behaviour which is involved in giving something a name and treating that word thereafter as the thing's name (the linguistic assumption). (2) An understanding that asserting is a cooperative activity which is based on certain pragmatic presuppositions. In particular, if the speaker is using the sentence appropriately in that context, he must pragmatically presuppose that (a) the hearer is able to

perceive X or the state of affairs, (b) the hearer must know that X is the name of something, (c) the hearer must currently either attend to X or can arrive at X via the common ground of the discourse.

For producing and understanding literal-direct assertions, the above conditions are not problematic for young children. As we have already argued, two and a half to three year olds operate with those conditions and are able to both direct attention and refer to something in the external world. The capacity to acquire and direct adult attention develops during the nonverbal period (Atkinson and Griffith, 1977). Examples of children's assertions are also given by Ervin-Tripp (1978a). She analyzed the conversational exchanges of two and a half year-olds. In asserting "A battery, this is a battery. Look battery. Battery is Jiji's" (example given by Ervin-Tripp, 1978a), the child aims at making a reference about something in the external world and claiming that particular object belongs to someone else. By uttering "look", the child verbally attempts both to make sure that the hearer attends to the referred object and to establish that the object referred to can form part of their common ground. In that particular example, the conversation continues with the hearer who states: "get one, I'll play with that one." Here, the hearer continues the conversation and uses the word "one" to signal to the speaker that he attends to the same object referred to previously. From now on, this has become a part of their common ground.

In the case of indirect or non-literal assertions, however, the situation becomes far more complex. To recognize the presence of indirect or non-literal expressions, the child must not only make inferences concerning the other person's state, but also inferences about

what the present discourse context involves and what is appropriate or inappropriate. Moreover, he needs to infer that, under the particular circumstances, the speaker could either not merely be implying X (and thus the speaker is producing an indirect act) or that there is a certain recognizable relation in saying P and implying R (e.g. in metaphorical language). The child faced with such utterances has first to infer the literal or direct meaning of the utterance and then conclude that this reading is inappropriate in the present context. To understand the intended meaning, the child must search via the Maxim of Relevance for an interpretation which makes the utterance relevant to the particular topic or issue at hand.

Virtually all the developmental research on conversational analysis deals only with one limited aspect of pragmatics, namely forms of requests and their responses. Ervin-Tripp (1977) hypothesized that children's use of forms of requests progresses from direct imperatives (e.g. "Gimme cookies") to indirect requests based on conversational postulates (e.g. "Those look nice"). Although children seem to be better at comprehending than at producing indirect requests, recent empirical studies on the use of request forms have generally confirmed this prediction. Shatz (1975) examined two year-old's responses to direct and indirect requests from their mothers. She found no difference in the likelihood of compliance to direct versus indirect requests. It may be that the young children in this study did interpret indirect requests correctly on the basis of the context in which they were uttered. But it is equally possible that they were relying on nonverbal cues from the mother or only on parts of the request (e.g. interpreting an utterance like "Can you shut the door" as "Shut the door"). Bates (1976) also

examined the production of request forms by two to four year-olds interacting with their mothers. She found that virtually all such requests by children were either conventional commands, "Can I have" requests, or statements of desire (e.g. "I want that"). In a longitudinal study of two Italian children, Bates found that indirect requests based on conversational postulates do not appear until ages three and a half to four at least. As deVilliers and deVilliers (1979), Ervin-Tripp (1978) and Shatz (1978) conclude, two and three year-old children respond often to indirect commands or assertions as if they were direct ones. They also have great difficulty in understanding and producing metaphorical or sarcastic language. However, there are many requests which are labelled indirect requests which in fact are not difficult for the young children. For example, embedded directives (which fall usually under the category of indirect speech) are extremely explicit and thus are acquired early in life. Moreover, children as young as two years can respond appropriately to requests in the form "Can you ..." and even to requests in which the desired act is not stated as in "Are there any more cookies?" (Shatz, 1975). However, they also respond with actions to utterances which do not necessarily require an action. Thus, Shatz has argued that children operate with an action-based rule of the form "mother says-child does". In Shatz's (1975) discrimination experiment, children were presented with utterances containing: "can you+feasible act" in two discourse contexts: one following a series of directives and one following an information exchange. It was found that even in the information exchange context, children showed a bias towards action-based responses. It is, therefore, argued that older children develop away from this action-based strategy

by learning the appropriate linguistic and contextual markers for various illocutionary acts.

Question directives and hints are less explicit than embedded directives and in most cases they do not mention the desired goal, state or object at all. Consequently, their comprehension has to rest either on repeated conjunction with more explicit forms or on active inference by the hearer. As Ervin-Tripp (1979) argues, from age four on, the comprehension of complex indirect speech acts enlarges. However, McTear's (1985) study on two four year-old children did not find a developmental trend away from direct imperatives to more indirect forms. As he himself points out, this can be explained in terms of the particular context of the requests. Given that most of the requests were directed to a peer in play, one can expect direct imperatives to predominate. McTear found that both his children used some hints in requesting and that some of these hints displayed evidence of strategic ploys on the part of the speaker. At the same time, McTear was able to analyze the request strategy used by the children at different developmental periods. As he argues, complex conditions such as reference to the possible consequences of a request act develop late (around age five), whereas querying the need for the request or the action using a simple why question occurs earlier. Moreover, denial of obligation occurred early, whereas denial of willingness occurs late.

All these developments are of crucial importance for successful and cooperative communication. The changes that occur as the child matures are due merely to his enlarged understanding of the implications or requests regarding the needs of others and a willingness to gratify those needs. The key assumption underlying the present study is that because

this change depends on the child's ability to take the perspective of others, it must be considered to be more social than linguistic. This change, of course, may require considerable knowledge of the practical, social and technical facts needed to make a successful inference. Thus, as Ervin-Tripp (1979) rightly points out, we can expect variations in the rate of development because of these social factors. However, it is important to keep in mind that although by the fourth or fifth year children are able to use diverse syntactic forms, they still refer explicitly to their desires and goals when these are not obvious from the context. So the major difference between adults and children, as Ervin-Tripp concludes, "...is not diversity of structure nor diversity of social features - though the rules may increase in number of variables and in complexity with age - but systematic, regular unmarked utterances .." (Ervin-Tripp, 1979, p.188) which either do not refer to what the speaker wants or which do not show an ability to use the intentions of speakers in developing elaborated strategies as a means to a communicative goal. Ervin-Tripp (1979) concludes that by the age of four, children appear able to understand simple indirect forms and to use verbal strategies to achieve a goal. By the ages of five and six, they do not require reference to the desired goal in order to understand a complex indirect act and, by seven, they become able to operate above and beyond the level of words and to use language to anticipate social events.

To understand direct or indirect non-literal expressions, the hearer has to be aware of specific conventional agreements (rules) which are culturally used to refer to things (e.g. metaphors) and facilitate action interpretation in social exchanges. To understand non-literal

expressions, the child must be able to take the perspective of others and to view speech-acts addressed to him as intentional. He must also have a considerable knowledge of the social facts needed to arrive at the intentional goal. We hope to show that children are able to cope with non-literality after their sixth year, and that this ability continues to develop until adolescence when the function of social rules is fully recognized.

THE DEVELOPMENT OF THE CHILD'S CONVERSATIONAL ABILITY
IN THE LIGHT OF
THE DEVELOPMENT OF HIS SOCIAL UNDERSTANDING

So far we have discussed one aspect of the development of the ability to become good conversational partners. The emphasis has been on examining how the child understands not only what is grammatically said, but also what is conversationally meant (i.e., whether a particular act is an act of referring, predicating, promising etc.). Once we adopt the above framework for studying the interpretative process which occurs in conversational exchanges, we move towards studying social knowledge and social interaction. Interaction, in the abstract sense intended here, can be understood as a sustained production of chains of mutually dependent acts constructed by two or more agents, each monitoring and building on the actions of the other. In such an approach, we ask what necessary and jointly sufficient conditions must be met in order for that highly coordinated kind of interdependent behaviour to take place. In spelling out the conditions (e.g. mutual orientation, awareness of the interactional domain, means-ends reasoning, inferences of the probable

goal that the other's behaviour was intended to achieve etc.), we move towards studying language use which has the development of social understanding as its core.

Most pragmatists working in the area of child language assume an interdependence of language and social functioning. In particular, Ervin-Tripp (1981) writes: "...interpersonal control acts always involve both information about social assumptions and relationships, and information about desired acts or goals" (Ervin-Tripp, 1981, p. 208). Moreover, as McTear (1985) points out, "...one only has to consider the inability of children to unravel the temporal and logical sequence of events in a film intended for adult viewers or to understand the humor in an adult comedy show, to recognize the extent to which competent participation in adult interaction depends on a degree of knowledge of the world which is beyond the experience of the young child." (McTear, 1985, pp. 202).

However, there are very few studies which attempt to examine in detail the interdependence of language and social functioning. Flavell et al (1968) give an account of their experimental work which links referential communication and role-taking ability in children. Karmiloff-Smith (1979) investigated the use of the definite and indefinite article and linked the appropriate usage of such articles to the overall cognitive ability of the child to assess the extent of the listener's knowledge. Both sets of works concluded that children's use of language becomes socially more appropriate with age owing to an increasing sensitivity to the listener's perspective and an increasing cognitive ability to assess the other's state of knowledge. However, there is no study in the literature which attempts to examine the

development of conversational behaviour together with the development of social functioning. The present study sets out to do exactly this. It aims to spell out the main parameters of social functioning which are related to competent language usage and to examine how this relation works in everyday conversations.

When studying language in the context of social cognition, there are several important aspects of the child's socio-cognitive development which appear to be of importance. These include:

(1) the development of inferences about others and the ability to role-take. Here, we include: (a) the ability to attribute to other people inner states (e.g. intentions, beliefs), (b) the understanding that other people's inner states may be different from yours, (c) the understanding of "agency" and human action (i.e. means-ends relationships, consequent and antecedent acts and goal directed behaviour).

(2) the ability to engage in inferential reasoning: Here, we include: (a) the ability to understand that a particular situation is IN NEED of an inference, (b) the ability to successfully perform an inferential act and arrive at the implicit information or the implicit intentions of the speaker.

(3) the understanding of social rules and social contexts: Here, we include: (a) children's reasoning about social rules and social contexts, (b) children's knowledge of usual sequences of events and roles.

(4) knowledge of certain social conventions: that is knowledge of certain conventional uses of words (e.g. metaphors).

Although not much research has been done on the development of these abilities in relation to language understanding, children's social development has been the subject of many studies.

Following the Piagetian position, it was assumed that children had to be capable of concrete operational thinking, before making any kind of inferences about another person's inner state. The classical example of that position is the belief that children below the age of seven or eight typically make the egocentric error of attributing their own point of view to a doll. This position, however, has been challenged by researchers who worked from within the Piagetian framework. Bryant (1974) has found that if you change the classical Piagetian designs and make sure that memory controls are made, children as young as four can make certain kinds of inferences. Shatz (1975) has argued that children do understand the perspective of the other person if the situation is more familiar and relevant to them than the classical "mountain" experiment.

The criticisms of the Piagetian designs generated new research designs which aimed at investigating the social abilities of children as young as three years old. These new designs have marked a shift in the ideology of studying social interaction. As Shatz (1975) argues, the experimental paradigms used so far for assessing children's abilities in interactional contexts (i.e. the sociological and the Piagetian paradigm) have failed to capture the dialectics of subject to subject interaction. However, children's social knowledge is not acquired independently of their social actions. We, therefore, do not need to study only the development of social knowledge, but also the social development of knowledge. We need to concentrate on the interactional context which

presents to the child occasional discrepancies from the behaviour he expects from others. These discrepancies provide the child with continuous corrective feedback about the interpretations he makes of the other's behaviour and his inner states and they motivate him to attempt a reassessment.

REVIEW OF THE SOCIAL COGNITION LITERATURE IN RELATION TO THE SOCIAL
PARAMETERS OF LANGUAGE USAGE

(1) The development of inferences about others: There is now evidence to support the belief that the ability to attribute inner states to other people develops quite early in life. As Keasy (1979) has shown, three and four year-old children ask why questions which emphasizes the fact that they start concentrating on the psychological motives of others. Lambers and Loss (1980) found that in a familiar and highly motivated natural setting, three year-old children make few errors regarding the other people's feelings. In her study of the representation of emotion, Shields (1985) demonstrated that three year-old children operate with an implicit two phase model (steady versus upset emotional states) which begins to be more differentiated at age five. This claim is in agreement with Flavell (1974) who argues that a four year-old child shows some limited knowledge of some sort of inferences about other's emotional states, especially if these are simple (i.e., sadness vs happiness, or goodness vs badness).

Flavell (1968), however, asserts that a distinction should be made between the child's ability to understand intentions and his ability to understand motives. In fact, as Keasy (1979) argues, the concept of

intentionality and the concept of motive seem to follow different developmental sequences. The concept of motive emerges earlier. Whereas the concept of "motive" deals with what a particular motive behind an act is (e.g. bad or good), the concept of "intentionality" deals with whether the action was accidental or motivated. As Keasy argues, children at the age of three already seem able to differentiate between good and bad motives, and the concept of bad is learned before the concept of good. In contrast, it is not much before their sixth birthday that children seem able to differentiate clearly between accidental and intentional events and attribute to people subjective responsibility for their actions. This claim is consistent with Fein's (1972) findings which showed that although four year olds were able to perceive the causality of social pictures, this ability increased with age and accurate statements were achieved only after the age of six.

It is reasonable to assume, then, that before the age of five children have a notion of a psychological force, but that this notion is global and undifferentiated. At the age of five, children begin to make accurate distinctions between the possible causes of the social phenomena and to understand the concept of "intentionality". They consequently become increasingly able to differentiate between inner-subjective states and concrete behaviours and to understand the correct motives, thoughts and intentions which underlie overt behaviour.

The empirical work on the study of role-taking abilities can be divided into two main paradigms. The first is Piaget and Inhelder's (1956) paradigm of visual-perspective taking. The second is set by Flavell (1968), who investigated situations which depend upon the

child recognizing and accommodating to the thoughts, feelings and intentions (as well as the percepts) of another person.

Piaget and Inhelder (1956) report a number of studies of the coordination of visual perspectives. One of them, the "Doll and Mountain" experiment, has since been regarded almost as an operational definition of spatial egocentrism. In this experiment, the child is presented with a three dimensional model of three mountains. He is then asked to identify the visual perspective of a doll which was placed in several different positions from those of the child. Piaget and Inhelder (1956) distinguish three stages of the children's performance in the experiment. In the first (between approximately four and seven years), the children responded egocentrically. They tend to attribute their own perspective to the doll. Seven and eight year-old children are in a transitional stage where errors are made, but are not predominantly egocentric. However, it is not until nine or ten years of age that children perform without errors. In the first stage, it seems that children lack the knowledge that the appearance of objects is a function of the spatial position from which they are viewed. In the second, they have this knowledge, but only in the third stage do they acquire the ability to determine what that appearance would be for any specific viewing position.

We have already mentioned that the classical Piagetian framework for studying role-taking abilities has been criticized as being inappropriate for young children. Recent literature suggests that the ability to coordinate visual perspectives is a function of the particular task presented and that, in some circumstances, non-egocentric responses may already be elicited in three or four year-olds. Shatz and Watson (1971)

used a task similar to that of the "Doll and Mountain", along with another in which the child himself moved and had to predict the view from his new position, the object being covered during the move. With three and a half and six and a half year-old children, the former task proved very difficult, yet the latter unexpectedly easy. Shatz and Watson (1971) suggest that in the former task the visible presence of the object seen by the child may make it harder for him to detach himself from it in order to appreciate the other's point of view. They found that if the easier task was done first, it facilitated performance on the "Doll and Mountain" type of task. Huttenlocher and Presson (1973) obtained similar results on a task in which the child himself moved and had to predict his new view. Fishbein and Nigel (1974) have raised an interesting point in relation to the Piagetian tasks. They argued that one should distinguish between social and conceptual aspects of perspective taking tasks. Whereas conceptual aspects concern the inferences involved in the construction of the other's view, social aspects concern the child's tendency to select his own point of view, acting as though the instruction made reference to himself rather than to another person or the listener. Given such a distinction, it becomes clear that our main concern is primarily with the social aspects of these tasks rather than with the conceptual one.

Moving even further down the age scale, a group of studies by Masangkay, McCluskey, McIntyre, Simms-Knight and Flavell (1974) demonstrated the capacity for some basic inferences about visual perspective in children as young as two and a half years old. For example, the child at this age can understand that when a card with a different picture on each side is interposed between himself and another

person, that person can see the picture which he himself cannot. Thus, it is safe to argue that from early infancy, the child appears to show some sensitivity to alternative visual perspectives, but as Light (1979) points out, such sensitivity will probably only be manifest in very simple situations where the instructions are explicit.

Flavell (1968) conducted a wide-ranging study of role-taking in middle childhood and adolescence, providing valuable descriptions of the nature and pattern of acquisition of various abilities subsumed under the heading of role-taking. He divided the tasks used into two types: those involving a straightforward inference which might be correct or incorrect, and those in which there is no "right answer", but where the interest is in the degree of subtlety of the child's role-taking in the situation. The latter category involved all social guessing games which contained the potential infinite chain of inference, "I think that he is thinking that I am thinking ...". Most of the tasks Flavell used fell into the category in which there was not a "right" answer. For example, he used a picture story composed of seven pictures. When the child had "told" the story depicted, three of the pictures were removed. The sequence was so constructed that the remaining four pictures still made a meaningful story, but one which was significantly different from the original. The youngest children (seven year-olds) grasped the original 7-picture story and could express it easily. But, for the 4-picture story, the seven year old's stories included various degrees of contamination from the original story. Flavell (1968) also investigated communication aspects of role-taking. He argued that effective

communication depends upon the child taking an accurate measure of the listener's role attributes and then actively using this knowledge to shape and adapt his messages accordingly. In one task, the child was asked to give instructions to another who was blindfolded in order to see whether he adapted the content of his messages accordingly. In another task, the child had to tell a story to a pictured four-year old child and then to a pictured adult. Flavell remarks that the seven year-old children showed remarkable competence.

The main problem faced by any researcher when a child fails on a task is to decide why the child fails. It is often difficult to decide whether the child does not know that others have different viewpoints (what Flavell has called the "existence" element), whether he is unaware that this is a task which requires this particular kind of knowledge (the "need" element), or whether he is simply having difficulty in working out the other's perspective (the "application" element). As Flavell (1968) has pointed out, it might even be wrong to conclude that the child considers his message to be adequate to a listener who cannot see. It is possible that the child fails to pay attention to this listener and thus fails to see the need to adapt his messages to his needs. An apparent disparity between underlying abilities and actual performance has been noted in other studies. Levine and Hoffman (1975), in their study of empathy in four year-olds, point to a marked gap between the availability of inferential skills and the use made of them. Acredolo (1977) suggests that the period around four years of age may be one in which the gap between the ability to coordinate perspectives and the spontaneous use of such ability is particularly wide. She makes this suggestion on the

basis of a study in which prompts and reminders were found to be uniquely effective in improving performance at this age.

The general picture which emerges from the studies is that some basic forms of role-taking emerge very early in childhood. But these are initially fragile, situation specific and heavily dependent upon contextual and instructional cues. Thus, preschool children are capable of cooperative behaviours (Garvey, 1973) ^{& Hogan} and speech adaptability to listener's needs (Shatz and Gelman, 1973), but as Light (1979) points out, : "... such children undoubtedly do behave egocentrically in a host of ways, but their egocentrism is far from complete and does not constitute nearly as tight a strait-jacket as has often been supposed." (p.25).

THE UNDERSTANDING OF THE SOCIAL CONTEXT AND ITS CONVENTIONS

From an early age, the developing child participates in social systems - be it the family, the school, or the peer-group. Nevertheless, little research has been done on the development of the individual's concepts of social groups and systems of social interaction. One reason is the emphasis placed by students of social cognition on the moral domain of social interactions. Shatz (1975), Damon (1977), and Turiel (1973), however, emphasized the need to distinguish clearly the development of moral vs the development of social issues. They have thus concentrated on examining the development of social issues and their experimental paradigm emphasizes the need to assess the child's abilities in interactional contexts. Their view assumes that the child's social development is influenced not only by specific others (as the learning

tradition will postulate) but also by interactions with patterns of social behaviour and social organizations. At each developmental point, the developing child must be viewed as constructing a workable social theory (a belief system) that is consistently modified in content and structure by the social environment. By observing social action, by communicating and being communicated with, the child gathers and creates social experience and social information. While he constructs and reconstructs social beliefs, the social environment acts and reacts in ways that provide essential social information and structure.

Work on the understanding of social rules and social structure has identified four main stages of children's reasoning about the social context and its rules. Shatz (1975) and Damon (1977) found that three and four year-olds reason in ways specific to the act and situation. Damon's interviews with children probed their views about violations of sex roles, table manners and stealing. The interviews suggest that rule-following at early ages is based on personal desires which justify compliance or noncompliance. After the fourth year, children acquire a global rationale of rules and social uniformity. However, this rationale consists of understanding what is good and bad without supplying any causal justification. In their sixth year, children become aware of social conventions as arbitrary uniformities that function to coordinate the actions of individuals within a social system. Thus, a clear distinction between conventions and principles is recognized and conventional violations are judged as being less serious than principle violations. However, it is not until the seventh year, that the organizational function of social rules is recognized. Violations of

conventions are seen as clearly less serious than principle violations, but the social impact of conventional violations is fully understood.

As we pointed out in the beginning of the present chapter, besides the understanding of social rules and social conventions the child must acquire general social knowledge. In particular, he must acquire event knowledge and knowledge about certain social categories (e.g. status, sex roles, etc.). How does the recognition of children's event knowledge enhance our understanding of children's communicative competence? Several different points come to mind. First, the notion of a sequentially based representation is an appropriate way to characterize the conceptual underpinnings of some of the linguistic phenomena of interest. Some of the child's communicative knowledge is inherently sequential in nature. For example, the rules for maintaining a conversation are based on the ability to deal with temporally contiguous speech events. Indeed, conversational settings, such as the telephone setting, consist of well-defined familiar sequences, such as starting a conversation with "Hello", then determining the identity of the caller and the nature of the call, followed by a variable length of discourse in which turn-taking is closely maintained, and concluding by saying "Good-bye". Other linguistic phenomena are linked with event knowledge indirectly. For example, Ervin-Tripp (1978) reported that children drew heavily upon their practical reasoning, their understanding of common event sequences, to infer the appropriate action response to an indirect request. If the mother says: "Is the door open?" when she has her arms full of grocery bags, a child would open the door regardless of whether or not he understood the indirectness of the question. In other words, the child will open the door just because the context dictates for him to

do so regardless of the language used. Ervin-Tripp suggested that such redundancies in natural context contribute to a child's mastery of indirect requests.

Most researchers agree that young children have acquired some sort of general understanding of familiar sequences of events by the age of three and a half or four years. Nelson (1981) concluded that script knowledge in young children is general in form, temporally organized, consistent over time and socially accurate. Her conclusions are based on a number of studies with children ranging in age from three to eight years. The children were asked to tell "What happens if..." they engaged in familiar activities such as eating dinner or going grocery shopping. Even three year-old children were able to relate reasonably accurate sequences of events. According to Nelson, a child moves from a direct representation of social relationships to an increasingly more general, abstract and static representation. Similarly, Goldman (1982) interviewed six, nine and twelve year-old children about their views on being friendly, getting a dog and doing chores. All the children had mastered the relevant information and the sequence of events leading to concrete situations (e.g. getting a dog). However, on more abstract situations (such as friendship), the younger children did not respond accurately. But, as Goldman pointed out, what most older children knew about friendship was found to be additions to what most younger children knew. "Thus developmental differences in the content of the knowledge appear to reflect an increase in the amount and variety of information expected by the majority of children within each age group." (Goldman, 1982, p. 301).

FORMULATING SPECIFIC EXPECTATIONS ABOUT SOCIAL LINGUISTIC UNDERSTANDING

(1) A developmental descriptive model. The primary research objective is to arrive at a "developmental descriptive analysis". The intended output would be a fairly detailed picture of what develops when in the domain of social knowledge and communicative competence. The present study does not address any causal-analytic questions. Nor does it intend to make statements regarding the order of such developments. In other words, we do not wish to imply that social cognition is the prerequisite of language understanding or vice versa. To suggest that would simply be to misunderstand the complex interrelation between social cognition and language understanding. Moreover, we need to avoid the circularity decried by Campbell (1979), that is the use of facts about the nature of children's language to infer facts about social development that are in turn used to explain language development.

Our main beliefs are that social knowledge and communicative competence are related, and that developments in one area facilitate developments in the other. At the same time, the distinction between linguistic and social knowledge is not clear cut. As Gumperz (1972) argued, social concepts such as status and role are manifest only in the linguistic system. Following this, Ervin-Tripp (1977) observed that language may introduce social distinctions to a child. It may serve as an "instructional milieu for learners regarding the major social dimensions and categories of groups they join." (Ervin-Tripp, 1977, p. 152). Bowerman (1981) concluded : "To the extent that socially important concepts can be inferred only through communicative interactions, and have no direct non-linguistic correlates, acquisition

of them could not take place independently of language." (Bowerman, 1981, p. 153). To conclude, we can say that as children acquire the system of language based knowledge represented in the notion of communicative competence, they draw upon the totality of their social experiences.

(2) A developmental analysis of linguistic interaction The review of the social cognitive research and the research on children's language leads us to a developmental analysis of linguistic interaction. It also helps us to formulate specific expectations regarding social linguistic understanding.

The ability to engage a peer in a coherent conversation is documented in two year-old children (Garvey and Hogan, 1973; Keenan, 1974). However, it is limited and depends on the communicator's skills in placing his language in the child's world. The child lacks the appropriate skills for regulating interaction with others and has problems taking another's perspective. By age three, children's conversational acts become enormously sophisticated in several ways. Grammatically, their structures are no longer telegraphic; their speech contains most of the function words (articles, conjunctions, prepositions, etc.) and grammatical morphemes (for inflecting verbs for tense, etc.) in the language. Functionally, the variety expands considerably beyond the assertions, questions and commands of approximately a year before. However, the most significant development in terms of language acquisition is the emergence of the control of form and function (Dore, 1977). At about that age, children start to realize that form and function are not isomorphic; that is they understand that the same form can be used to convey several different functions and that the same function can be conveyed by different forms. To learn that different

grammatical forms can be used to communicate a single intent, the child must first understand that participants have different intentions to communicate. The child must also somehow acquire rules or conventions for deploying grammatical knowledge in actual conversations. This pragmatic (as opposed to grammatical) knowledge involves beliefs about how to accomplish various goals and other aspects of social episodes through the use of language. It also involves an active interpretation or inference concerning the action goals or the conveyed intent of the messages.

This "inferential" perspective which helps the child see conversational acts as accomplishments of social episodes is present at about the age three. At that age, the child starts attributing inner states to other people. However, he lacks the social cognitive perspective required to view conversational acts as steps in a plan for the accomplishment of specific goals. Although he has a notion of psychological states, the psychological and physical aspects of behaviour are frequently undifferentiated and the ability to form causal schemata has not fully developed. Indirect speech-acts are thus understood only if these can be directly inferred from the present context of discourse. At the same time, it is believed that there is a considerable difference in the "uses" of language by adults and children when they communicate. Given that the child at this age is an immature conversationalist, the adult who interacts with him has to employ those speech-acts categories which facilitate conversational participation and maintain conversational flow. Thus, with the youngest children (three and four year-olds), mothers are expected to direct action and ask questions which help to control and direct conversation. However, the functions that language

performs change for older children. Six and seven year-olds are active and equal conversational partners who are able to select, control information received and direct discourse.

We expect young children to have similar problems when we examine their communicative effectiveness. As we have pointed out, young children's role taking abilities are poor. Consequently, the main limitation children will have in sustaining everyday communication will be to clarify their intentions and to realize that their perspective is not always clear to others. Young children will frequently include in their talk speech which is incomprehensible to a listener or which does not account for his perspective. Five year-old children, however, will not.

By age four, children understand simple indirect speech-acts. However, it is not until the end of the fourth year that they can understand complicated indirect speech-acts (e.g., hints) and not until age five do they understand the conversational meaning of utterances which do not make explicit reference to the desired goal. This is not surprising if we consider the evidence from the social-cognitive research which supports the belief that children at that age begin to make accurate distinctions between the possible causes for the social phenomena and understand the implications of human agency.

To understand direct or indirect non-literal expressions, however, the hearer needs to be aware of specific conventional agreements (rules) which are culturally used to refer to things (e.g. metaphors) and facilitate action interpretation in social exchanges. The ability to understand non-literal expressions requires the ability to take the perspective of others as well as the ability to view speech-acts

addressed to you as intentional acts. Moreover, it requires a considerable knowledge of the social and practical facts needed to arrive at the intentional goal. To understand complex forms of conversational implicatures, the child must operate with specific conversational principles (e.g., the principle of relevancy or cooperation). However, he must also assume that although at specific points in discourse, talk does not appear to proceed according to these specifications, the principles of conversation are nonetheless followed. It is only by making the above assumption, that the child will make inferences about what is meant rather than what is said. Children become aware of social conventions and understand their significance in regulating social interaction only after age six. Thus, it is believed that children will be able to cope with non-literality after their sixth year and that this ability will continue to develop until adolescence, when the function of social rules is fully recognized. However, it is important to note that it is reasonable to expect variation in the rate of development in coping with complex forms of language because of the social and technical factors involved.

CHAPTER 4

METHODS

(1) Aims of the present study

As we have already pointed out, the primary aim of the present study is to investigate conversational competence. The approach adopted is pragmatic. It emphasizes (i) the importance of taking into account the social context in which language occurs, and (ii) the use of language - the communicative functions it performs. The acquisition of language is viewed as one aspect of the growth of effective communication and social functioning. When acquiring language, children do not merely acquire its grammar, but also knowledge of how the adult community uses language and how language structures its social life.

This study aims: (1) To investigate the kind of social functions language performs at different points in the child's development. Here, we are interested in exploring the young child's ability to use language to make reference to objects, to make requests, to assert and to initiate conversations. Furthermore, we are interested in examining the degree to which children at different developmental points are competent in producing successful speech-acts and coherent discourse. For example, we are interested in how successfully children at different ages understand the listener's perspective and in how ably they direct their speech according to his needs. (2) To analyze the kind of interaction children at different developmental periods are able to engage in. This gains special importance in light of (1). (3) To examine when and how children begin to understand the "conversational meaning" of an utterance. The aim here is to understand the interpretative process which occurs in conversational exchanges. The interest lies in analyzing the development

of linguistic communication with a focus on those inferential abilities which help young children to see conversational acts as accomplishments of social episodes. (4) Given the belief of the present study that conversational competence is closely related to social functioning, we also aim to investigate children's performance on certain socio-cognitive tasks. We will attempt to relate the children's socio-cognitive abilities to their abilities as competent conversational partners.

EXPECTATIONS OF THE PRESENT STUDY

The present study's underlying assumption is that the development of communicative competence goes hand in hand with the growth of social awareness and social sensitivity. However, as we have already argued, we do not wish to account for language development solely in terms of a socio-cognitive theory. What the argument of the present paper boils down to is that there are interesting correspondences between socio-cognitive acts and the linguistic acts that a child acquires. We are therefore interested in showing that language functioning is only one aspect of social functioning and that language development is best seen as being one aspect of the growth of general social understanding.

Given that the study is observational, specific hypotheses are not made. The object is first of all to look and see what is there in children's language use. By analyzing their problems and development, we intend to offer ~~at~~ a developmental analysis of linguistic competence. We view these problems within the general context area of the child's emerging social understanding. Using independent socio-cognitive measures, we then attempt to explore whether the child faces similar problems in his social functioning.

METHODOLOGICAL CONCERNS OF THE STUDY

In order to investigate conversational behaviour and social functioning, the design of the present study should be one which has several important aspects. Firstly, we need a design which permits the investigator to arrive at a detailed analysis of what children do with language and how they do it in a social context. The design most appropriate for the present purposes is an observational one aiming at exploring language development and use in a natural everyday environment. However, understanding conversational interaction necessitates a clear picture of both verbal and nonverbal behaviour. Nonverbal cues (e.g. eye-to-eye contact) signal important messages in adult conversational interaction. With young children, moreover, the recording of nonverbal behaviour is very critical. Nonverbal behaviours are not just an accompaniment of talk but often, and particularly at an early age, an alternative to talk (Bates et al, 1979; Ochs, 1979; McTear, 1985). As McTear (1985) has pointed out, many of the children's attention-getting and attention-drawing devices are nonverbal. It is often the case that the child points or touches the mother to direct her attention and uses gaze to establish eye-contact with her. These devices are sometimes used together with verbal ones, but are often used as substitutes. Consequently, to omit them would be to overlook important aspects of the children's conversational abilities. Furthermore, to pick up and understand the presence of indirect and non-literal speech, we often have to take into account both the context of the speech and certain nonverbal devices used to explicate the nature of the utterance. Thus, we need a videotaped documentation which helps us to assess the

significance of the discourse context. This is vital for assigning functional meaning to our conversational data.

Secondly, given that the purpose of the present study is to take into account developments in social understanding, as well as developments in language understanding, the situation for analysis must be one which allows the investigation of both these understandings. In other words, the methodology which must be employed should take into account the social setting where both language and social functioning take place. To get a lifelike, but still structured, situation, the selected task is a game task. We thus videotaped conversations that occur when children play with an adult. The game requires that the two players create the rules whereby they shall play. To succeed they must cooperate by using language. By analyzing the beginning and the end of the game interaction, we can study both the ways in which participants establish and structure their discourse and the ways in which they arrive at agreements about social rules and social interactional patterns.

Two related problems are relevant here. The first concerns the extent to which the present design provides a representative picture of children's general conversational abilities. The second, is concerned with the ways in which the data are collected and the extent to which these might affect the naturalness and spontaneity of the observed behaviour. The first concern raises sampling problems. On the one hand, there is the issue of the degree to which participation in a game will elicit representative conversational behavior. Clearly, any situation chosen will have its intrinsic biases. The game situation was chosen both because children are familiar with such a situation and because it necessitates a considerable amount and variety of conversational

behavior. On the other hand, there is the question as to how representative the performance of such a small group of subjects can be. This may be a problem, but at this early stage in research, a detailed analysis of a relatively small sample of the children's language use is preferable to a more superficial analysis of a larger sample where many aspects of conversational behaviour will necessarily be overlooked. The second question concerns the extent to which the data can be considered as natural or spontaneous. To overcome such problems, all children who took part in the present study were recorded in their nursery. The camera was placed in one corner of a room and most children were unaware of its presence. To create an even more natural situation, the mother who was chosen to play the game with the child. It is believed that children feel more relaxed when playing with their mother. At the same time, her involvement should increase their chance both to draw on their ordinary repertoire of behaviours and also become meaningfully involved in the situation so that their behaviour would be representative.

Thirdly, it was felt that the game situation was not sufficient for the investigator to infer the children's social awareness and social sensitivity. In order to arrive at a representative picture of the children's social development which is independent of performance in the game task, all children were assessed on three role-taking problems. Performance on these problems helps the investigator to examine the children's development of social understanding independently and then to explore its relationship to a naturally occurring interaction. At the same time, such tests help us to examine individual differences in social functioning within the same age group. This is especially important given the evidence that age has been suggested to be helpful but yet not a predictive variable for social development.

GENERAL PROCEDURE OF THE PRESENT STUDY

(1) Subjects

The children were selected from four age groups. There were (a) five children aged 3.6-4.0, (b) five children aged 4.6-5.0, (c) five children aged 5.6-6.0, and (d) four children aged 6.6-7.0. The mean age of the first group was 3.7, of the second group 4.8, of the third 5.7 and of the fourth 6.9.

In the first two groups there were 3 boys and 2 girls. In the third group there were 3 girls and 2 boys and in the fourth 4 boys. Originally, the fourth age group had five children. However, the scores of the child in the last age group were not included in the final results. For most of the recording sessions, the mother was the one to talk and this child, aware of the camera, became camera shy. It was thus felt that his performance could not be representative of his true abilities and it was therefore not included in the present analysis. All other children had no problems with the game situation or the social tasks.

Three children were videotaped in their own houses rather than in the nursery. Since the observer came to their house and set up the camera in front of them, they were fully aware of being videotaped. However, they did not appear to be unduly affected by the presence of the camera. From time to time they looked in the direction of it, but otherwise they ignored it and got on with their play. According to the mothers their play did not differ substantially from other occasions when they played together without the presence of the camera.

All the children but one were selected from a particular nursery located in the middle class community of Laguna Beach, Southern California. One child was selected from a nursery in a community near Laguna Beach. The nursery is situated in the Irvine university campus and serves mainly university students. The child's parents were Japanese students at Irvine. However, the three years and six months old child was born in United States and had a good grasp of the English language.

All the subjects were volunteers. The observer composed several leaflets which were distributed to all the mothers at the nurseries. The leaflets explained the purpose and the methodology of the present study. The mothers interested in becoming part of the study were asked to make an appointment with the nursery coordinator.

(ii) The recording sessions

The recording sessions took place, in all but three cases, in an isolated room in the nursery. The observer had set up the camera before the child and the mother came in. As soon as the mother and child had entered the room the observer explained the purpose of the interaction and left the room. The length of the recording sessions varied with each individual mother-child pair. The average length of the sessions for the first two age groups was 20 minutes and for the last two age groups 35 minutes.

After each pair had finished the game the mother was asked to come to an adjacent room to inform the observer. Immediately after, the observer met the child and played with each child for about an hour. After this first contact, the child was asked to participate in the three socio-cognitive tasks. The mother was encouraged to be present, and most

mothers were in fact present. However, four of the mothers had to go and the socio-cognitive tasks were played without their presence.

The children's performance in the socio-cognitive tasks was recorded. the recording sessions for the socio-cognitive tasks lasted for approximately 30 to 40 minutes.

(iii) The Game Situation

The game was a board game with unknown rules. As we have already pointed out, the aim of the mother-child interaction was to succeed in cooperating by using language in order to arrive at an agreement about the rules of the game and play it. The board game was designed by the observer. It was, however, very similar to a popular game played in the United States which is called "Candyland". It was believed that using a design for a game which was somehow familiar to most children will make the situation less stressful especially for the younger age group. All children were familiar with "Candyland" and had played it at least once. Each mother-child pair was presented with a 14"x 23" game board which represented a road composed of a series of coloured squares. The children had to snake their way from the beginning to arrive at a goal (a box of candies). There were several forks in the road (one was leading towards the goal and the others leading off the board). In the course of the journey the children encountered several potential threats (e.g. wild animals and witches). The complexity of the game varied according to the child's interpretation of these threatening objects (See Fig. 1).

Along with the board the children were handed: a square cube with different colours in each side (could be used as a dice), a cutout figure of a key (could be used to open the door for the candies), a cutout

figure of a sword (could be used for protection from the animals), and a toy pig and cow. These objects were not necessary for the game. Their employment as parts of the game was up to the individual child.

FIG.1 THE BOARD GAME

THIS IMAGE HAS BEEN
REDACTED DUE TO THIRD
PARTY RIGHTS OR OTHER
LEGAL ISSUES

Two adult pairs were also asked to perform the same task. Their interactions were recorded and transcribed in the same manner as the children's. This was done to provide a standard for evaluating the children's performance on this new task.

(iv) Transcription Rules

All the videotapes of each mother-child pair were transcribed by the observer. The basic transcript included information about both the verbal and the nonverbal behaviour of the participants. The behaviour of the child and the mother was presented side by side in parallel columns. Turns were thus separated in individual participants columns. Fig. 2 represents a portion of the actual transcript and its format.

FIGURE 2 EXAMPLE OF THE TRANSCRIPT

CHILD		MOTHER		CONTEXT
<u>Non-Verbal</u>	<u>Verbal</u>	<u>Verbal</u>	<u>Non-Verbal</u>	
1. Looks at M.	1. We are to play it.		1. Looks at C.	M=Mother C=Child
2. points at board		2. Um	2. Looks at board comes to C.	Mother and child sit around the
3. Expressionless		PAUSE	3. Looks at board then at	table in the nursery and
4. points at board	4. (U)		4. Leans, looks closely at	the game interaction

FIGURE 2 (continued)

CHILD		MOTHER	CONTEXT
<u>Non-Verbal</u>	<u>Verbal</u>	<u>Verbal</u>	<u>Non-Verbal</u>
5.Watches M.		5. We can go here.	5. Points at has just route on board begun.
6.Smiles, points at at board	6.Brown (WH)		6. Looks where C. Points
7.Watches M.		7.Brown!YES	7. points at brown square
8.Looks close at board		8.And <u>this?</u>	8.points at red square.
9.Looks at M.	9.Red	9.//Red	9. Looks at C. smiles.
10.Looks M.	10. Gre::en		10. Looks at board
11.then at	11		11. looks at C., nods

The advantages of using such a format for children's transcripts are twofold (Ochs, 1979). First, the reader can see more easily the prior verbal behaviour of the child. In interpreting the child's utterance the reader of a transcript can assess its place with respect to what the child has been saying or doing as well as with respect to the talk or behaviour of the other speaker. That is, the present format provides greater access to the stream of behaviours that the talk of another may have interrupted. In this way, the researcher may assess whether the child's behaviour is contingent on the talk of another's or whether it is

contingent on both or neither. Second, several studies (Keenan, 1975; Keenan and Klein, 1975) which documented the development of discourse coherence of twins (aged 2;9) over a period of one year, showed that young children link their utterances to their prior talk before linking them with the speech of others. So, verticality within each speaker column encourages such kinds of discourse links. Further studies of children at the one-word stage (Bloom, 1973; Keenan and Schieffelin, 1976; Atkinson, 1979) indicate that the expressions of a single proposition frequently cover the space of several utterances. This process may be thus masked in a classic vertical script format.

A third column, near the participants' columns, provided the reader with specific information about the general context of the discourse. It is believed that this column is particularly important in understanding the presence of indirect or non-literal expressions.

The mother's column was added on the right hand side of the child's column on purpose. In this way, transcription biases do not coincide with a priori cultural biases (i.e. the mother as the competent language user who controls and dominates discourse).

As the above example indicates, behaviours are numbered sequentially as they occur. Behaviours are numbered for each page of transcription. Furthermore, as Fig.2 shows, behaviours that occur at the same time by two different participants are numbered by the same number. This system is useful in classifying different behaviours and in showing clearly to the reader the exact overlap of nonverbal with verbal behaviours (For example, the child's nonverbal behaviours 10,11 which occur with a single utterance).

Certain symbols were used to describe nonverbal actions and frames, as well as matters of timing. These symbols are explained in Appendix 1.

Specific procedure of data analysis

The transcripts were analyzed in two ways. First, a language analysis was carried out. However, in order to examine how language is placed in the general interactional pattern of the participants, a socio-interactional analysis was performed.

LANGUAGE ANALYSIS

The utterances of both the child and mother were coded in relation to their function as speech-acts. A special note was made as to whether the utterances performed a direct, indirect or non-literal function. In order to investigate how good communicators young children are, the children's assertions were isolated and their degree of relevancy and cooperation was examined.

(i) Speech-acts analysis: The utterances of both participants were coded according to Bach and Harnish's classification system. Their system includes six major classes of functions : ASSERTIVES, REQUESTIVES, RESPONSIVES, COMMISSIVES, EXPRESSIVES, and ACKNOWLEDGEMENT. However, given that the particular study is dealing with children's language, whereas Bach and Harnish's system is derived from adult's language, the classes were subdivided into a total of 20 highly differentiated subclasses of conversational acts. Part of Dore's (1977) system was used to arrive at the 20 subcategories. The actual system used in the present study is quite different from Dore's due to the poor inter-observer agreement that was obtained with Dore's original system. Table 1 below, shows the major classes with their subdivisions together with the definition of each class.

TABLE 1 SPEECH ACTS CLASSIFICATION

<u>ASSERTIVES</u> : reports facts, states rules, convey attitudes, etc. _____	(i) Assertions about objects (ii) Assertions about Events (iii) Assertions about internal phenomena
<u>RESPONSIVES</u> : utterances which supply solicited information to prior requestive act. _____	(i) Supply solicited information (ii) Supply extended information
<u>REQUESTIVES</u> : utterances which solicit information from the hearer _____	(i) Real Questions (ii) Test Questions (iii) Verbal Reflective questions (iv) Requests for clarification. (v) Requests for Action (vi) Suggestions (vii) Requests for Permission
<u>COMMISSIVES</u> : utterances that look forward and promise or offer a claim to the partner.	
<u>EXPRESSIVES</u> : non-propositional utterances which convey attitudes or repeat prior utterance or acknowledge the utterances of others. _____	(i) Exclamations (ii) Accompaniments (iii) Repetitions
<u>ACKNOWLEDGMENT</u> : Any non-propositional utterance which either recognizes prior non-requestive act or simply helps the maintenance of the conversational flow. _____	(i) Agrees or rejects prior utterance (ii) Thanks (iii) Apologizes (iv) Congratulates or greets

To the above list two more categories were added . The category of Personal speech, and the category of Uninterpretables. Given that Bach and Harnish's system is for adult conversations it is perhaps not surprising that it does not include personal or private speech. However,

in the present study it was judged that such a category was needed since young children often talk to themselves and do not use language which is directed to others.

PERSONAL SPEECH: essentially covers any speech which is apparently an accompaniment to an activity and apparently addressed to the speaker (self) rather than others.

UNINTERPRETABLES: any utterance judged to be uncodable by the observer and any utterance which was unintelligible at the stage of transcription to the observer.

Percentage of agreement between the observers was checked by using five pages of transcription from each mother-child pair. A research student in psychology and cognitive studies at the University of California, Irvine acted as the co-observer. The co-observer had a copy of the classification system for a week. After a week he was asked to code children's speech acts in some old transcripts. The co-observer was thus trained for a day before he started coding the present study's data. There were no speech acts categories which were more prone to errors. The pages were drawn at random thus representing the beginning, middle or end of the game interaction. The reliability was assessed at 94% in the speech-acts analysis. (For a detailed description of the definitions used for the speech-act categories and their subcategories see Appendix 2).

(ii) Analysis of indirect and non-literal speech

All the speech-acts produced by both the mother and the child were examined in relation to their degree of directness and non-literality.

All the different types of direct, indirect and non-literal speech were computed for each child across the different age groups.

The coding system for understanding the presence of an indirect or non-literal expression was the following:

INDIRECT SPEECH ACTS:

Any speech act which was judged as having two illocutionary forces was coded as being an indirect speech-act. To judge the presence of an indirect speech-act, the coder had to rely on the relevant contextual information of the utterance in question.

For example: Speaker (S) utters : " There is a tiger there" to the hearer (H).

It is a mutual contextual belief that S and H are playing a game and the location of the tiger on the board is irrelevant to the discussion so far.

Thus, H infers that S could not be merely stating that the tiger is over there.

It is a mutual contextual belief that "tigers" are dangerous. Thus, H infers that S in stating that there is a tiger there, he is also requesting H not to go near the tiger.

Therefore, the utterance " There is a tiger there" is an ASSERTION but under the specific circumstances it serves an additional illocutionary intent and it also becomes a REQUESTIVE.

All the indirect utterances were isolated and they were re-coded according to several sub-categories. Following Bach and Harnish (1979) there are three main subcategories of indirectness:

(1) Standardized form

Some forms which appear to be indirect actually behave as if they were direct in that the usual inferential process illustrated above is apparently short-circuited. This process has been called "standardization" and some typical examples are :

(a) Wh-Imperatives

E.g. Could you pass the salt?

Would you pass the salt?

Indirect Force : (I request you) to pass the salt

(b) Impositives

E.g. Why don't you read?

Shouldn't you read?

How about reading?

Indirect Force: (I request you) to read

(c) Declaratives

E.g. Does anyone read anymore?

Indirect Force: Nobody reads anymore

(2) Pragmatic Idioms (or situated conventional speech)

Some forms do not receive their proper interpretation in any regular way; they are in effect idiomatic and must be learned case by case. Here are some typical examples:

(Imperatives) Take it easy (calm down)

Never mind (forget it)

Buzz off (leave)

(Interrogatives) Isn't that nice? (that's nice)

How do you do?

(3) Hints (Logical inferences)

Hints require a logical inference on the part of the hearer for the realization of the speaker's intention. Typical examples are "The door is over there" - implying "Leave the room", or "The matches are all gone"- implying "Bring me some matches". Hints are employed when the speaker and hearer can rely on shared rules or on shared understandings of habits and motives in familiar set ups.

NON-LITERAL SPEECH ACTS

Where it was judged that the speaker does not intend the literal meaning of the expressed phrase, the speech-act was coded as being non-literal. There are three main subcategories of non-literality. These are:

(1)Understatement or Overstatement

E.g. Not bad! (Very good, Great!)

I wasn't born yesterday (I am not so naive)

No one understands me (Not a lot of people understand me)

In these cases, the hearer understands what is implied by recognizing the next evaluation towards the midpoint of the relevant scale.

(2)Irony, Sarcasm

To recognize sarcastic comments, the hearer must understand that under the particular circumstances the opposite of what is said is meant.

E.g. Boy, this food is terrific! (the food is terrible)

(3)Metaphor

E.g. She is as tall as a tree

For the last kind of non-literality some relation R between what is said

and what is meant is needed to help guide the hearer's search for what is meant. For metaphors, like "She is as tall as a tree", the R is a figurative or metaphorical connection. In most cases, such connection is learned case by case. Thus, there is cultural diversity for metaphors. Whereas in our society the "tree" is used to symbolize "tallness", in another society the "house" might be used for the same purpose.

To check the reliability of the coding, agreement between observers' categorization of utterances as direct, indirect or non-literal was checked using approximately 10% of all data. Agreement was evidenced in 85% of the cases. Because of the very small number of indirect or non-literal utterances, all cases of each were used in assessing the reliability of the coder's categorization of the type of indirectness or non-literality of utterances of this kind. Inter-coder's agreement was assessed at 100%.

(iii) Analysis of cooperation vs uncooperation

In this level of language analysis we are concerned with the extent to which children at different developmental periods are able to draw on the relevant contextual information and make the kind of inferences required to understand each type of speech-act. To narrow down the scope of enquiry, we concentrated on two speech-act categories - the categories of assertions and responses - and analyzed them in terms of their degree of cooperation and relevance. Thus, the children's assertions and responses were examined in relation to how they are performed and whether they are relevant to previous discourse. This analysis aims at understanding the child's competence in acting upon the world by maximizing communicative competence. The method used for classifying

cooperation and competence was influenced by suggestions in child language literature regarding the problems that young children have in communicating. As reviewed in chapter 3, the literature suggests that the main limitation young children have in using language is in sustaining everyday communication by producing relevant replies, in clarifying their intentions and in realizing that their perspective is not always clear to others.

The following system was used to classify the child's assertions and responses:

(i) Analysis of the child's assertions:

All the assertions produced by the children were isolated and were numbered. These were then coded according to specific categories. There were two main categories under which the child's assertions could fall. The assertions could be cooperative assertions or uncooperative assertions (i.e. the child is talking to himself and thus uses private speech).

Two subcategories existed for the cooperative assertions: successful and unsuccessful cooperative assertions. The former are assertions directed to the hearer and successful in terms of the hearer's ability to understand them. The latter are assertions which, although directed to the hearer, the hearer is not in a position to understand (i.e. the child utters "I want it" without specifying verbally or nonverbally what "it" refers to).

The successful assertions were further analyzed according to the degree to which they are dependent on the verbal or the nonverbal general background for understanding them. Thus, some assertions were grouped as being made appropriate by the verbal discourse (e.g. "I like it" when

"it" refers to the "doll" used in the previous utterance) and others as being made appropriate by nonverbal signals (i.e. " I want this" accompanied by pointing).

(ii) Analysis of children's responses:

Given that our aim is to understand the degree of successful communication among the four age groups, the child's responses were isolated and were grouped as either successful, unsuccessful or uncooperative responses.

Successful responses consisted of (i) directly relevant responses

(E.g. S:What colour is that?

H:Blue

(ii) indirectly relevant responses

(E.g. S:Where do you want to go?

H:No play

(iii) non-verbal responses

(E.g. S: Where shall we start?

H: (points at GO)

Unsuccessful responses consisted of (i) irrelevant responses

(E.g. S: When did we play such a game?

H: Tomorrow grandma

Uncooperative responses consisted of (i) No responses

(E.g. S: What shall we do with this? (shows dice)

H: (turns back, plays.)

Percentage of agreement between observers was checked on 10% of all assertions and response. The reliability was assessed at 98% in the assertions and responses analysis.

ANALYSIS OF SOCIAL INTERACTION

The child's behaviour during the game interaction was broken down into several units. Each behavioural unit represented either a verbal utterance accompanied by a non-verbal act or a relevant non-verbal act. Each unit was then coded along two dimensions of social interaction. It was coded according to whether the unit represented an act which was a positive act facilitating further interaction, or a negative act inhibiting further social interaction. To be more specific about naming positive and negative acts, these two categories were broken down into several sub-categories:

- Positive social interactional Acts:
- (i) Initiations:
 - (a) Labels
 - (b) Informs
 - (c) Requests
 - (d) Non-Verbal
 - (ii) Responses:
 - (a) One-Word
 - (b) Extended
 - (c) Non-Verbal
 - (iii) Shared Activity:
 - (a) Watches
 - (b) Gives
 - (c) Takes
 - (d) Smiles

- (e) concentrates on same activity
- (f) Acts in agreed ways. e.g. throws dice.

Negative social

interactional acts

(i) Waiting for initiation

(a) Stares at board or mother.

(b) Sits motionless

(ii) Non-social behaviours

(a) Concentrates on irrelevant act

(b) Acts against agreed rules

(c) Talks to self

(d) Cries-Leaves room

(e) Attempts to terminate interaction without informing partner.

(iii) Unresponsive behaviours

(a) Sits motionless

(b) Concentrates on different activity

Percentage of agreement between observers was checked on whether the act was a positive or a negative one and on whether it was a positive

initiation or a response or an act which indicated shared activity. The other subcategories were not checked for reliability in so far as no statistical analysis was done on them. The reliability was assessed at 88% in the social interactional acts analysis. (For a detailed description of the social interactional act categories see Appendix 2.)

ANALYSIS OF MOTHER'S CONVERSATIONAL STYLE

In several studies it was found that mother's speech to children is distinctively different from their speech to other adults. At the same time, as Howe (1978), Nelson (1975), McDonald and Pien (1982) and others have pointed out, there are individual differences in mother's conversational style. It is believed that differences in the mother's conversational style may in fact create differences in the child's language use. The present analysis investigates the extent to which mother's language across and within each age group is variable. Two main questions are of interest in the present analysis. The first is concerned with finding out any individual differences in mother's conversational style across and within age groups. The second looks at whether the variation among mothers (if there is any) is merely a response to differential age or linguistic maturity in the child.

All the utterances produced by the mother in the game situation had been previously coded according to their illocutionary force in the speech-acts analysis. Here a further classification of the mother's intended illocutionary force was obtained. The system adopted was McDonald and Pien's (1982) category system which differentiates the utterances intended to elicit or acknowledge physical actions from those

intended to elicit or acknowledge verbal behaviour. This differentiation appears necessary because, as McDonald and Pien pointed out, mother's conversational behaviour tends to fall into two main clusters: that which elicits conversational participation and that which attempts to control and direct the child's behaviour. The mother who wishes to elicit her child's conversational participation will do so through the use of frequent questions (especially low-constraint questions), infrequent negations of the child's actions, infrequent use of directives, and infrequent monologuing. On the other hand, the mother who wishes to control or direct her child's behaviour will do so through the use of frequent high-constraint questions, (i.e. test questions), frequent use of directives, frequent use of negations of the child's verbal or physical actions and frequent monologuing.

To explore such kinds of functions, the speech-acts produced by the mothers were further classified. Requestives were broken down into five-sub-categories:

- (1) Real questions: information seeking questions for which the speaker does not have the answer.
Those types of questions carry a low degree of constraint of the child's behaviour.
- (2) Test questions: information seeking questions for which the speaker already has an answer. They are thus used to direct the hearer's attention, to demonstrate his knowledge or to explore its extent. Such questions carry a high degree of constraint.
- (3) Verbal reflective questions: questions which

repeat, reduce or paraphrase the hearer's previous utterance, without adding new information. They often take the form of Yes-No questions with rising intonation (e.g. "He did?") or tag questions with falling or falling-rising intonation (e.g. "He did, didn't he?"). Verbal reflective questions act to acknowledge the previous utterance, while at the same time, they pass the speaking turn to the hearer. Their constraint upon the form or content of the hearer's response is minimal for what is required is only a response which maintains the conversational topic.

- (4) Clarifications: are devices for "repairing" conversation when a misunderstanding has arisen. Repairs elicit a whole or partial repetition of the hearer's previous utterance with no alternative and are thus considered high-constraint questions.
- (5) Permission: These questions seek permission or acceptance for an action of the speaker. These questions may be thought of as indirect commands.

The category of acknowledgment was also broken down into two categories: (1) Positive acknowledgment (e.g. "Good, girl!").

- (2) Negative acknowledgment (e.g. "No" in response to the child's action).

Mother's Dominance or monologuing was also measured. The degree of mother's monologuing was measured by the mother utterance-turn ratio. That is by the average number of mother utterances in a speaking turn.

Percentage agreement between observers was checked on 10% of all the mother's utterances. The reliability was assessed at 91%.

METHOD AND ANALYSIS OF THE SOCIO-COGNITIVE TASKS

It has already been pointed out that the observer was called into the room as soon as each mother-child pair had finished with the game. The observer then played with each child for approximately an hour and as soon as the child was familiar with the observer, she administered the three socio-cognitive tasks. The child's behaviour during those tasks was video-recorded. The transcription, however, was not as detailed as for the game situation. The observer transcribed the videotapes by following a running-record method.

For example : Observer : What is happening to the little boy?

Child : It is his birthday (looks at O. smiles)

Observer : And is he giving a party? A birthday party.

Child : (looks at O. nods head)

Observer : How do you think he feels? (pause)

what's his face? (turns looks at child)

Child : (turns looks at faces) Ha;;ppy !

Observer : Happy. Good. Put the face on the boy.

Child : (Selects happy face, puts it on top of the boy's body).

A description of the three socio-cognitive tasks is presented below.

(1) "The Guess my story" Task and the "Face Sensitivity" Task

The first task given to the children is concerned with "face sensitivity" to other's emotions and with the set of inferences needed for the child to guess what another person is trying to say by inferring the causality of pictures. In designing the task, the observer was influenced by the work of Borke (1971, 1973) and Light (1979). Borke (1973), presented children between three and eight years of age with a series of short stories. The children were asked to indicate how the child in each story felt by selecting a "happy", "sad", "angry" or "afraid" face. Similarly, Light (1979) read aloud some short stories and the children were asked to select among several faces the one which they thought matched the appropriate emotion of the child in the story.

In the present study, the child was asked to come up with a story which matched some pictures and then to select an appropriate face. The "guess my story" task was composed of seven pictures of several objects and of five blank faced cutout figures of a boy. The cards, were presented to the child in a predetermined sequence and each card represented an event. The seven pictures of objects were: a birthday cake, a present, a present box partially opened, a box with a snake coming out of it, a cat eating a piece of the birthday cake, and a sick boy in bed. The pictures were presented in the following sequence: A boy with his birthday cake and his present. A boy who sits down and opens the present. A boy who discovers a snake in the present box. A boy who sees a cat eating a piece of his birthday cake. And finally, a boy who is ill in bed. (Figure 3 represents the actual pictures given to the children).

FIGURE 3 Guess my story task

**THIS IMAGE HAS BEEN REDACTED DUE TO
THIRD PARTY RIGHTS OR OTHER LEGAL
ISSUES**



The experimenter presented the pictures to each child and asked them to guess the story. As soon as the child came up with an interpretation, the experimenter asked: "Which face do you think the boy has?" or "How do you think the boy feels?". For that purpose eight colored pictures of boy's faces were drawn - two happy, two frightened, two sad, and two angry faces. The child was presented with two faces representing each emotion so that he could choose the same face for several sets of pictures if he thought that doing so is appropriate. Finally, the child

was asked to pick up the face he felt was the most appropriate one and to complete the boy's blank faced figure. (Figure 4 illustrates the faces used for this task).

FIGURE 4 The 4 emotions used for the Face Sensitivity task

**THIS IMAGE HAS BEEN REDACTED DUE TO
THIRD PARTY RIGHTS OR OTHER LEGAL
ISSUES**

(11) Hiding Task:

As soon as the children had completed the "guess my story" task and the task of "face sensitivity", a "hiding task" was presented. This was a variation of Light's (1979) task, aiming to explore the child's ability

in role-taking. It involved a three dimensional figure of a cat and the picture of the birthday cake to be hidden from it amongst a group of obstacles arranged for that purpose. The obstacles were : a two dimensional wall, a three-dimensional armchair and a three-dimensional table. The child was asked to "hide the cake so that the cat cannot see it". When the child had done so, the experimenter gave the child the cat figure and asked : "Can the cat see the cake?" If the child answered "no" he was then asked to take the cat and to find the cake. The same procedure was carried out with a boy-figure, a girl figure and a dog figure. In each of the four trials, the position of the wall, armchair and table were changed. (For a representation of the actual format of the task see Fig. 5).

FIGURE 5 THE HIDING TASK

THIS IMAGE HAS BEEN REDACTED DUE TO
THIRD PARTY RIGHTS OR OTHER LEGAL
ISSUES

To score the socio-cognitive tasks, we initially adopted Light's (1974) system. He developed a set of four or five point categorical scales. However, when applying these to the analysis of our children's performance, we found them inadequate. Most of the children's performance scores fell into the middle two of Light's categories. To develop a more sensitive measure, we expanded Light's scoring categories by differentiating the middle categories. For example, in the hiding task, we observed that there were important differences in the quality of the major errors committed as well as their number. The four and a half and five year-old children committed only one kind of major error in hiding the object from another person's view. They hid the object under the table. Although the object can be seen, there is a clear attempt to hide the object. Three and a half and four year-old children committed cruder errors. For example, they "hid" the doll in the middle of the room and merely turned the doll's head to the side. Using our eight category measure, we were able to code these differences.

Applying our expanded measure, we were still dissatisfied. The categorical system was not doing justice to the richness of the data. Subtle, but important, distortions were produced. The key problem was that although the categories defined a series of steps in the ever more adequate solving of a task, there were clear differences in the amount accomplished in moving from one step to the next. To refine the measure further, the qualitative categories were translated into a percentage scale which more accurately reflected the relative distances between the developmental steps.

The advantage of our scale may be illustrated with reference to the "guess my story" task. Using the categorical measure, we could simply

note that children progressed from (a) being unable to perform the task to (b) giving a label in response to the experimenter's question "What is that?" to (c) giving the label by himself to (d) giving a description of the objects to (e) describing the event to (e) giving a descriptive story and so on. The conceptual (and later statistical) problem is that each of these steps is regarded as an equivalent increment of achievement. Using the 0-100 scale, we could then attempt to represent our sense of the relative distance between the steps. In this vein, we assigned only five point differences between minor advances such as giving a label on one's own rather than just in response to the experimenter's inquiry. We assigned a much larger increase (fifteen points) when the child takes the very significant step from describing the events in each picture to offering a descriptive story which integrates the four pictures.

Another example of the advantage of our interval scale is provided by the hiding task. In scoring this task, we wished to differentiate among major errors. In particular, we felt that the error of "hiding under the table" reflected more adequate performance than the others. However, we did not wish to overestimate this difference. Other distinctions among categories reflected greater progress. By using the 0-100 scale, we were able to both differentiate the "hiding under the table" error from the others and indicate that it reflected a relatively minor advance.

In sum, we decided to score the socio-cognitive tasks using a measure which transposed our expanded eight category system onto a 100 point scale. It is certainly the case that our assignment of relative distances between categories is somewhat arbitrary and vulnerable to criticism. However, we felt the advantages outweighed the disadvantages. Armed with an interval scale, we were able to measure the

performance of subjects in a way which was more sensitive to the differences among them. This in turn allowed for a more powerful statistical analysis of our results and ultimately a more accurate portrayal of the children's behavior.

The "guess my story" task was scored as follows:

Point 0 : The child is unwilling to participate.

Points 25: The child is unable to perform.

Points 30: The child seems unable to come up with a story-like elaboration of the seven pictures. However, the child answers experimenter's questions of the form "What is that?".

Points 35: The child names particular objects in the pictures. (E.g. "A snake")

Points 45: The child gives a description for each picture after the experimenter's questions. (E.g. "A cake and a boy")

Points 55: The child labels the events that are represented in each picture. (E.g. "Birthday party"). However, there is no attempt to link the pictures or to use any connective or anaphoric articles.

Points 70: The child gives a more or less straightforward presentation of the four picture story. The story includes some connective articles (e.g. "and", "then") but is very descriptive and lacks motivational statements of any kind. The child simply describes the objective details of the situation or action.

Points 90: The child gives an elaborated story of the four pictures. However, the child comes up with the story with the experimenter's help.

Points 100: The child offers an elaborated story. The presentation of the correct four picture story makes it obvious that in the child's mind one picture represents an event which has a place in a sequence. The story includes motivational statements and connective and anaphoric articles.

The Scoring Scale for the "face sensitivity" task was the following:

Points 0 : The child is unwilling to participate in the task.

Points 25: The child is unable to perform.

Points 35: The child comes up with emotions which match the story but he seems unable in more than half of the trials to find the appropriate face to match the emotion.

Points 40 : The child uses the "Happy" face improperly.

Points 50 : More than one "sad", "scared" and "cross" face is used inappropriately, with or without the right emotion.

Points 65 : Only one "sad", "scared" and "cross" face is used inappropriately, with or without the right emotions.

Points 75 : The appropriate emotion is chosen and the face to match the emotion is selected, but the child makes one careless identification of faces which is corrected.

Points 90 : Fully correct choices in all six trials. The appropriate emotion is chosen and the face to match the emotion is selected. However, in at least two trials the child comes up with his choice only after the experimenter's query : "How does the child feel?".

Points 100: Fully correct choices in all six trials. The appropriate emotion is chosen and the right face to match the emotion is selected without the experimenter's questioning.

The scoring categories for the "hiding task" were the following:

Points 0 : The child is unwilling to participate.

Points 25 : The child shows interest in the game and seems unable to perform.

Points 30 : The child makes more than one major error or errors of some kind in all trials. Major errors were such that the object supposedly hidden was in fact openly and immediately visible to the seeker doll.

Points 45 : The child makes one major error other than the hiding the object under the table.

Points 50 : The child makes one major error. In this category however, the major error performed was only of one kind. The object was hidden under the table.

Points 60 : The child makes two or three minor errors or at least one minor error which was left uncorrected or was corrected only after the experimenter's query : "Will that be a good hiding place?" or "Are you sure that the cat cannot see the cake?" Minor errors included careless placements (e.g. leaving an arm or a foot protruding), or placements behind an armchair or the wall which did not use the limited cover effectively.

Points 70 : One or two minor errors otherwise all correct. These errors were spontaneously corrected by the child.

Points 80 : No errors in all four trials. The child in more than two of the trials placed the object in a position where both the seeker doll and the child could not see it.

Points 100: No errors in all four trials. In more than two of

the trials the child placed the object in a position where the doll could not see it but the child himself could.

CHAPTER 5

RESULTS

The results of the study are presented in three sections. In the first, we present the results from the language analysis. In the second, we present children's scores on the social interactional analysis during the game. In the third section, we present children's scores on the socio-cognitive tasks.

(1) LANGUAGE ANALYSIS

(a) Results from the speech-acts analysis

The utterances addressed to the child or the mother during the game interaction were isolated and were categorized according to their conversational act or function. The conversational acts of all five children in each age group were added for each conversational class. Table 2 and 2a represents the mean scores and the standard deviations of the mother's and child's scores for each age group.

TABLE 2 DISTRIBUTION OF THE CHILD'S SCORES WITHIN AGE GROUPS

		A1=3.6-4.0 N=5	A2=4.6-5.0 N=5	A3=5.6-6.0 N=5	A4=6.6-7.0 N=4
ASSERTIVES	X	21.8	37	37.4	45
	SD	12.4	20.2	21.2	8.7
RESPONSIVES	X	14.8	27.6	17.8	23.7
	SD	8.5	13.2	9.9	1.7
REQUESTIVES	X	4.4	10.2	13.2	23.5
	SD	4.1	4.6	4.3	10.3.
EXPRESSIVES	X	2.4	7	7.6	10
	SD	1.5	2.6	5.2	4.8
ACKNOWL.	X	4	10.6	10.6	14
	SD	2.9	7	7.6	4.5
COMMISSIVES	X	0	1	1.4	2.5
	SD	0	1.7	2.4	3.1
UNCODABLE	X	4.4	7.8	4.1	2.1
	SD	3.1	1.3	1.5	1.8
PERSONAL	X	5	0.6	0	0
	SD	3.1	1.5	0	0

TABLE 2A DISTRIBUTION OF THE MOTHER'S SCORES WITHIN AGE GROUPS

		A1=3.6-4.0 N=5	A2=4.6-5.0 N=5	A3=5.6-6.0 N=5	A4=6.6-7.0 N=4
ASSERTIVES	X	31.4	26.8	40.4	40.2
	SD	7.6	5.8	15.2	10.1
RESPONSIVES	X	1	2.8	3.4	9.5
	SD	0.8	2.2	1.6	3.4
REQUESTIVES	X	39.2	48.6	31.8	32
	SD	6.4	4.1	19.8	9.5
EXPRESSIVES	X	7.4	9.8	10	10
	SD	4.1	5.6	4	8.4
ACKNOW.	X	13	27.4	13.4	17.5
	SD	5.4	13.6	2	8.3
COMMISSIVES	X	1.6	0.8	0.8	0.75
	SD	1.6	1.5	1.2	1.1
UNCODABLE	X	2.2	4	2.1	0.8
	SD	2.1	3.6	1.8	0.5
PERSONAL	X	0	0	0	0
	SD	0	0	0	0

As suggested in Tables 2 and 2a, despite some within group variability, the speech acts produced by mothers and their children of each age are importantly different. The nature and extent of these differences will be demonstrated throughout the analysis which follows.

The relationship between the mothers' and the children's scores was also examined. A non-significant relationship was found between the mother's and the child's acknowledgment ($r=0.29$), commissives ($r=-0.152$), expressives ($r=-0.009$), assertives ($r=-0.008$), requestives ($r=0.010$), and responsives ($r=0.39$).

The distribution of functions within general conversational class are presented in Table 3. The table presents the overall number and percentages of each age group. For the individual results of the speech-acts see appendix 3.

TABLE 3 DISTRIBUTION OF FUNCTIONS
WITHIN GENERAL CONVERSATIONAL CLASS

	1st Age Group mean age:3.7		2nd Age Group mean age:4.8		3rd Age Group mean age:5.7		4th Age Group mean age:6.9	
	CHILD	MOTHER	CHILD	MOTHER	CHILD	MOTHER	CHILD	MOTHER
ASSERTIVES	109 40.5%	157 33.5%	185 36.4%	134 22.4%	187 40.6%	202 38.5%	180 38.3%	161 35.7%
RESPONSIVES	74 27.5%	5 1%	138 27.2%	14 2.3%	89 19.3%	17 3.2%	89 18.9%	38 8.4%
REQUESTIVES	22 8.2%	196 40.3%	51 10%	243 40.6%	65 14.4%	159 30.3%	74 15.7%	128 28.4%
COMMISSIVES	- -	8 1.7%	5 0.99%	4 0.7%	7 1.5%	4 0.8%	10 2.1%	3 0.7%
EXPRESSIVES	12 4.5%	37 7.8%	35 6.9%	49 8.2%	38 8.2%	50 9.5%	40 8.5%	40 8.9%
ACKNOWLEDG.	20 7.4%	65 13.7%	53 10.4%	137 23%	46 10%	67 12.8%	56 11.9%	70 15.5%
UNCODABLE	17 6.3%	11 2.3%	38 7.5%	17 2.8%	28 6.1%	26 5%	21 4.5%	10 2.2%
PERSONAL	15 5.6%	- -	3 0.6%	- -	- -	- -	- -	- -
TOTAL	269	475	508	598	460	525	470	450

There is a considerable difference in the "uses" of language by an adult and a child within the above major conversational classes. Especially in the first two age groups, mothers typically direct actions and ask questions. Similarly, with so many requestives addressed to the child, it is not remarkable that the child's responsives are high. With an increase in the child's age, we see a decrease in the mother's requestives (from 40.3% to 28.4%) and a move towards other uses of language (mother's assertives increase from 33.5% to 38.5%). However, the main change in the mother's speech is in the responsives and requestives categories. As indicated in Table 3, the change of these two categories comes at different developmental ages. We have the biggest change in the mother's use of requestives between the second and third age group (from 40.6% to 30.3%) and for the mother's responsive category the change is between the third and fourth age group (from 3.2% to 8.4%). In the child's language we also see a decrease of responsives (from 27.5% to 18.9%) accompanied by an increase in requestives and expressives (from 8.2% to 15.7% and from 4.5% to 8.5% respectively).

To test statistically for any differences between the speech-acts produced by the mother and the child across the age-groups, several analyses of variance were carried out. Two measures were isolated for determining significant differences between the mother and child. The first was the amount of talkativeness for each mother-child pair across the age groups. For this measure we computed the actual number of utterances produced by mother and child during the game interaction across the four age groups. The second measure was the actual differences between mother and child among the different conversational

classes.

(a) Measure of Talkativeness:

A Two-Way analysis of variance was carried out to determine any significant differences in the actual number of speech-acts uttered by the mother and the child across the four age groups. The F-Table is presented in Table 4.

TABLE 4 DIFFERENCES IN THE No OF SPEECH ACTS
PRODUCED BY MOTHER AND CHILD
ACROSS THE AGE GROUPS

SOURCE	SS	DF	MS	F
Between A. mother/child	2656.38	1	2656.38	
				2.57
Between B. Age Groups	9359.13	3	3119.71	
A X B	2556.42	3	852.14	3.02
Error	30949.2	30	1031.64	0.83

A nonsignificant difference was found between treatment A ($F=2.57$, $p>0.05$). Thus, the amount of speech-acts produced by both the mother and the child across the age groups is not significantly different. However, a significant difference was found ($F=3.02$, $p<0.05$) between Treatment B. Thus, with an increase in age we have an increase in the actual number of speech-acts which shows that both participants become more talkative within this specific interactional context. A nonsignificant interaction ($F=0.83$, $p>0.05$) was found between age and the number of speech-acts produced.

A multiple comparison of means test was carried out to compare any mean differences in terms of their reliability. Using the Neuman-Keuls test, it was found that there was a significant difference between the mothers' and children's talkativeness in the first age group. The children remain speechless most of the time, and the mother is responsible for conversing. A nonsignificant difference was found in the mothers' and children's talkativeness in the remaining three age groups.

(b) Differences between conversational classes:

Several analyses of variance were performed to determine any significant differences between the mothers' and children 's speech within each conversational class. The F-table for the assertive category is presented in Table 5.

TABLE 5 F-TABLE FOR DETERMINING DIFFERENCES
IN ASSERTIVES BETWEEN MOTHER AND CHILD

MEANS :	MOTHER	A1 = 31.4	CHILD	A1=21.8
		A2 = 26.8		A2=37
		A3 = 40.4		A3=37.4
		A4 = 40.2		A4=45

SOURCE	SS	DF	MS	F
Between A. mother/child	72.48	1	72.48	0.32
Between B. age groups	1989.15	3	663.05	2.97
A X B	281.05	3	93.68	0.42
Error	6697.5	30	223.25	

A nonsignificant difference was found in the number of assertives produced by the mother and the child across the four age groups ($F=0.32$, $p>0.05$). However, there was a significant difference ($F=2.97$, $p<0.05$) between the number of assertions produced in each age group. Young children produced less assertions than did the older ones. There was a nonsignificant interaction ($F=0.42$, $p>0.05$).

Table 6 represents the F-table of the analysis performed to determine if any significant differences between the number of the child's and mother's responses exist.

TABLE 6 F-TABLE FOR DETERMINING DIFFERENCES
IN RESPONSIVES BETWEEN MOTHER AND CHILD

MEANS	MOTHER	A1=1	CHILD	A1=14.8
		A2=2.8		A2=27.6
		A3=3.4		A3=17.8
		A4=9.5		A4=22.2

SOURCE	SS	DF	MS	F
Between A. mother/child	2110.59	1	2110.59	31.84
Between B. age groups	644.11	3	214	3.24
A X B	335.74	3	111.91	1.69
Error	1988.6	30	66.29	

A highly significant difference was found between the number of responses used by the child and the mother across the four age groups

($F=31.84$, $p<0.05$). Looking at the means we can see that mothers used significantly less responsives in their speech than did their children. A significant result ($F=3.24$, $p<0.05$) was also obtained between the four age groups. In other words, as children grow older, their use of responses increases. The interaction effect was not significant ($F=1.69$, $p>0.05$). In Table 7, the F-Table of the analysis performed to determine any differences in directives between the mother and child across the age groups is presented.

TABLE 7 F-TABLE FOR DETERMINING DIFFERENCES
IN REQUESTIVES BETWEEN MOTHER AND CHILD

MEANS	MOTHER	A1=39.2 A2=48.6 A3=31.8 A4=32	CHILD	A1=4.4 A2=10.2 A3=13.2 A4=23.5	
SOURCE		SS	DF	MS	F
Between A. mother/child		6078.07	1	6078.07	40.86
Between B. age groups		308.82	3	102.94	0.69
A X B		1354.87	3	451.62	3.04
Error		4462.55	30	148.75	

The two-way analysis of variance yields a significant interaction ($F=3.04$, $p<0.05$). In other words, there is an interaction between the age group the child belongs to and their production of requestives. Looking at the mean scores, we see that children's use of directives does appear to increase with time. In applying the Neuman-Keuls test to compare the means, we found that children's production of requestives in the fourth age group is significantly different from children's production in the first age group. The Neuman-Keuls test yields a nonsignificant difference for the intermediate age groups. Even though the intermediate groups are not significantly different they nonetheless show an increase in the correct direction. As the children grow older, their use of requestives in communicating with their mothers increases. The Neuman-Keuls test yields nonsignificant differences in the mother's production of requestives across the four age groups. Thus, the amount of requestives in the mother's speech remains more or less constant across the age groups.

A nonsignificant result was obtained between and within conditions for the remaining conversational classes. (For the raw data, see appendix 3)

Overall, there are differences between the child's speech across age groups. In particular, mothers of young children speak more and their speech is directed to control their children's behaviour. As the children grow older they become more competent in using language as a successful communicative device. Thus, the actual number of speech acts for older children increases. At the same time, older children are able to shape and control conversation by requesting and producing relevant information to the mother's requests.

(ii) Results from the analysis of direct, indirect and non-literal speech

The observer counted all the cases of indirect or non-literal speech which were produced by both the mother and the child across the four age groups. The proportions of direct and indirect or non-literal speech are presented in Table 8. Given that the instances of complex speech acts were few among the first three age groups, table 8 shows the total number of utterances produced by the mothers and children (five pairs) in each age group.

TABLE 8 NUMBERS AND PROPORTIONS
OF DIRECT AND INDIRECT OR NON-LITERAL SPEECH ACTS

		DIRECT	INDIRECT	NON-LITERAL	TOTAL
AGE 1 3.6-4.0	Mother	451 (94.9%)	21 (4.4%)	3 (0.6%)	475 (100%)
	Child	264 (98.1%)	4 (1.5%)	1 (0.;4%)	269 (100%)
AGE 2 4.6-5.0	Mother	560 (94.5%)	28 (4.7%)	10 (1.6%)	598 (100%)
	Child	495 (97.4%)	8 (1.6%)	5 (1%)	508 (100%)
AGE 3 5.6-6.0	Mother	484 (92.4%)	31 (5.9%)	9 (1.7%)	524 (100%)
	Child	451 (97%)	10 (2.1%)	4 (0.9%)	465 (100%)
AGE 4 6.6-7.0	Mother	377 (83.9%)	46 (10%)	26 (5.7%)	449 (100%)
	Child	425 (89.7%)	38 (8%)	11 (2.3%)	474 (100%)

Table 8 shows that there is indeed a gradual increase of indirectness across the age groups. This increase is present in both the mother's and the child's speech. Table 8 also shows an increase in the amount of non-literal speech, but this increase is evident only in the last age group. (For the children's and the mothers' individual scores see Appendix 3).

Table 9 below gives the detailed analysis of the child's and the mother's indirect speech across the four age groups.

TABLE 9 FREQUENCIES OF DIFFERENT TYPES OF INDIRECTNESS
IN MOTHER'S AND CHILD'S SPEECH

INDIRECT SPEECH						
	STANDARDIZED			PRAGMATIC	HINTS	TOTAL
	Wh- Imperatives	Impositives	Queclaratives			
M	7	7	-	1	4	19
A1 C	-	-	-	-	4	4
M	8	11	-	5	4	28
A2 C	-	1	-	5	2	8
M	3	9	-	9	10	31
A3 C	-	1	-	3	6	10
M	6	11	-	8	21	46
A4 C	2	7	-	8	21	38

(*) Note: M= mother, C=child, A1=3.6-4.0, A2=4.6-5.0, A3=5.6-6.0, A4=6.6-7.0.

Figures 6,7 and 8 show graphical representations of the above results for the mothers' and children's speech across the four age groups.

FIGURE 6 GRAPHIC PRESENTATION
OF MOTHERS' AND CHILDREN'S STANDARDIZED SPEECH

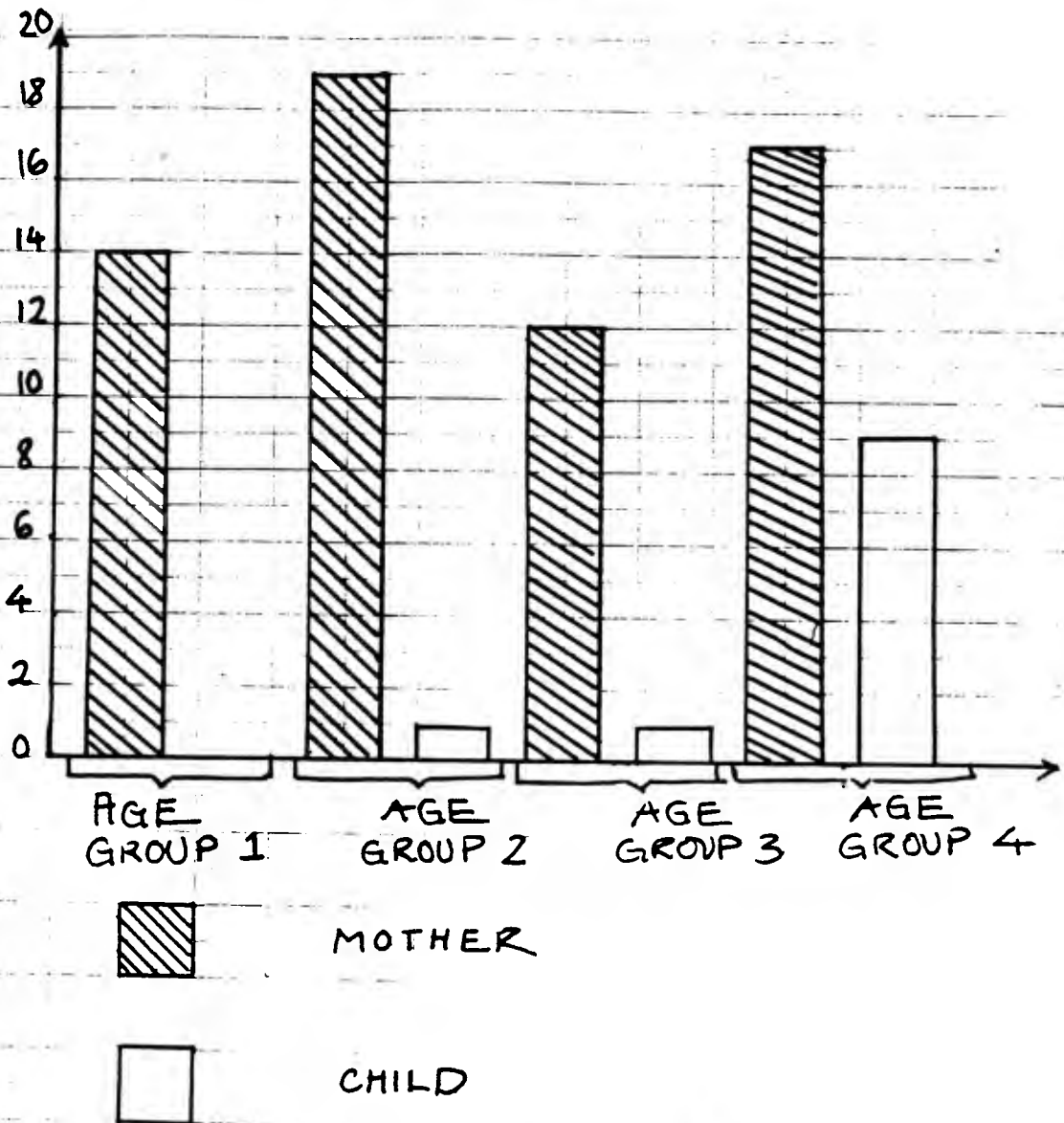


FIGURE 7 GRAPHIC PRESENTATION

OF MOTHERS' AND CHILDREN'S PRAGMATIC INDIRECTNESS

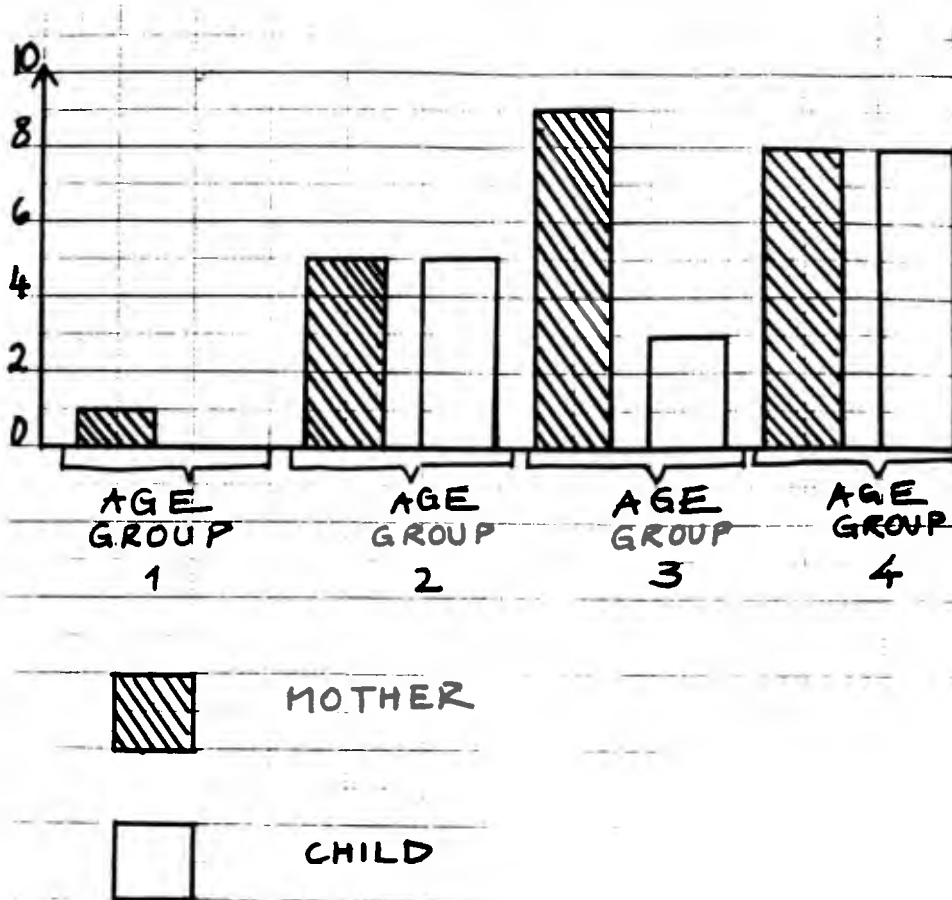
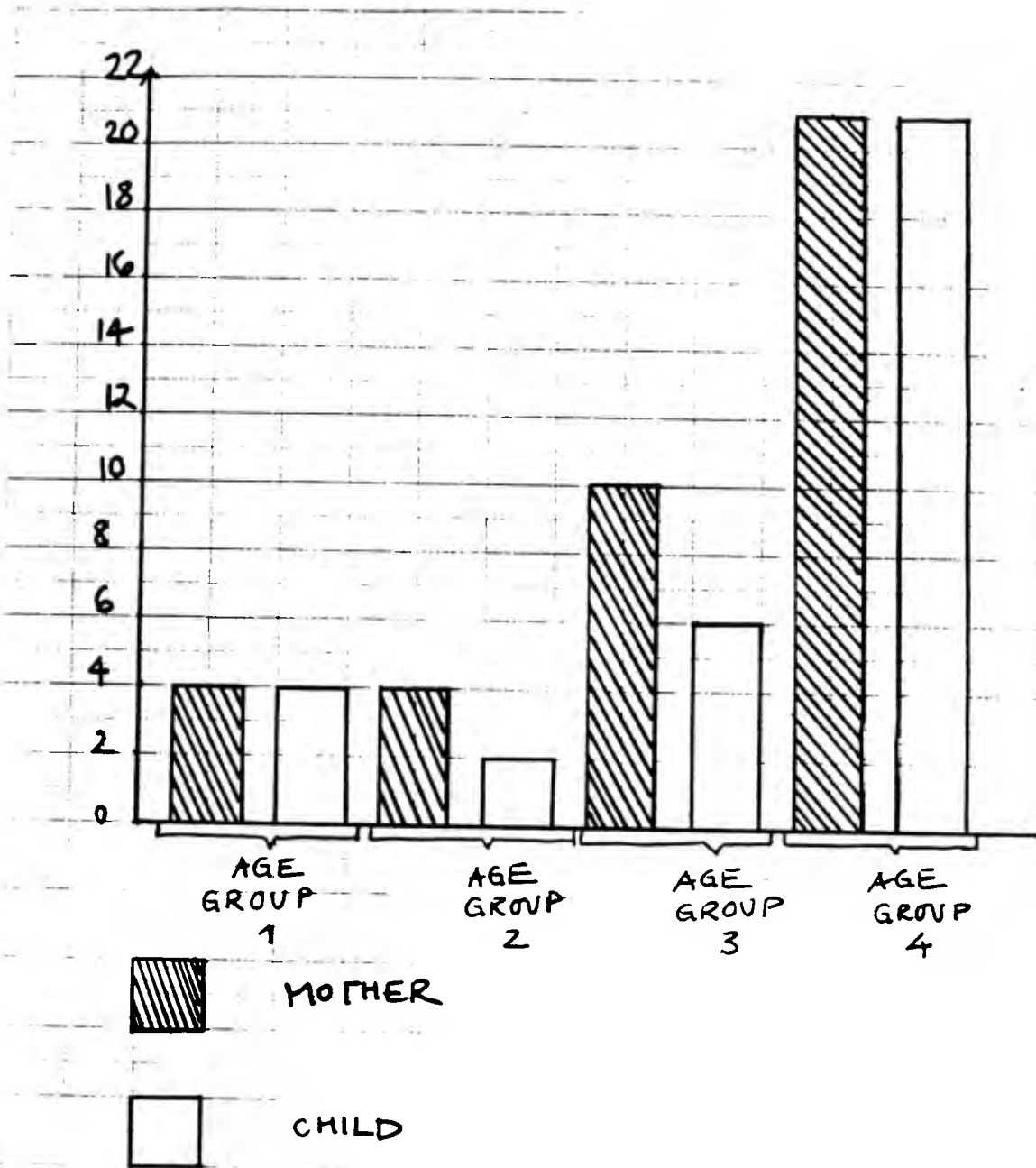


FIGURE 8 GRAPHIC PRESENTATION
OF MOTHERS' AND CHILDEN'S HINTS



Looking at Table 8, we can see that the mother's indirect comments in the youngest group represent 4.4% of the total speech and over half of these are of a standardized form. In the second group, we see an increase of pragmatic indirectness with standardized indirectness being very high. This result is hardly surprising. Mothers use speech to which they think that their children are more likely to respond. At three and four years of age, children are competent in using language for communicating. However, they lack the social cognitive requirements to see conversational acts as steps in plans for social ends. Thus, they can not cope with complex forms of indirectness such as hints, which require an active inferential capacity on the part of the hearer. The mothers are less likely to produce talk which will confuse the children who will consequently fail to participate in the conversation. By four and five, however, the children understand that there is a distinction between the "form" and the "function" of an utterance and that utterances may convey different attitudes and perform many functions with the same form. Therefore, indirect speech which is of a standardized form is easier to comprehend.

In the last two age groups, we see an increase of hints. By six years of age, the child's ability to understand indirectness develops fully and he starts coping with hints without needing explicit characterizations of the desired goal. However, though the mother is using some hints, most children were hesitant in using them in their speech. By the sixth year, the child's indirect remarks represent only 2.1% of his total speech. We have the most significant increase of indirectness in the last age group, where it represents 8% of the total speech. By age seven, children are fully aware of the active and

flexible use of language and its power in a social context.

The children in the first two age groups produced very few instances of indirect speech. However, most of the child's indirect speech consisted of hints. Ervin-Tripp (1979) and Keenan (1974) have commented on the young child's nature of indirect speech when they talk to adults. As both argued, the child's utterances may "look" indirect without having a clear intention to be so. That is because three year olds often focus their attention on obstacles rather than on specifying their means, when they speak to adults. Thus, although they are simply elliptical, their utterances look indirect. In the present study, the elliptical nature of the young child's indirectness was evident. Most of the speech which could be coded as hints was of the following nature : "I am tired" which may imply " Let's finish the game" or simply state an internal event.

We saw some clear instances of hinting after age four and a half. We observed two instances of hinting in the children's speech in the second age group. Both instances were more sophisticated than the ones produced by the children in the first age group. However, the ability to hint among children in the second age group was limited. Although we found a complete structural masking of the directive intent, in both cases the desired object was mentioned. The two hinting instances of the second age group were the following:

(1) "Mom don't you have a blue?" (Implying "It's your turn and you
move to blue").

(2) "I didn't have any candies" (Implying "Let me have some").

In the remaining two age groups, children's hinting was of an even more complex nature. All of their hints were subtle and the desired objects were not mentioned.

Table 10 presents the frequencies of the different kinds of non-literality on the mother's and child's speech.

TABLE 10 FREQUENCIES OF DIFFERENT TYPES OF NON-LITERALITY
IN MOTHER'S AND CHILD'S SPEECH

		DIRECT NON-LITERAL		INDIRECT NON-LITERAL		TOTAL
		Under/Over Extension	Metaphor	Sarcasm	General	
	M	2	1	-	-	3
A1	C	-	1	-	-	1
	M	2	6	2	-	10
A2	C	-	5	-	-	5
	M	4	5	-	-	9
A3	C	-	4	-	-	4
	M	11	8	6	1	26
A4	C	1	8	2	-	11

(*) Note: M=Mother

C=Child

A1=3.6-4.0, A2=4.6-5.0, A3=5.5-6.0, A4=6.6-7.0

The instances of non-literality in both the mother's and the child's speech are very few. That is true for all the age groups. We can clearly see an increase of non-literal utterances in the last age group. However, the actual numbers are so small that they do not allow for any conclusive remarks about the nature of non-literality in the mother-child conversations.

One concern of the present study was whether the game situation inhibited the expression of indirect or non-literal speech. To test for this, we administered the task to one adult pair and videotaped their interaction. The pair consisted of two adults who were very familiar with each other. The degree of familiarity between adult participants was judged to be of great importance because most of the complex forms of indirectness are employed when the speakers can rely on shared understandings of habits and motives. Table 11 represents the proportions of direct and indirect or non-literal speech acts found in adult conversations.

TABLE 11 PROPORTIONS OF DIRECT AND INDIRECT AND NON-LITERAL SPEECH
IN ADULT CONVERSATIONS

	DIRECT SPEECH	INDIRECT AND NON LITERAL SPEECH
Subject 1	136 (65.5%)	47 (34.5%)
Subject 2	131 (61.8%)	50 (38.2%)
Total	267 (63.7%)	97 (36.3%)

Overall, 63.7% of the adult's speech was of a direct nature and 36.3% was of an indirect or non-literal nature. Thus, we can argue that the game situation does not in fact inhibit the production of complex speech. In negotiating the rules of the game, adults used speech which did not explicitly state the desired goal or speech which was of a metaphoric or sarcastic nature 36.3% of the time.

Table 12 and 13 represent the proportions of the different kinds of indirectness or non-literality in the adult conversations.

(See following page)

TABLE 12 PROPORTIONS OF DIFFERENT TYPES OF INDIRECTNESS IN ADULT CONVERSATION

INDIRECT SPEECH ACTS					
	STANDARDIZED FORM			PRAGMATIC	HINTS
	Wh-Imperatives	Impositives	Queclaratives		
S1	4 (12.9%)	4 (12.9%)	1 (3.2%)	6 (19.3%)	16(51.6%)
S2	6 (17.6%)	1 (2.9%)	-	9 (26.5%)	18(52.9%)
TOTAL	10 (15.4%)	5 (7.7%)	1 (1.5%)	15 (23.1%)	34(52.3%)

FIGURE 9 GRAPHIC PRESENTATION

OF DIFFERENT TYPES OF INDIRECTNESS IN ADULT CONVERSATIONS

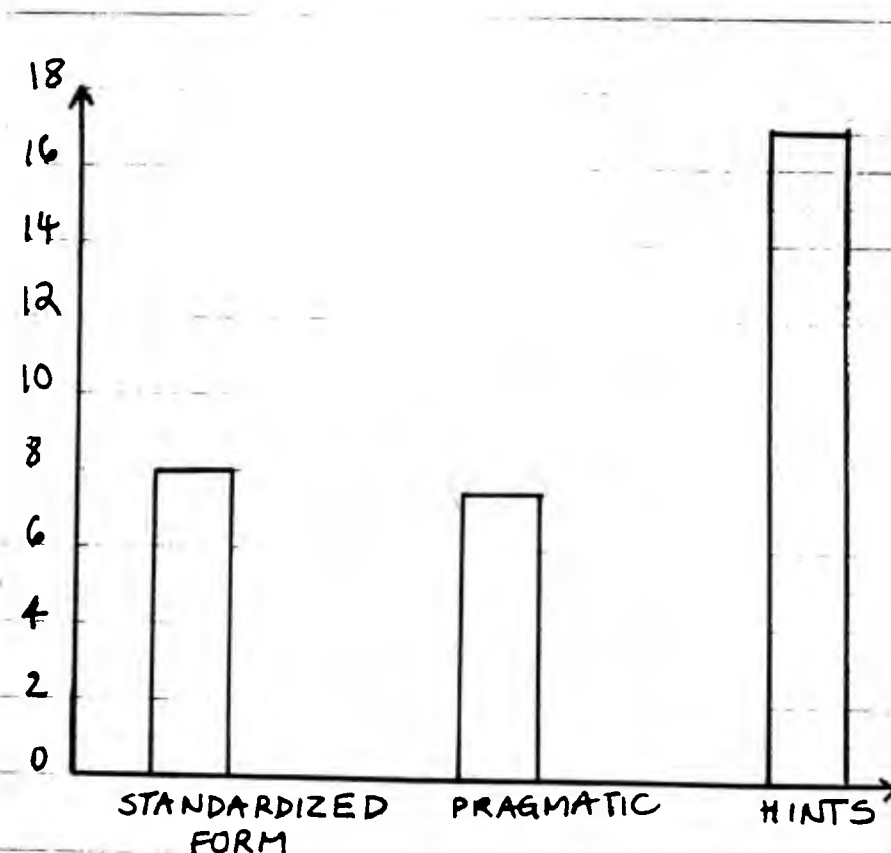
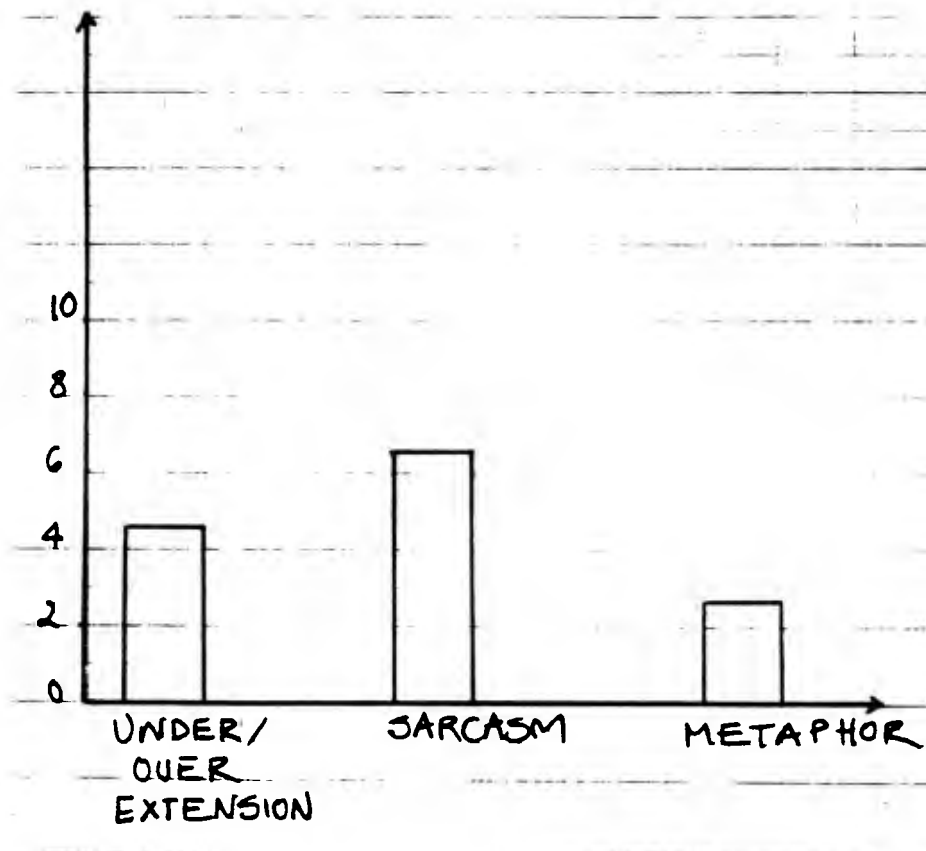


TABLE 13 PROPORTIONS OF DIFFERENT TYPES OF NON-LITERALITY
IN ADULT SPEECH

NON-LITERALITY			
	Under/Over Extension	Irony/Sarcasm	Metaphor
S1	5 (35.7%)	6 (42.8%)	3 (21.4%)
S2	4 (30.8%)	7 (53.8%)	2 (15.4%)
TOTAL	9 (33.3%)	13 (48.1%)	5 (18.5%)

FIGURE 10 GRAPHIC PRESENTATION OF DIFFERENT TYPES
OF NON-LITERALITY IN ADULT CONVERSATIONS



Looking at Table 12 and 13, we can see that most complex speech was indirect literal speech. There were very few instances of non-literal speech. Moreover, 52.3% of all indirect speech were hints.

The videotape analysis of both the adult and the mother-child interactions has shown that understanding starts from context. When a listener is attending to ongoing action and its trajectory, it is possible to understand a congruent utterance with minimal interpretative work. What is said is likely to be redundant from what is already known. Alternative interpretations are not likely to be considered, including "literal interpretations", unless the utterance is so unconventional as to require inference to reach a relevant interpretation. Thus, the present study is in agreement with Ervin-Tripp's proposal: "We propose that participants become aware of inferential processes when there is an incongruity or misunderstanding and that this awareness has been the model for standard interpretation. Most of the time, language is facilitative to ongoing event projection, and merely confirms or supplements what is already known." (Ervin-Tripp, 1981, p. 207).

(iii) Results from the analysis of cooperation in conversations between mothers and their children

All the assertions produced by the children were isolated and numbered. The assertions were then categorized according to whether they were cooperative, uncooperative, successful or unsuccessful. Table 14 presents the proportions and the raw data of the different kinds of assertions and responses performed by the children in the four age groups. Verbal and nonverbal assertive and responsive remarks are included.

TABLE 14 CHILD'S ASSERTIVE REMARKS

		COOPERATIVE		UNCOOPERATIVE
		Successful	Unsuccessful	
3.6- 4.0 Age Group	Assertives	102 (73.4%)	22 (15.8%)	15 (10.8%)
	Responsives	80 (57.1%)	3 (2.1%)	57 (40.2%)
	TOTAL	182 (65.2%)	15 (8.9%)	44 (25.8%)
4.6- 5.0 Age Group	Assertives	149 (80.5%)	30 (16.2%)	6 (3.2%)
	Responsives	157 (76.6%)	11 (5.4%)	37 (18.4%)
	Total	306 (78.5%)	41 (10.5%)	43 (19%)
5.6- 6.0 Age Group	Assertives	185 (97.4%)	5 (2.6%)	-
	Responsives	123 (90.4%)	1 (0.7%)	12 (8.8%)
	Total	308 (94.5%)	6 (1.8%)	12 (3.7%)
6.6- 7.0 Age Group	Assertives	180 (100%)	-	-
	Responsives	97 (98%)	-	2 (2%)
	Total	277 (99.3%)	-	2 (0.7%)

Table 14 indicates that as age increases, cooperative and successful assertions increase. In a complementary manner, uncooperative or unsuccessful assertions decrease.

In Table 15 below, proportions and frequencies of the verbal or nonverbal means employed by the children for making their assertions successful are presented. Here again, we have a decrease in the dependence on nonverbal means of communication with an increase of age.

TABLE 15 PROPORTIONS AND FREQUENCIES OF VERBAL AND NONVERBAL
MEANS FOR SUCCESSFUL COMMUNICATION

		VERBAL	NONVERBAL
3.6- 4.0 Age group	ASSERTIVES	109 (78.4%)	30 (21.6%)
	RESPONSIVES	74 (52.8%)	66 (47.15%)
	Total	183 (65.6%)	96 (34.4%)
4.6- 5.0 Age Group	ASSERTIVES	185 (97.9%)	4 (2.1%)
	RESPONSIVES	138 (68.6%)	63 (31.4%)
	Total	323 (82.8%)	67 (17.2%)
5.6- 6.0 Age Group	ASSERTIVES	187 (98.4%)	3 (1.6%)
	RESPONSIVES	89 (65.4%)	47 (34.5%)
	Total	276 (84.7%)	50 (15.3%)
6.6- 7.0 Age Group	ASSERTIVES	180 (100%)	- (0%)
	RESPONSIVES	89 (89.9%)	10 (10.1)
	Total	269(96.4%)	10 (3.4%)

(a) Further analysis of the child's assertions

Several anovas were performed in order to further explore the children's use of assertions. Because the amount of successful and unsuccessful production of assertions could be confounded with the amount of talk, the one-way analysis is done using the percentages of the child's speech rather than the raw data. The angular transformations were used for transforming the percentages in to a form which could be used in a statistical analysis. The data used and the anova tables are presented in Tables 16, 17 and 18.

TABLE 16 THE CHILD'S SUCCESSFUL ASSERTIONS
ACROSS THE FOUR AGE GROUPS

	1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
SUB.1	66.74	66.97	81.09	88.19
SUB.2	61.27	59.74	88.10	88.19
SUB.3	55.18	67.78	76.06	88.19
SUB.4	47.18	59.79	88.19	88.19
SUB.5	57.67	71.85	82.73	88.19

ANOVA TABLE

SOURCE	SS	DF	MS	F
Between	3160.18	3	1053.4	39.9
Within	423.32	16	26.4	
Total	3583.5	19		

TABLE 17 THE CHILD'S UNSUCCESSFUL ASSERTIONS
ACROSS THE FOUR AGE GROUPS

	1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
SUB.1	20.70	18.63	8.91	0
SUB.2	28.73	27.20	0	0
SUB.3	21.13	22.22	13.94	0
SUB.4	31.24	33.21	0	0
SUB.5	32.33	18.15	5.74	0

ANOVA TABLE

SOURCE	SS	DF	MS	F
Between	2633.2	3	877.7	
Within	31877.1	16	199.2	4.4
Total	5820.3	19		

TABLE 18 THE CHILD'S UNCOOPERATIVE ASSERTIONS
ACROSS THE FOUR AGE GROUP

	1ST AGE GROUP	2ND AGE GROUP	3RD AGE GROUP	4TH AGE GROUP
	3.6-4.0	4.6-5.0	5.6-6.0	6.6-7.0
SUB.1	10.14	13.05	0	0
SUB.2	0	12.25	0	0
SUB.3	26.28	0	0	0
SUB.4	25.99	0	0	0
SUB.5	0	0	0	0

ANOVA TABLE

SOURCE	SS	DF	MS	F
Between	384.65	3	128.2	2.3
Within	882.32	16	55.1	
Total	1404.67	19		

A highly significant difference ($F=18.9$, $P<0.05$) in the production of successful assertions was found among the four age groups. As children get older, they become better in producing speech which fits the listener's perspective and the social context of discourse.

A highly significant difference ($F=16.21$, $P<0.05$) in the production of unsuccessful assertions was also found. In other words, young children often produce assertions which are directed to the listener, but the listener is not in a position to comprehend them.

A nonsignificant difference ($F=2.88$, $p>0.05$) in the production of uncooperative assertions was found between the age groups. This finding is hardly surprising. By the age of three and a half, children have a clear desire to engage in communication with an adult and they do so by attempting to cooperate with him. Thus, in a structured situation where there is a specific task to be performed, the children are less likely to use private speech.

(b) Further analysis of the child's responses

Several one-way analyses of variance were performed to analyze the degree of successful and unsuccessful assertive responses. The statistical analysis used percentages and the angular transformations were computed.

Given that our aim is to investigate the degree of successful communication among the four age groups, responses were grouped as successful, unsuccessful or uncooperative.

The following system was used:

Successful Responses consisted of = Directly Relevant Responses
Indirectly Relevant Responses
Non-Verbal Responses
Unsuccessful Responses " " = Irrelevant Responses
Uncooperative Responses " " = No Responses

The data and the anova tables are shown in Tables 19,20 and 21.

TABLE 19 THE CHILD'S SUCCESSFUL RESPONSES
ACROSS THE FOUR AGE GROUPS

	1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
SUB.1	49.78	66.11	88.19	88.19
SUB.2	43.91	68.19	68.61	88.19
SUB.3	48.22	62.65	72.44	78.91
SUB.4	52.24	47.87	66.34	78.91
SUB.5	45	55.18	88.19	81.87

ANOVA TABLE

SOURCE	SS	DF	MS	F
Between	3872.54	3	1290.8	4.5
Within	4596.79	16	287.3	
Total	8469.33	19		

TABLE 20 THE CHILD'S UNSUCCESSFUL RESPONSES
ACROSS THE FOUR AGE GROUPS

	1ST AGE GROUP	2ND AGE GROUP	3RD AGE GROUP	4TH AGE GROUP
	3.6-4.0	4.6-5.0	5.6-6.0	6.6-7.0
SUB.1	16.74	16.64	0	0
SUB.2	11.09	10.63	0	0
SUB.3	13.56	13.31	0	0
SUB.4	0	12.92	7.71	0
SUB.5	0	11.97	0	0

ANOVA TABLE

SOURCE	S	DF	MS	F
Between	558.48	3	186.16	9.6
Within	308.97	16	19.3	
Total	867.45	19		

TABLE 21 THE CHILD'S UNCOOPERATIVE RESPONSES
ACROSS THE FOUR AGE GROUPS

	1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
SUB.1	35.24	16.64	0	0
SUB.2	43.91	18.72	21.39	0
SUB.3	38.59	23.42	17.56	11.09
SUB.4	37.76	39.23	22.22	11.09
SUB.5	45	32.14	0	8.13

ANOVA TABLE

SOURCE	SS	DF	MS	F
Between	3450.2	3	1150.1	17.2
Within	1069.5	16	66.8	
Total	4519.7	19		

There is a highly significant difference ($F=29.15$, $p<0.05$) in the children's production of successful responses. As children grow older, they become more sensitive to the social demands of a question. They also become able to locate their responses in the appropriate context.

A highly significant difference ($F=7.59$, $p<0.05$) was also found in the children's production of unsuccessful responses. This suggests that the number of irrelevant responses for young children is significantly higher than it is for older children. This can be explained by the fact that children at three and four years of age have realized that the purpose of a question is partly to give the speaking turn to the hearer. However, they are often either unable to understand what the question requires or what is the appropriate context against which the question should be understood. They take their turn, but provide irrelevant responses which only serve the purpose of maintaining the flow of conversation.

A highly significant difference was found ($F=22.01$, $p<0.05$) in the use of uncooperative responses among the four age groups. The amount of unanswered questions declines with an increase in the child's age.

Overall, the present results support the original hypotheses. Young children have major problems when they communicate with their mothers. Up to the age of four and a half to five, children seem to have problems in clarifying their intentions, in taking the perspective of the listener and in producing talk which is relevant to the conversation at hand. By the age of seven, the above limitations have evaporated. By that age, children seem able to maximize communicative effectiveness by drawing on the relevant contextual information. They are also able to role-take and understand the perspective of the listener.

RESULTS FROM THE ANALYSIS OF THE SOCIAL INTERACTION IN THE GAME

SITUATION

The number of positive and negative social acts performed by the child were counted across the four age groups. The original intention was to perform the same analysis for the mother's speech. However, it became apparent from looking at the transcripts that mothers did not engage in negative social acts. In particular, none of the mothers engaged in non-social behaviour or acted against agreed rules. In most cases, they responded to their children's questions. This finding can be explained by emphasizing the semi-experimental nature of the present design. It seems that in such a situation, mothers are unlikely to produce non-social behaviour. Thus, the following analysis is directed towards examining the child's social interaction. Table 22 presents the total number of such acts and their percentages. (For the child's individual scores see appendix 4).

TABLE 22 PERCENTAGES OF POSITIVE AND NEGATIVE SOCIAL ACTS
DURING THE GAME INTERACTION

		1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
POSITIVE SOCIAL ACTS	S1	121 (73%)	140 (81.4%)	228 (98.3%)	153 (99.3%)
	S2	113 (77.9%)	158 (80.6%)	151 (96.8%)	215 (99.1%)
	S3	131 (66.8%)	190 (87.5%)	192 (97%)	313 (99.3%)
	S4	123 (65.1%)	181 (85.8%)	143 (86.4%)	197 (100%)
	S5	106 (76.2%)	132 (76.7%)	240 (99.2%)	-
	Total	594 (71.8%)	801 (82.4%)	954 (95.5%)	878 (99.4%)
NEGATIVE SOCIAL ACTS	S1	48 (27%)	32 (18.6%)	4 (1.7%)	1 (0.;7%)
	S2	32 (22%)	38 (19.4%)	5 (3.2%)	2 (0.9%)
	S3	65 (33.5%)	27 (12.5%)	6 (3%)	2 (0.6%)
	S4	64 (34.9%)	30 (14.2%)	32 (18.3%)	0 (0%)
	S5	33 (23.7%)	40 (23.3%)	2 (0.8%)	-
	Total	242 (28.2%)	167 (17.6%)	49 (5.4%)	5 (0.5%)

Table 22 shows that there is a decrease of negative social acts with an increase in the child's age. As children grow older they become increasingly able to engage in a meaningful social interaction and do so for longer periods of time. In other words, with an increase in the child's age, we have a decrease in behaviours which are potentially harmful to social exchanges. As we can see in Table 22, there is little variation among children within first two age groups and the fourth age group. However, this is not true for the third group. Subject 4 in the third age group scored an unusually high number (32) for his negative social acts. This result increased the total number of negative social

acts for this particular age group. In examining subject 4's scores, we saw that he seemed to be unresponsive because he chose to concentrate on a different or an irrelevant activity from the one his mother addressed. His scores, however, on the other subcategories of negative acts were less. Also his scores on the language parameters and the socio-cognitive parameters were not substantially different from the scores of the other four children in his age group.

Table 23 provides a more differentiated picture of the above social acts looking at sub-categories of each act for each of the four age groups.

TABLE 23 FREQUENCIES AND PERCENTAGES OF POSITIVE
AND NEGATIVE SOCIAL ACTS BY AGE GROUP

	POSITIVE SOCIAL ACTS			NEGATIVE SOCIAL ACTS		
	Initiations	Responsive	Shared Activity	Waiting for Init.	Non-Social Behaviour	Un-Responsive
A1	148 (17.3%)	136 (15.9%)	328 (38.3%)	57 (6.6%)	101 (11.8%)	87 (10.1%)
A2	284 (32.3%)	189 (21.5%)	239 (27.2%)	46 (5.2%)	36 (4.1%)	85 (9.7%)
A3	272 (27.3%)	89 (8.9%)	576 (57.8%)	14 (1.4%)	20 (2%)	26 (2.6%)
A4	284 (30.9%)	97 (10.5%)	533 (58%)	1 (0.1%)	1 (0.1%)	3 (0.3%)

(*) Note : A1= 3.6-4.0, A2= 4.6-5.0, A3= 5.6-6.0, A4= 6.6-7.0

Table 23 presents some interesting results. First, within the positive acts category, we have an increase of acts illustrating shared activity (from 38.3% to 58%) and initiating interaction (from 17.3% to 30.9%) with an increase of age. This result illustrates an interesting difference in the nature of interaction in which children at different ages can engage. Young children sustain social interaction by merely responding to the adult's comments or acts. Thus, the successful maintenance of interaction depends on how skillful the adult is in producing comments to which a young child can respond. Older children, however, are able not only to respond to the other's comments but also to initiate and control the nature of the interaction. Thus, when interacting, children are active and equal participants with the adult.

(3) RESULTS FROM THE ANALYSIS OF THE MOTHER'S CONVERSATIONAL STYLE

All the utterances produced by the mothers in the game situation were isolated and coded according to their illocutionary force. The new coding system differentiated the utterances intended to elicit or acknowledge the child's physical actions from those intended to elicit or acknowledge the child's verbal behaviour.

Table 24 presents the pattern of distribution among categories across the mothers. Variability across the patterns of distribution among the mothers is not pronounced. Most mothers across the age groups used a lot of questions and a lot of assertives in communicating with their children. The third most frequent category used by mothers is the directive category together with the positive acknowledgment category.

TABLE 25 VARIATION AMONG MOTHERS ON SELECTED CONVERSATIONAL MEASURES

	1ST AGE GROUP 3.6-4.0					2ND AGE GROUP 4.6-5.0					3RD AGE GROUP 5.6-6.0					4TH AGE GROUP 6.6-7.0				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
MOTHER																				
REQUESTIVES	13.2	12.7	3.7	10	9.4	12.5	3.2	3.8	13.8	8.5	5.7	0.9	4.6	5.5	2.4	3.6	4	15.2	2.8	6.4
REAL QUEST.	8.8	5.1	29.6	17.1	6.5	6.2	11.9	14.1	21.5	15.4	19	6.6	24.6	32.2	7.4	14.5	9.1	6.5	20.7	12.7
TEST QUEST.	8.8	4.2	3.7	3	3.5	9.4	1.2	0.9	4.6	6.9	-	-	1.5	3.7	-	-	-	4.3	-	1.1
VERBAL REFLE.	3.3	7.7	8.6	9	3.5	9.4	12.5	4.7	8.5	7.7	6.7	2.8	4.6	4	-	1.8	10.1	4.3	2.8	4.7
CLARIFICAT.	5.5	0.8	-	3	-	3.1	2.4	7.5	3.1	4.6	4.8	3.8	3.1	3.9	2.4	-	7.1	8.6	1.9	3.15
PERMISSION	4.4	8.9	-	-	-	3.1	0.6	-	1.5	0.8	-	0.9	-	-	-	-	1	0.7	-	0.4
POSIT.ACKNOW.	3.3	12.1	11.1	12	9.4	6.2	20.8	11.3	13.8	13.8	12.4	11.3	21.5	9.4	9	19.1	21.1	21.7	18.9	20.2
NEGAT.ACKNOW.	2.2	6.8	7.5	8	5.9	6.2	11.3	15.1	6.1	10.18	6.7	3.8	10.8	3.1	6.5	5.4	4	1.4	3.8	3.6
ASSERTIVES	31.9	37.3	28.4	20	37.6	28.1	20.8	22.6	26.9	23.8	36.2	39.6	38.5	25.2	53.3	32.7	30.3	41.3	35.8	35
EXPRESSIVES	14.3	7.6	2.5	8	15.9	7.8	8.3	16	3.1	0.8	5.7	18.9	13.8	9.4	13.9	19.1	11.1	0.7	6.5	4.4
MOTHER DOMIN.	1.8	3.2	0.9	2.4	5.6	1.8	1	0.8	1.4	1.5	0.8	2.6	0.9	2.1	1	1.2	1	0.9	0	0.8

(*) Note: The above percentages were taken from the overall utterances produced by the mothers.

(**) The Categories of Commissives, Private Speech and Uncodable Speech were omitted from the above Table. Therefore, the percentages do not add to 100%.

(***) Mother's dominance was measured by the mother utterance turn ratio.

Although there is no variability in the pattern of speech distribution among mothers in the same age group, there is an interesting variation in the use of mother's questions and mother's dominance across age groups. Several analyses of variance were performed to test for any significant differences in the mother's type of questions across the four age groups. The statistical analyses used angular transformations to transform the percentages of mother's utterances.

Table 25 presents the anova table for the mother's use of test questions across the four age groups.

TABLE 25 F TABLE FOR DETERMINING DIFFERENCES
IN THE MOTHER'S USE OF TEST QUESTIONS
ACROSS THE FOUR AGE GROUPS

SOURCE	SS	DF	MS	F
Between	337.68	3	112.56	4.81
Within	374.35	16	23.4	
Total	712.04	19		

There is a significant difference ($F=4.81, p<0.05$) in the use of test questions across the four age groups. Mothers tend to use

high-constraint questions with the younger two age groups more frequently than they do with the older children.

Table 26, 27 and 28 present the F-Tables of the mother's use of verbal reflective questions, real questions and directives across the four age groups.

TABLE 26 F-TABLE FOR DETERMINING DIFFERENCES
IN THE MOTHER'S USE OF VERBAL REFLECTIVE QUESTIONS
ACROSS THE FOUR AGE GROUPS

SOURCE	SS	DF	MS	F
Between	140.09	3	46.7	
				2.66
Within	281.36	16	17.58	
Total	421.45	19		

A non-significant difference ($F=2.66$, $p>0.05$) was found in the mother's use of verbal reflective questions across the four age groups. Mother's speech to young children and to older ones contains equal instances of such questions which are simple and help the maintenance of the conversational flow.

A non-significant difference ($F=0.27$, $p>0.05$) was also found for the mother's use of real questions across the four age groups. (See

Table 27). It seems, therefore, that mother's instances of real questioning do not increase with age.

TABLE 27 F-TABLE FOR DETERMINING DIFFERENCES
IN THE MOTHER'S USE OF REAL QUESTIONS
ACROSS THE FOUR AGE GROUPS.

SOURCE	SS	DF	,S	F
Between	35.75	3	11.92	0.27
Within	709.83	16	44.36	
Total	745.57	19		

Given that we have an increase of the mother's amount of questioning with a decrease in age, we can conclude that mother's questioning behaviour changes as a function of age only in terms of test questions. The mother's speech to young children contains many instances of this type of question which are simple and exercise a high constraint on the child's behaviour. However, this is not true for mothers in the two older groups. Although the mothers used many questions in their speech, these were genuine questions and the mothers showed no desire to control or direct their children's behaviour.

A non-significant difference ($F=2.25$, $p>0.05$) was found in the mother's use of directives across the four age groups (see Table 28). Thus, the mothers directive behaviour towards their children does not change as a function of age.

TABLE 28 F TABLE FOR DETERMINING DIFFERENCES
IN THE MOTHER'S USE OF DIRECTIVES
ACROSS THE FOUR AGE GROUPS

SOURCE	SS	DF	MS	F
Between	142.87	3	47.62	
				2.25
Within	338.07	16	21.13	
Total	480.93	19		

A significant difference ($F=3.59$, $p<0.05$) was found in the degree of the mother's monologuing across the four age groups (see Table 29). As the child gets older and a more equal partner in a conversation, the mother's speaking turns contain less utterances.

TABLE 29 F TABLE FOR DETERMINING DIFFERENCES
IN MOTHER'S DOMINANCE
ACROSS THE FOUR AGE GROUPS

SOURCE	SS	DF	MS	F
Between	55.35	3	18.45	
				3.59
Within	82.27	16	5.14	
Total	137.62	19		

Overall, the results from the analysis of the mother's conversational style do not suggest any major individual differences in the mother's conversational style within age groups. There were, however, some differences of the mother's conversational style across age groups. Mother's speech to young children contains significantly more test questions than their speech to older children. At the same time, mothers tend to dominate the conversations with young children by producing significantly more utterances per speaking turn than they do when conversing with older children. Thus, we can conclude by saying that we found variations among mother's conversational styles but these variations were merely a response to differential age or linguistic maturity of the child rather than a response to individual differences of children or mothers styles.

RESULTS OF THE SOCIO-COGNITIVE TASKS

The first socio-cognitive task - the Guess my story task - investigated the child's ability to come up with a story when faced with a set of pictures which represented connected events. The detailed system of the scoring is presented in the method section. For convenience we present again a brief outline of the system.

- Points 0 : Child refuses to participate
- Points 25 : Childs attempts to perform but seems unable to do so
- Points 30 : Child labels objects after E's query of the form "What is that?".
- Points 35 : Child names objects in the pictures.
- Points 45 : Child gives a description of objects.
- Points 55 : Child labels events.
- Points 70 : Child gives a descriptive story.
- Points 90 : Child gives an elaborated story with Ex. help.
- Points 100 : Child gives an elaborated story , full of motivational elements and connective devices.

Table 31 presents the scores each subject received across the four age groups.

TABLE 30 CHILDREN'S SCORES ON "GUESS MY STORY" TASK

	1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
SUB.1	25	45	55	70
SUB.2	50	25	70	70
SUB.3	30	55	70	70
SUB.4	25	55	55	90
SUB.5	35	45	50	100

The results illustrate that the scores on the "Guess my story" task depend on age. Children as young as three and a half and four years of age fail to perform correctly in the above task, whereas children in the ages of six and a half and seven have no difficulty in linking the pictures together and coming up with an elaborated sequence of events. However, it is noteworthy that only one child performed in accordance with the last category. It seems that the task is complicated. Even children between the ages of six and a half and seven are not able to make an elaborated story when faced with a set of potentially connected pictures.

The second task investigated the child's ability to recognize different emotions and be sensitive to the other's emotions.

The scoring system was:

Points 0 : Child not willing to participate.

Points 25: Child attempts to participate but he is unable to do so.

Points 35: Child comes up with emotions which match story but selects wrong faces to match emotions.

Points 40: The "Happy" face is used inappropriately.

Points 50: More than one sad, scared or cross face is used inappropriately.

Points 65: Not more than one of the above faces is used inappropriately.

Points 80: The child gives one careless identification of faces .

Points 90: The child gives correct choices but only after the E. questions about the emotions.

Points 100: The child gives correct choices without E's intervention.

Table 31 represents the results of children's performance on the "Face recognition" task.

TABLE 31 CHILDREN'S SCORES ON "FACE RECOGNITION" TASK

	1ST AGE GROUP	2ND AGE GROUP	3RD AGE GROUP	4TH AGE GROUP
	3.6-4.0	4.6-5.0	5.6-6.0	6.6-7.0
SUB.1	25	65	100	100
SUB.2	50	65	70	100
SUB.3	35	80	80	90
SUB.4	50	50	90	90
SUB.5	50	65	90	-

Here again, performance increases with age. Children in the older age group had no difficulty with the task. However, children in the youngest age group were unable to perform adequately and one of them gave up. Table 31 indicates some interesting results. Despite their age, all children used the "happy" face appropriately throughout the task. The "happy" face thus was used most adeptly. This finding is in agreement with the findings of Borke (1971) and Light (1979). On the remainder, the "sad" face was used more frequently than the "angry" and the "angry" face more frequently than the "scared". Children in both Group 1 and Group 2 did not use the "scared" or "angry" faces and did

not incorporate such emotions in their stories.

The third task investigated the child's ability to take the perspective of another (i.e. to role-take) and his ability to make certain perceptual inferences. The scoring categories were the following:

- Points 0 : Child unwilling to participate
- Points 25: Child attempts to perform but seems unable
- Points 30: Child makes more than one major error
- Points 45: Child makes one major error
- Points 50: Child hides object "under" table
- Points 60: Child makes 2-3 minor errors
- Points 70: Child makes 1-2 minor errors
- Points 80: Child performs correctly. Both the seeker doll and the child cannot see the object
- Points 100: Child performs correctly. The seeker doll can not see the object but the child can

Table 32 presents the children's scores on the Hiding task.

TABLE 32 CHILDREN'S SCORES ON THE "HIDING TASK"

	1ST AGE GROUP 3.6-4.0	2ND AGE GROUP 4.6-5.0	3RD AGE GROUP 5.6-6.0	4TH AGE GROUP 6.6-7.0
SUB.1	30	30	50	80
SUB.2	30	45	50	80
SUB.3	30	25	60	80
SUB.4	40	50	60	100
SUB.5	25	45	70	70

Once again, the above results illustrate that the scores on the "hiding task" depend on age. Young children fail to perform correctly in the above task, whereas children in the last age group have no difficulty in hiding an object so that another person could not see it. Children in the first age group were either unable to understand the purpose of the game or were hiding the object right out in the open. By five years of age, we see some developments. All children in this age group except one, understood what was asked from them. However, they were still making major errors. The object to be hidden was either hidden "under" the table or they left the object in the open and simply turned the doll's head around so that it was facing the

other way. Two children from the third group hid the object under the table. Apart from the "under the table" error no other major errors were observed in the third age group. However, only the six and a half to seven year old children had no problems with the above task and responded in correct ways.

INTERCORRELATIONS OF THE SOCIO-COGNITIVE TASKS

The validity of role-taking ability as a construct was investigated by examining the inter-correlations of the three socio-cognitive tasks: Table 33 presents the correlation coefficients of the hiding task (HT), the guess my story task (GT) and the face recognition task (FT).

TABLE 33 CORRELATION MATRIX FOR HTASK, GTASK, FTASK AND AGE

	HTASK	GTASK	FTASK	AGE
HTASK	1.000			
GTASK	0.764	1.000		
FTASK	0.752	0.698	1.000	
AGE	0.768	0.645	0.796	1.000

All the above correlation coefficient are statistically significant at the 0.05 level.

However, given that we know that performance on the socio-cognitive tasks is highly dependent on age, several regressions were carried out

in order to determine the level of significance when the age variable is controlled.

Table 34, 35 and 36 present the regression tables for the three socio-cognitive tasks when the age variable is controlled.

TABLE 34 REGRESSION TABLE OF HTASK CONTROLLING FOR FTASK AND AGE

Dependent Variable : HTASK

IV	REGRESSION COEFFICIENTS	STANDARD ERROR	t(1,16)
GTASK	0.4594	0.1752	2.6
AGE	0.5059	0.1878	2.7

TABLE 35 REGRESSION TABLE OF HTASK CONTROLLING FOR FTASK AND AGE

DEPENDENT VARIABLE :HTASK

IV	REGRESSION COEFFICIENT	STD. ERROR	t (1, 16)
FTASK	0.4741	0.2728	1.7
AGE	0.2610	0.3108	0.8

TABLE 36 REGRESSION ANALYSIS OF GTASK CONTROLLING FOR FTASK AND AGE

DEPENDENT VARIABLE:GTASK

IV	REGRESSION COEFFICIENT	STD. ERROR	t (1, 16)
FTASK	0.4741	0.2728	1.73
AGE	0.2610	0.3108	0.8

As Tables 34, 35 and 36 illustrate, there is a significant positive relation ($t=2.62$, $p<0.05$) between performance on the GTASK and the HTASK even when the effects of age are controlled. This finding is not surprising. Performance on the guess my story task depends partly on the ability to take the perspective of another person and to make accurate emotional inferences about the psychological states of other people. The hiding task, on the other hand, depends on the ability to take the visual perspective of other people. The other two regression coefficients are not significant at the 0.05 level. However, it is worth noting that we found a significant relation between the FTASK and the GTASK ($t=1.7$) at the 0.10 level. We can thus tentatively say that successful perspective taking of a set of events is related to successful perspective taking of another person's emotional states.

Performance on the face recognition task, however, is not significantly related to performance on the hiding task ($t=1.5$, $p>0.05$) when the effect of age is removed. This finding is in agreement with

Flavell's argument. Following Flavell (1968), a distinction must be made between "perspective taking" tasks and tasks which depend on the "affective" side of role-taking. Flavell suggests that visual perspective taking is easier than role-taking when this involves the intentions or emotions of others.

CHAPTER 6

DISCUSSION

In the first section, the results of each type of analysis will be presented. In so doing, an attempt will be made to place the child's communicative functioning within the literature on children's language use. In the second section, the general issues raised by the study will be discussed. Here, we will discuss the relationship of conversational competence to social awareness and social sensitivity. In the end, we aim to contribute essential information towards a model of conversational development.

(a) The present results

Overall, the results of the present study confirm the original expectations. All participating children had a good grasp of the language and were able to use it as a powerful tool for communicating with their mothers. Even the children in the youngest age group were good communicators. They were able to understand most speech addressed to them, had clear intentions to communicate and, in most cases, were able to do so. The present study thus, is in agreement with so many others in the field (e.g. Ervin-Tripp, 1977, 1979; Keenan, 1974; Dore, 1979; Garvey, 1979; McShane, 1980; McTear, 1985), all of whom showed that, by the third year, children are conversationally quite competent. They initiate conversations, control the information received, and sustain a conversation for more than one turn by being able to identify, and in most cases respond appropriately to, the questions addressed to them.

Despite these accomplishments, three and a half and four year-old children have difficulties in using language. Their language only serves a limited number of functions and and their speech is not yet fully social. Moreover, their conversational exchanges are short. The interaction of the younger children contains significantly less utterances (per speaking turn) than does the interaction of older ones.

However, it is important to keep in mind, that the learning of the social uses of language and the understanding of its social possibilities is a matter of degree. In the present study, we have witnessed a gradual improvement in the child's ability to use language. In the beginning, use of language is egocentric. The child often lacks the ability to take his listener's perspective and place language in the appropriate social context. By the age of five and six, the child becomes increasingly competent in producing relevant talk and in fitting his utterances to the listener's needs. But at this age, the child has problems in comprehending and producing subtle uses of language (e.g. hints) which do not explicitly state the desired goal of communication. By the age of seven, we see the beginning of language use which attempts to go beyond the here and now context of interaction, and attempts to accomplish a series of social ends by employing subtle means.

(1) Functions that language performs at different developmental periods

From the outset, one of the aims was to investigate the various functions that language serves for both participants across different developmental periods. We found interesting differences between the child's language across the four age groups and between the child's and mother's language use.

The functions that all children performed with language were numerous. All were able to use language to request, to make a statement, to respond, and to acknowledge prior utterances. Table 37 presents the pattern of the distribution of language use together of the child's and mother's speech across the age groups.

TABLE 37

PATTERN OF SPEECH ACTS DISTRIBUTION

IN MOTHER'S AND CHILD'S SPEECH, RANKED IN ORDER OF MAGNITUDE

	1ST AGE GROUP 3.6-4.0		2ND AGE GROUP 4.6-5.0		3RD AGE GROUP 5.6-6.0		4TH AGE GROUP 6.6-7.0	
	child	Mother	child	mother	child	mother	child	mother
Assertives	1	2	1	3	1	1	1	1
Responsives	2	7	2	6	2	6	2	5
Directives	3	1	4	1	3	2	3	2
Commissives	-	6	7	7	7	7	7	7
Expressives	7	4	6	4	5	4	5	4
Acknowledg.	4	3	3	2	4	3	4	3
Uncodable	5	5	5	5	6	5	6	6
Private	6	-	-	-	-	-	-	-

The pattern of the child's language functions remains more or less the same across the four age groups. The category of assertives is the most frequent one for all the children. The second most frequent is the category of responsives. There are two important points worth noting here. First, it is interesting that the category of commissives is never used by the children of the first age group. Commissives are utterances

that look forward and promise or offer a claim to the hearer, committing the speaker to some future course of action. Both Searle (1964) and Bach ^e (1979) ^{Harnish} have commented on the fact that this kind of speech act is the hardest one to find in everyday conversations. However, the present context of interaction is ideal for the employment of such language uses because it encourages language which is directed to future actions. It seems, therefore, that the actual illocutionary force of such utterances is too complicated for the younger children. For all the other age groups the category of commissives is the least frequent one. Second, it is only in the first age group that we see some instances of private speech. Children between the ages of three and a half and four are more likely to use speech to fulfill their personal needs than older children. In contrast, older children's utterances were used only as a social activity, where conversational participation becomes the main aim and purpose of language.

There are important differences in the functions that language performs across the four age groups despite the fact that the pattern of the child's language functions remains the same. Significant differences were found among the general conversational classes and among the several sub-categories within each conversational class. Though the assertive category is the most frequently used by all children, there is a significant increase of assertions with age. This is accompanied by a significant increase of directives. More significant are the differences across the age groups in the functions of language for the subcategories of the major conversational classes. Table 38 below, represents the raw data together with the percentages of the different subcategories within the assertive category.

TABLE 38
DISTRIBUTION OF THE CHILD'S ASSERTIVE REMARKS
INTO THREE SUBCATEGORIES

	Labelling	Descriptions of Events	State.about Internal Ev.	Total
A1	60 55%	21 19.3%	28 25.7%	109 100%
A2	43 23.2%	58 31.3%	84 45.4%	185 100%
A3	41 21.9%	110 58.9%	36 19.2%	187 100%
A4	25 13.9%	93 51.7%	62 34.4%	180 100%

Assertion is the function in which language is used as a means of communicating information to someone who does not already possess that information. As we can see from Table 38, the first stage of the child's attempt to talk about the world comes by his adoption of conventional means of communicating. The first age group scored a high percentage for

the labelling category. Fifty-five percent of all assertions consisted of one word which was a label of an object (i.e. "Ball") or a label of an attribution of an object (i.e. "Blue"). However, this labelling decreases as age increases. By the age seven, only 13.9% of the child's assertive remarks were labels. Instead, assertive comments were usually to describe events. Ervin-Tripp and Kernan (1977) and McShane (1980) found that labelling is the first activity to be grasped. For two and two and a half year-olds, the majority of assertive utterances are commonly labelling. By their third year, children begin to produce assertions which do not only label objects but also attribute properties to objects or describe an action (e.g. "fall down"). Though our younger group produced many labels as compared to the older groups, they were still able to produce assertions which were describing events or properties of objects in 45% of the cases. Thus, their speech had improved beyond that of the two year-old's.

With age, we have a gradual increase of vocabulary. Words that describe events and subjective feelings are acquired as is the gradual ability to produce structured utterances. We also see an increased ability to use sentences that go beyond the here and now. The use of language to refer to spatially and temporally remote phenomena is a complex cognitive and linguistic skill. As Ervin-Tripp (1979) points out, children begin to master it after their third year. However, in our study, three and a half year-old children did not use any instances of assertions which attempted to go beyond the present environment. We observed the beginning of this ability in our second age group. It was after the fourth year that we found children exploiting the semantic potentials of language to refer beyond the immediate context. We

observed frequent instances of recall of past events or internal feelings, sometimes prompted and sometimes not. Some of the instances made reference to potential events (see example 1) or past events (see example 2).

Example 1 Child (4;9): Let's play it again.
 Mother : You want to win?
 Child : Yes. This time I'll win.

Example 2 Child (6;6): It is like the game I play with Kim.
 Mother : Yes, it's like Candyland

We see similar developments when examining the subcategories of the child's responses across the four age groups. Table 39 presents the raw data together with the percentages of the child's scores in the category of responses.

TABLE 39
DISTRIBUTION OF THE CHILD'S RESPONSES INTO TWO SUBCATEGORIES

RESPONSES			
	One -Word Responses	Extended Responses	Total
A1	7 (77%)	17 (23%)	74 (100%)
A2	83 (61.5%)	52 (38.5%)	135 (100%)
A3	58 (65.2%)	31 (34.8%)	89 (100%)
A4	41 (46.1%)	48 (53.9%)	89 (100%)

(*) Note : A1=3.6-4.0, A2=4.6-5.0, A3=5.6-6.0,A4=6.6-7.0

As Table 39 illustrates, responses providing the required information decreased with age. This was accompanied with an increase of responses providing extended replies. Whereas both the above type of answers are appropriate for conversation, extended replies serve an additional role. Apart from providing an answer, they also help maintain conversation by initiating further remarks and by extending the topic. Most of the minimal replies consisted of yes-no answers or naming answers. The prevalence of minimal replies in the young child's language can be explained by taking into account many different factors. First, one can argue that the linguistic ability required for one word replies is substantially less than that required for an extended one. Whereas the former requires knowledge of the conventional aspects of language, the latter needs both semantic, linguistic and social ability. Second, the mother's speech towards the young children contains many instances of yes-no and naming questioning. This is not true of her speech towards older children. In our analysis of the mother's conversational style, we found a high percentage of test and tag questions directed towards young children. It seems, therefore, that most mothers adapt their speech pattern according to their perception of what the young child can understand. Most mothers were aware that addressing complicated questions (e.g. requiring explanations, justifications, or extra information) will cause a breakdown of communication. Consequently, they rarely used them. Most questions, however, addressed to older children (especially towards six and seven year-old children) were of a how, where and why nature.

Some interesting differences among the age groups in the "yes-no" replies were found. In adult conversations, yes-no questions elicit a

range of alternative replies. These include yes-no replies, simple synonyms of them, and replies containing various degrees of inferential distance between explicit answers and explanations depending on shared assumptions. For example, the question "Can I go outside?" could be responded to with "It is cold". Such inferential gaps are in fact characteristic of communication where both sharing of assumptions and abbreviations are considered normal.

For the first two age groups, all yes-no replies were very explicit. In addition, we had an increase of explicitness in the second age group. It seems that children in the age range of four and a half and five are far more preoccupied with the clarity of their responses than in saving time in replying. It was in the last two age groups that we observed a few instances of non-explicit replies to yes-no questions which depended on shared assumptions for inference (See example 3 and 4).

Example 3 Mother : Can I go there?

 Child (6;8) : You will be eaten

Example 4 Mother : Shall we have this rule?

 Child (6;0) : Ok, let's have it..

Table 40 represents the raw data and the percentages of the child's subcategories of the directive and requestive function. Young children rarely employed this function. Moreover, whenever they did, it was only for the purpose of soliciting an action. We have very few instances of real questioning in the youngest age group. With the second age group on the other hand, we observe the beginning of the child's ability to use

conventional lexical content, whereas appropriate intonation is often sufficient to indicate a request regardless of the phonological or lexical content of the utterance. The difference goes yet further. There are behavioural correlates of requesting and directing attention such as "reaching" and "pointing" which serve to further clarify communicative intentions. These, however, cannot be behaviourally disambiguated to the same extent with statements. An additional difference between the two types of speech acts is reflected in the fact that statements are subject to criteria of truth or falsity whereas utterances that request and call attention are more appropriately considered as felicitous or infelicitous. Thus, with statements the burden of intelligibility is carried by the semantic content of the utterance. Consequently our finding of a high percentage of assertives and a smaller percentage of directives, especially in the speech of the young children, requires an explanation which must come outside the field of the child's linguistic ability.

We can explain the present results by examining the structure of the interaction that occurred between the mother and the child in the present social context (i.e. the establishment of specific rules for a game). The interaction between the mothers and young children was unequal and pedagogical in nature. Mothers typically asked questions and directed behaviour, while the child labelled objects around him or responded to the questions addressed to him. It is only in the last age group that a more equal interaction emerges. Here we have an increase in assertions accompanied with a rise of directives. This changes the pattern of the distribution of language functions. The mother becomes a true

participant with equal rights rather than a controlling figure responsible for directing communication.

The gradual development of an equal interaction can be seen when we consider several factors in the child's and mother's speech across the four age groups. First, we have an unequal distribution of the actual number of speech acts between mother and child for the first age group. Mothers talk far more than their children and they do so significantly more than in any of the other three age groups. By the fourth year, this inequality is not present. Second, with age, we have a significant increase in the child's directives. As children grow older, they become more competent in asking questions and in controlling and directing their mother's behaviour. Last, in examining the type of the mother's questioning, we see a significant difference in their use of test questions across the four age groups. When interacting with three and a half to five year-old children (i.e., with the first two age groups), mothers make use of a lot of high constraint questions. However, as we saw, this is not typical of their speech towards older children. High constraint questions serve two main purposes: they are simple and secure efficient communication, while serving as tools for directing and controlling the child's behaviour.

The above points lead us to conclude that the present social context encourages a certain type of interaction between young children and mothers and a different type between older children and mothers. For the four year-old child, the interaction is asymmetrical - it is one of the relationship between an superordinate figure and a subordinate one. In contrast, the interaction that the seven year-olds are engaged in is symmetrical.

(11) Coherence of Children's Discourse

One of our aims was to examine how the child becomes a better conversationalist. We wished to examine how and when the child produces coherent discourse and learns to adapt his speech to the listener's needs. We isolated two important concepts which we felt are necessary for a successful conversation: the concept of "relevancy" and the concept of "speech adaptability". The first implies that the contributions a speaker makes should be relevant to the topic at hand. The second suggests that those contributions should be adapted to the listener's perspective and knowledge.

Piaget (1954) suggested that even children as old as five and six years are reluctant to attend to one another's utterances. For the most part, children talk alongside one another but not with one another. The child's "egocentrism" both prevents him from adapting or addressing his speech to a listener and hinders him from adopting the perspective of his interactional partner. Insofar as his utterances are not contingent on the listener's showing signs of understanding, he does not expect the listener to respond appropriately. It seems, therefore, that the egocentric child is unable to consider seriously the conversational contributions of others. Thus, children in interacting with others produce collective monologues rather than dialogues.

However, our analysis of the child's assertions and responses yield results which contradict the Piagetian paradigm. Our results agree with Keenan and Klein (1975), Dore (1979), Ervin-Tripp (1979) and McTear (1985) who show that children's pragmatic understanding of language is far better than the one which surfaces in their speech. We found that even four and a half year-old children frequently made the continuation

of their utterances contingent on the addressee's responding appropriately. It was also the case that as speakers, the children would often adapt their utterances to the form or content of the previous speaker's utterance. In this light, we feel that the capacity of young children to engage in dialogues had been underestimated and that the properties of these interactions deserve further elaboration.

(a) Degree of Appropriateness and Relevance of the Children's Responses

The results of our analysis of the children's responses yield an interesting picture. First, we found nonsignificant differences in the number of inappropriate responses across the four age groups. This finding suggests that even when young children choose to reply to the questions addressed to them, they are able to place their responses in the appropriate context and do so in a manner that ensures successful communication.

Despite this ability, we found significant differences in the number of uncooperative and cooperative responses across the four age groups. In particular, we found that 40.7 per cent of the time, children in the age range of three and a half to four fail to respond to the questions addressed to them. This finding contradicts Stefferson's (1978). He found that two year old children generally responded to questions, but their responses were often inappropriate. We did not find evidence of the child operating with the rule "if there is a question give an answer even if you don't understand it". It seems that children older than two years are in a position to understand rules of appropriateness and are thus less willing to violate them. However, the high percentage of the young child's unanswered questions leads us to agree with Dore's (1977)

claim that, for these children, failure to respond does not appear to violate a social obligation. Obviously, the ability to respond interacts with the development of the comprehension of the question.

The ability to respond to Wh-questions develops between the ages of one and six years (Ervin-Tripp, 1970). Children first learn to respond to where and what questions and later to why, how and when questions. This can be explained partly by appealing to the notion of conceptual complexity (for example, location is acquired earlier than concepts such as causality), but also by the type of response which the question requires. For example, where questions can often be answered nonverbally, whereas when, how and why questions generally require a verbal response. There seems, however, to be good reason to distinguish between the child's responses which are the result of comprehension of the question and the responses which reflect a realization that questions impose a social obligation to respond. We have no way of being certain that children process unanswered questions, but we have at least some behavioural evidence that they attend to most of them. Looking at the videotapes, we found that more than 90 per cent of the questions seemed to be deliberately not answered by children in the first two age groups. If the first decision an addressee must make after grammatically processing a question is whether or not to answer, then no answer seems to be a viable alternative for young children, and one which does not appear to violate a social obligation. The second decision an addressee must make is exactly how to answer. With age, we have a gradual increase in the proportion of answered questions. With the second age group, we observe for the first time, the child's ability to go back to the

question and require additional help when he does not know exactly how to answer the question. (See example 5).

Example 5 Mother : How do you want to play it?
 Child (4;9): What?
 Mother : Do you want to play this game?
 Child : Yeaaaaah !
 Mother : Ok, we have to make up some rules.
 Child : Me?
 Mother : No, we'll make them together

By the age of seven, the children responded to 98 per cent of the questions addressed to them and all of the answers were 100 per cent successful (i.e. appropriate and relevant).

There are also other developments that take place in the child's responses between the ages of three and a half and seven. These have to do with the ways in which responses are used to construct coherent sequences of dialogue. The main development is in the child's ability to structure his conversation. In the earliest age group, we found that children could respond to simple topics (as we already have mentioned these responses were usually one-word responses). Their exchanges were usually fairly closed and did not combine into larger topically and interactionally related sequences. As a result, their conversations often came to a dead end and there was a continual need for the mother to initiate new topics. Example 6 below, illustrates an interactional sequence of a three year, eight months old child with his mother.

Example 6 : Mother : What is that ? (shows object to child)
Child (3;8) : Pig
Mother : What shall we do with that little pig?
Child : (raises shoulders).
Mother : Shall we use it in our game ?
Child : Yes
Mother : Ok, do you want to be the pig ?
Child : (Nods head)
Mother : Ok, and I'll be the cow.
Child : Alligator (points at alligator on board)
Mother : Yes, an alligator! Scary !!
(pause)
Mother : And what is that Justin? (points)
Child : Lion
Mother : Good boy, and this? (points)
Child : Snake

In the above interactional sequence, we see little or no attempt to relate one sequence to another. For most of the conversations of this age group, each turn was independent of the preceding one. We observed very few instances of cohesive devices. One aspect of development consists of the ability to structure longer sequences of dialogue. The major development comes when children learn to set up expectations or provide for the possibility of a further response. This can be combined with the acquisition of devices for fitting more than one utterance into a turn. Consequently, we have longer interactional sequences which contain many

subject to the same constraints of relevance. Given the nature of such exchanges, cohesive devices and anaphoric references are needed to connect utterances together. The use of "it" in the following exchange determines that the word "color" has been accepted by the interlocutors as part of the common pool of shared information.

Mother : Ok, and I move to the right color?

Child : Right, if it is red you go to red

Thus, the latter proposition becomes relevant by virtue of its place relative to the set of propositions which form the common ground of the discourse.

How about the child's responses in the middle two age groups? As we have seen, the child's uncooperativeness decreases with age. However, in the second age group, we see an increase of unsuccessful responses. Although this increase is not significant, we nevertheless examined the nature of the child's unsuccessful responses. Most of these were responses to why and how questions (See example 9).

Example 9

Mother : Why did you go there?

Child (4;7) : An alligator (points at alligator on board)

It seems that the style of the mother's questioning is different from the style she used with younger children. When interacting with the three and half and four year-old children, most of the mothers do not use Why and How questions. They are considered more complex than naming questions and yes-no questions. However, in interacting with four and a

Example 11a

Mother : Well, you see we have to decide
that

Child (5;4): You see, we have to go there
(points at end-point on board)

This strategy brings out the importance of separating the child's "willingness" to cooperate in talk from his "skill". It is clear from the above examples that despite the child's inability to maintain referential talk exchanges for longer conversational sequences, he is willing to interact verbally. At this level, the discourse coherence is achieved to a large extent by tying one's utterances to the formal properties of an antecedent one.

The above does not imply that children did not have some problems in conversing. In particular, children of the second age group had difficulty engaging in conversation. In some instances, it took the mother several turns to secure the attention of the child and establish a discourse topic. (See example 12).

Example 12

Mother : What do you think we do with this? (shows
dice to child)

Child (4;6): Oh! (looks at board)

Mother : Jastin, what do you think this is? (shows
dice)

Child : (looks around)

Mother : JUSTIN! I am talking to you!

Child : (Raises head looks at mother)

Mother : What is that ? (shows dice)

Child : (Looks at dice, then at mother)

Box, BOX!

Mother : Yes, but what do you do with it ?

Child : (looks at dice)

(PAUSE)

Mother : What is that Justin?

Child : (Raises shoulders, looks around)

Mother : Oh come one Justin.

Child : (turns looks at mother) Dice!

Mother : Well, at last!

And what do you do with the dice?

Child : (takes dice) Throw it (throws dice)

Mother : and..... (looks at child)

Child : See, ... blue (points at dice's side) and
here blue (points at board)

After the last turn, the above conversation continues with the child naming the different colours on the board. As we can see, the mother had to push the child to converse. But, after the first couple of turns, the child was able to respond and provide additional information concerning the use of the dice.

In sum, we found that contrary to the Piagetian perspective, children's conversations with their mothers were dialogues. The children attended to the others' utterances and provided relevant responses. This is not to say that children experienced no difficulty in sustaining cooperative discourse. In the beginning, their conversations are short and the topic is exhausted in two turns. However, when the interlocutor

is focusing on the very concrete and immediate context, the child succeeds in producing relevant and coherent contributions. After the fifth year of life, we observe the beginning of extended themes where topic continuity takes several turns. This new accomplishment becomes possible because of the mother's willingness to use several turns to secure the child's attention and the strategy of repetition (phonological or semantic). Repetition is used as a successful cohesive device and it is a means of responding. This finding agrees with Keenan's (1974;1975) and McTear's (1978) findings on the children's strategy of repetition. By the age of seven, the child becomes an equal conversational partner and coherence is achieved by the employment of several cohesive devices and anaphoric references.

(b) Degree of adaptability in children's assertions

The results of the analysis of the children's assertions showed that even the youngest children were not bad conversationalists. About seventy-three percent of the time, children of three and a half and four years of age produced successful assertions, that is assertions which the listener was in a position to understand. All our children were engaged in conversations rather than in monologues and all tried to fit their utterances to the social context of discourse.

In this context, it must be noted that young children had some difficulties. Three points illustrate the child's initial difficulties and subsequent development in appreciating the hearer's needs. First, we have a gradual improvement of successful speech with age. We found a highly significant difference between the age groups in the children's production of successful assertions. As children get older, they become

Mother : (Looks at board, then at child)
I don't understand
(PAUSE)
Child : (Looks at board)
Mother : You mean you throw this ? (shows dice
to child)
Child : YES! And if you have RED you go he::re
(points at square on board)
Mother : (turns looks at child) OK!

It seems that the child was willing to explain his first assertive remark, but the utterance "I don't understand" did not make the problem clear. When the mother attempted to clarify her general statement, the child was able to provide additional remarks.

Third, we found interesting differences in the nature of the actual conversational context in which children at different ages can engage. Although our youngest children produced assertions which were successful 78 per cent of the time, we must note that the context of their interaction was very concrete and immediate. Most of the assertions produced by these children were statements about either observable objects (example 16) or statements about simple wants (example 17). Most children used a lot of nonverbal signs (e.g., "reaching" and "pointing") to illustrate nonverbally what they couldn't illustrate verbally.

Example 16 Child (3;9) : I want this (reaches takes cow)
Mother : Ok, you will be the cow

Example 17 Child (3;8) : Oh, candies! (points at candies on
board)

It seems that it is in fact quite difficult to produce unsuccessful speech when the actual context of interaction is so immediate and concrete. The high frequency of adult's concrete questioning and the prevalence of immediacy suggest that four year olds are not very competent as conversationalists and therefore they (and their adult partners) adopt a strategy which minimizes the chances of unsuccessful communication. It is not that young children often talk in a way which takes the perspective of the listener into consideration, but rather that the complicated talk which requires such a consideration is rarely used. This, however, is not true of the child's conversations at five and a half and seven years. Their conversations are abstract, involve reference to future and past events and communicate subtle subjective feelings.

(c) Degree of Indirectness and Non-Literality in Children's Speech

In general, our analysis suggests that indirectness and non-literality gradually increase with age. We therefore agree with Ervin-Tripp's (1977) claim that children's language use progresses from the ability to produce and comprehend direct comments to the ability to produce and comprehend indirect or non-literal comments.

(i) Analysis of Indirect Remarks

Our results indicate that indirect speech is infrequent for all age groups. Given the low incidence of this kind of speech, our conclusions are necessarily tentative and should be regarded with great caution.

Indirectness increases with age. Two points are of interest here. First, the three first age groups evidenced similar levels of indirectness. A noticeable increase was only evidenced by the oldest group. The percentage of indirect speech for the first three age groups was 1.5, 1.6, and 2.1 respectively. For the oldest group, it was 8. It seems, therefore, that only six and a half and seven year-old children that use complicated language in their everyday conversation. Second, the mother's speech follows the pattern of the child's speech. Mother's indirectness increases in proportion to the child's. This is hardly surprising; it fits into the general picture. Mothers are likely to produce only that kind of speech which accords with their children's understanding and abilities.

When examining the frequencies of the different kinds of indirectness in the child's speech, we looked first at standardized speech; that is speech which contains wh-imperatives, impositives, and queclaratives, which is very simple. Though it appears indirect, it actually behaves as direct speech. This is because the usual inferential process is short-circuited. It should be expected, therefore, that indirectness of a standardized form would be the most frequent of the indirect remarks.

In investigating standardized indirectness, we found that the first three age groups produced no or only one instance of standardized speech. This finding needs explanation. Two points can be made to explain this finding. First, we have to remember that most standardized indirectness consists of a request of the would, should or why form. But as already mentioned, when interacting with their mother under the present social context, young children are less likely to produce many remarks of an interrogative nature. The ability to perform a request for

information implies that the speaker can exercise power and can initiate further conversation. Given the fact that the young child is an unequal participant in the social interaction, very few questions will be found in his speech. When this is borne in mind, our failure to find indirect standardized remarks is not surprising. Secondly, most of the standardized indirect questions can also be seen as a polite way to form a question. The utterance "Could you pass the salt please" is, for example, best conceived as a polite way to request the salt from someone. Ervin-Tripp (1979) has argued that the beginning of polite forms of requests appears around the fourth year. Children start realizing that they have to use politeness markings as a way of showing their cooperation with their hearer. However, as Ervin-Tripp has found, mothers are less likely to be addressed with polite markers. Fathers and strangers are given different treatment. As Ervin-Tripp has noted, they receive fewer imperatives than mothers. This may be because the fathers and the strangers serve the children less often. Thus, our failure to find such speech may well be a result of the specific pattern of interaction between young children and their mothers rather than the result of the child's cognitive and linguistic limitations.

In terms of standardized indirectness, the mother's speech is more or less constant across the four age groups. Although we do have some imperatives and wh-imperatives, we found no declaratives. However, when we consider the number of questions that mothers address to their children, we see that the percentage of the wh-imperatives and imperatives is a small percentage. Indirect and more polite forms of requesting are thus not characteristic of interlocutors who are familiar with each other. Imperatives and other direct forms occur whenever cooperation can be assumed. Conversely, the special markings we call

polite, are called into play whenever cooperation can not be assumed either because the other is considered an outsider or because he is less familiar with an already established pattern of communication.

In terms of pragmatic indirectness, we found a slight increase with the child's age. However, the actual instances of such indirectness are so small that they allow for no further comments.

The results on indirect hinting are worth considering. First, hinting gradually increases with age. In the first age group, there are four instances of such indirectness. In the last age group, there are nineteen instances. Secondly, it is very interesting that although young children score very low on the other categories of indirectness, they do produce hinting, the form of indirect speech which is considered the most complicated. In order to realize their intention, hints typically require a logical inference on the part of the hearer. We have claimed that the most important limit that the young child has in producing or comprehending hints is cognitive or inferential; he can not do the work on drawing the inference about the desired object or act.

How can we explain, then, the presence of hinting in our young children's speech? We can attempt to answer this question by examining the instances of hinting that the first two age groups produced. Most hints were of the nature "I am tired", rather than "Let's stop playing", or "this alligator", rather than "You can not go there". For example, the child's utterance, "This alligator", received the following response from the mother: "Oh no, I will be eaten." Thus, the mother perceived her child's naming behaviour as an indirect remark directed to restrain her from making any particular kind of move. But can we be sure that the child hints deliberately? Does he consciously restrain himself from

doing otherwise? Restraint in mentioning what is wanted is used by adults both to leave the choice to the hearer (as a form of deference) and to allude to shared knowledge under conditions of solidarity and humour. Yet, it is easy to see that young children are likely to refer to the beginning stages or preconditions of need simply out of failure to specify what is wanted - as when they say " I am tired " rather than "Let's stop playing". Being nurturant, adults then complete the work for them. Similarly, given that the young child spends most of his time in labelling objects around him, we can not be sure that his choice to utter "this alligator" is an active choice resulting from the proper identification of what he wanted to imply. It seems, therefore, equally appropriate to argue that the three and a half and four year-olds' speech to adults often focuses on obstacles rather than on specifying their means. Consequently, although their utterances may look indirect, they fail to be direct and therefore are merely elliptical. A similar point has been raised by Ervin-Tripp (1980).

It is only in the third and fourth age groups that such worries disappear. When the child hints, both the mother and the observer are sure that he does so consciously and his choice of concealing his needs is deliberate. For example, a six year and eight month-old child produced the utterance, "This is a blue square mommy!", when his mother moved there after rolling a red. There was no doubt in the mother's and the observer's mind that the child chose an indirect act to correct the mother's behaviour. This was judged to be milder than simply complaining about the mother's error.

When we examine both the mothers' and the older children's indirectness, we find certain characteristics which raise doubts

regarding our preliminary definition of indirectness. The Indirect Speech Act Thesis views such acts as performing two functions, direct and indirect. One feature which distinguishes indirect acts from direct ones is that they can be contextualized to yield two interpretations - the literal and the non-literal interpretation. There are, however, problems involved. First, many of our indirect acts were conventional and standardized. Embedded in a particular context, the indirect reading of such acts, even when it has an indirect function, can be contextualized to yield no more than a literal interpretation. If, then, some formula, like "please" in (1) and (2) below, no longer admits two readings, there is no longer any point in calling the speech act "Indirect".

(1) Can you keep playing, please? (child 6;9)

(2) Can you please give me the dice (mother to her 7;0 year
old child)

One can argue that conventional indirect acts are a special case of indirectness and that the concept is still a useful one, especially in understanding the role of "hints" in social interactions. "Hinting" can never be so strong as to force the indirect speech act reading. However, looking closely at our hinting instances, we found that in some cases when these were embedded in a particular context, the indirect reading was the only one possible. For example, consider the utterance (1) "No, not the BLUE!" (child 6;6) made when the mother is just about to move into a blue square and the utterance (2) "You have a red" (child 6;7) made when, after rolling the dice, the mother looks around trying to decide where to go. Because they can be interpreted as statements and as directives, both seem indirect. However, there is an important difference between them. When the social context is taken into account,

the first is unambiguously a directive. The child utters it by suddenly leaning forward, turning to the mother and waving his hand. The sudden shift in body attitude and the loud excited voice signal an urgent warning, and the intonation that accompanies the act leaves the mother no room other than to interpret it as a clear directive. This is not the case with utterance (2). Here, the mother has options. She may wish to interpret it as a directive and respond appropriately. Alternatively, she might decide that the utterance is a statement and proceed in this vein.

We think that the above distinctions are very important for clarifying the Speech-Acts Thesis. The videotape analysis demonstrated that understanding starts from context. Thus, in many situations, the calculation of the speaker's intent (as this has been conceived by linguistic philosophers) is unnecessary. When a listener is attending to ongoing action and its trajectory, it is possible to understand a congruent utterance with minimal interpretative work. What is said is often redundant or adds only certain specifications (e.g., as in "please"). In such cases, alternative interpretations, including literal ones, are unlikely to be considered at all unless the utterance is so unconventional as to require an inference to reach a relevant interpretation. Here, therefore, we find ourselves in close agreement with Ervin-Tripp (1979) who writes: "We can say that interpretation is retrospective to context..... We propose that participants become aware of inferential processes when there is incongruity or misunderstandings and that this awareness has been the model for standard interpretation." (p. 207).

This discussion raises serious doubts about the usefulness of the concept of indirect speech acts in developmental research. If this term is unclear and does not seem to have a unique point of reference, what does it contribute? We believe that the concept does have a distinct point of reference, but this needs clarification. In our analysis of conversations, we found many instances of speech which were ambiguous and required certain inferences to be disambiguated. Intended meanings were often calculated from context and connected with certain general conversational principles, such as the cooperative principle. However, the term "indirect" is too broad. We need to make several distinctions among the different types of indirectness that it embodies. Some of the most important distinctions we found in our transcripts are:

(1) When the intonation (or nonverbal behaviour) of some conventional phrases forces a reading which is indirect with respect to the speech act. Without the special intonation and the conventional phrase, the whole speech act is no longer indirect.

(2) Indirect meanings may be understood immediately (short-circuited implicatures). The interpretative process that occurs here relies heavily on context and appears to depend on expectations based on repetitions, knowledge of usual sequences, and roles. The process of comprehension that exists here is automatic. The speaker does not have to go through the same inferential process as that associated with complicated indirectness.

In developmental terms, such indirect speech acts might be easier for children to comprehend since they depend on knowledge about

routines and social events. From a very early age, children have a rich system of alternations in a form that is systematically related to social features. They sensitively identify social contrasts signalled by tag modal, polite forms, address terms. They also have learned to respond to standardized indirectness (e.g., could you give me the book?).

(3) Indirect meanings may also be computed. Here, the meanings are elliptical and the hearer is responsible for drawing the inference about the desired act or object. Children by the age of six or seven are able to cope with this kind of inference and they incorporate it in their everyday exchanges for ellipsis, for joking, or for the redundancy that instructs participants about conventions.

(4) For the purposes of observational or experimental work with children, we need to make a distinction between deliberate indirectness and indirectness due to the child's inability to specify his wants. To test the likelihood that young children actively hint when they could do otherwise, we need to look solely at situations where we are sure they know how to identify what they want.

(ii) Analysis of Non-Literal Remarks

Instances of non-literality in both the mothers' and the children's speech are very few. This is true for all the age groups. The most frequent subcategory of non-literality is that of metaphoric language. This finding can be explained by addressing the characteristics of language which accompanies a game interaction. All the instances of

metaphor use were of only one kind: allocating roles in the game. For example, "I am the pig", "you are the cow", etc. In the last age group, we have an increase of non-literal expressions in the mother's speech. However, when we examined this increase in detail, we found that it was mainly due to one mother. She used a lot of under/over extensions and was responsible for most of the sarcasm. We therefore feel that the increase is due more to the characteristics of a specific person than to the group.

Given that the numbers are so small, we feel that we are not in a position to arrive at any conclusive remarks about the nature of non-literality in the mother-child conversations.

A Task Designed to Investigate Children's Comprehension of Indirectness
and Non-literality

Since our observations revealed such a small number of indirect and non-literal speech, a special task was designed to test the child's direct comprehension of such speech. A "Puppet-Show" was performed by the experimenter. Together with her, the child was asked to hear the story and act it out by using the puppets. Three puppets were involved: a dog, a child, and a mother. The experimenter acted out the roles of the dog and the mother, and the child acted as the puppet-child. To create a concrete environment for the show, a three dimensional house and a garden which included all the objects mentioned in the story (i.e. flowers, watering jug, etc.) were designed.

The Puppet-Show story was as follows:

One sunny day, Mary and her mother were out in the garden watering the flowers. The mother said to the child: (1) "Mary could you bring me the watering jug please?" As they were watering the flowers, the little dog came out and started immediately to play with the flowers. The mother saw the dog and said: "Oh Mary, the dog will destroy the flowers!" As soon as Mary had taken the dog away, the mother said : (3) "Dogs will always be dogs". Mary and her mother then continued with their watering. Suddenly, the mother saw the cactus that was in the far end of the garden. She said to Mary: (4) "Oh Mary look! The cactus has grown as tall as a tree!" One of the flowers was drying up and turning brown. Mother looked at the flower and said: (5) "Oh my goodness, and this flower is doing very well! We have to do something for that poor flower." She turned to Mary and said (6) "Mary where is the food for the flowers?"

Soon Mary became bored with watering the flowers and started playing with the dog. She was pulling the dog's ear and making it cry out. Mother saw Mary and said : (7) " I am sure Mary the dog loves having his ear pulled". As soon as mother finished watering the flowers, she said to Mary: (8) "Mary it's getting dark".

The story contains many instances of indirect or non-literal speech. After producing each, the experimenter stopped to ask: "What do you think Mary did?" or "What do you think mother meant by this?"

Several problems must be considered: First, the task is subject to all the criticisms which may be raised about any comprehension test directed to young children. In particular, we have to be aware of the classical issue of performance versus competence. Does the failure to show elements of understanding derive from lack of understanding of what was asked, lack of specific knowledge asked of the child, or disinterest in the task? We have no way of distinguishing between these three alternatives. They are thus necessarily lumped together under the broad category of "no response". Second, even worse problems plague the attempt to evaluate the child's comprehension of certain instances of non-literal speech. When the child understood instances of indirect speech, he was usually able to indicate this by using behavioural means. For example, when the mother uttered: "Could you bring me the watering

jug, please?", the child (Mary) could pick up the jug and hand it to the mother. But, there was nothing that the child could do to show his understanding of the utterance: "Dogs will always be dogs". Consequently, the experimenter had to ask explicitly for a justification of the mother's remark. Here again, one finds difficulties in attributing a failure to any specific cause. Was it that he failed to give an explanation, because he did not understand non-literal expressions? Or was it because he could not find an adequate explanation? Moreover, the experimenter's form of questioning might have been problematic for young children. The literature suggests that why and what does he mean type of questions are in fact very difficult for young children.

We found that these problems are serious enough to make the inclusion of the "Puppet-Show" task in the main body of the thesis, unwarranted. However, we do feel that some of our results are worth a brief mention.

We found that the youngest children were mostly unable to perform the task. Three out of five sat motionless and refused to take part. Although two of the children were excited by the show, they did not stick to the experimenter's story. They acted as if they had forgotten the fact that the experimenter had a story to tell and were more interested in creating their own. It was in the second age group that we observed the child's willingness to hear the story and carry out the instructions. All the children in this group understood the standardized indirect comment (comment 1) and performed appropriately, (in other words, they picked up the watering jug and gave it to the mother). Two children understood the second indirect comment (comment 2) as being a

direct request. See example a.

Example a

Experimenter : (turns looks at child)

Oh, Mary, the dog will destroy
the flower

Child : Ok, here! (takes dog away)

The remaining three children did not, however, respond. One of them was clearly inattentive to the mother's comment. The other two gave the impression of listening, but did not respond.

All the children in the last two age groups behaved in an appropriate way to the above two instances of indirect speech. We have similar results for the next indirect utterance (Comment 6: "Mary where is the food for the flower?"). Children in the second age group were hesitant. Two out of five responded by giving the food to the mother. However, three showed no signs of understanding. In the third and fourth group, all children searched for the food and gave it to the mother. See example b.

Example b

Experimenter : Mary, (turns looks at child)

Where is the food for the flowers?

Child (6;8) : Is that the food? (picks up a box,
shows it to mother)

We found that the last indirect request (comment 8: "It is getting dark") was less difficult. In the second age group, all the children

except one interpreted the utterance as a request to terminate the activity and enter the house. Likewise, the children in the third and fourth age group had no difficulty in understanding the mother's intention. Two children in the third group who did not wish to end the game and go home, protested as if the mother's comment was in fact a direct request. See example c.

Example c Experimenter : It's getting dark!
 Child (6;7) : Oh,no! Let's play some more!

Overall, we found that four and a half and five year-olds were able to cope with half of the indirect comments addressed to them. Standardized indirectness posed no problems for all the children over four and a half years. That was also true for the last indirect comment, "It is getting late". Although it is a hint, it has probably become conventionalized in the mother-child everyday conversations. However, some of the children in the second age group had problems in comprehending the other instances of hints which did not contain the desired act. Hints like "Oh, Mary, the dog will destroy the flower" were not picked up by half the children in this age group. Unfortunately, we do not know whether the children did not pick up that remark because they didn't understand it or because they chose to not pick it up. It was only after the fifth year, that the children responded promptly to such a remark.

Our results concerning the comprehension of the non-literal expressions were less clear. In the second age group, we had only one

child who responded appropriately to the expression: "Dogs will always be dogs". See example d.

Example d

Experimenter : "Dogs will always be dogs"
Child (4;7) : (looks at dog, pats dog)
Experimenter : What does mother mean by that?
(pause)
Experimenter : Why did mother say that?
Child : (looks at experimenter)
Because dogs eat flowers

It is worth mentioning that this was the only child in this age group that owned a dog. We don't know whether the child picked up the non-literality or whether he was just able to rely on past experience when he produced his response. The responses of the children in the third age group were equally problematic. Three children seemed puzzled by the above remark. When they were asked why the mother said that, they responded by saying that they did not know.

The metaphor (comment 4: "The cactus has grown as tall as a tree") and the sarcastic comment (comment 5: "Oh my goodness, and this flower is doing very well") were also received with confusion. However, the second sarcastic comment (comment 7: "I am sure Mary, the dog likes having his ear pulled") had a laughing response by two of the children in this group. When they were asked why did the mother say this, both responded appropriately. See example e.

Example e

Experimenter : I am sure Mary, the dog likes
 having his ear pulled! (looks at child)
Child : (Child leaves dog's ear, turns looks at
 mother and laughs).
Experimenter : Why did mother say that?
Child : She is joking

It seems that the second sarcastic comment is in fact more concrete than the first one. It contradicts an everyday fact that young children know. They were puzzled, however, by the previous sarcastic comment (comment 5: "Oh, my goodness, and this flower is doing very well"). The understanding of the sarcasm here necessitates a specific knowledge of the intonation accompanying sarcastic comments and an ability to operate within the framework of the story as presented by the experimenter.

The performance of the children in the fourth age group was more advanced. They all understood the tautological expression - "Dogs will always be dogs". Their responses were: "Dogs are naughty", or "Dogs are bad", or " All dogs eat the flowers in the garden". Three out of four children understood the metaphorical expression. For example, a six year and eight month-old child responded to the experimenter's questioning of the mother's expression "Is the cactus as tall as a tree?", by explaining "No, it just grows fast". Only one child could not respond. When asked whether he believed that the cactus was in fact as tall as a tree, he said that he did not believe that, but he could not articulate why he thought the mother said so. We encountered the same problem of articulation with our sarcastic expression "Oh, my goodness, and this flower is doing very well". One child laughed, but the other three did

inferences regarding the internal states and the perspectives of others. The second is the ability to understand a social context and its imperatives for social behavior. To test directly the children's abilities in these areas, we selected three tasks. The first, "the face sensitivity task," explores the child's knowledge of others' emotional states. The second, "the guess my story task," investigates the child's social understanding and awareness, in particular, his ability to attribute causality and his degree of social knowledge. In the latter regard, the focus is on the child's familiarity with what is relevant, what is irrelevant and what is the sequence of the events which take place during a familiar social occasion. The third, "the hiding task," investigates one aspect of successful role taking, namely successful visual perspective taking.

Overall, our results suggest that the development of social awareness and knowledge is not an all or nothing affair. Rather, it is a very gradual process which starts at around the fourth year of life. Despite making important mistakes, all our children at that age showed some elements of understanding. The process appears to be completed only by the seventh year. The oldest children performed without making any errors. Although they were the only ones to do so, we feel that to conclude the younger children are completely "egocentric" is incorrect and fruitless. Our results suggest that we ought to look closely at our transcripts and analyse both the achievements and limitations of the younger children. In so doing, we may determine which social cognitive parameters are problematic and which are not for children of each age group. We may thus arrive at a developmental picture of the children's understanding of their social world. At the same time, we can better

understand the performances of children belonging to the intermediate age groups.

Face sensitivity task

The aim of this task was not only to investigate only non-verbal responses to emotional representation (like for example, Shields' 1985 study), but also verbal expressions of what the face is and what emotion goes with what kind of face. Virtually all the subjects found the task easy to comprehend and had no difficulty responding. Only one child, a member of the youngest age group, seemed unable to perform the task.

Here, we summarize the results for each age group. The children's performances in the first age group were inadequate in several respects. A lot of the faces selected were incorrect and one child selected the wrong faces which did not match the emotions of the boy in the picture. In the second age group, levels of performance improved. All the children were able to identify four out of five faces and were able to come up with the right emotions to match the pictures. Most, however, made one mistake in identifying one of the sad, scared or cross faces (in two of the cases, this was a careless mistake corrected by the child himself). The performance of the children in the third age group improved even further. Without any experimenter intervention, one child gave correct faces and correct emotions throughout the task. Two made careless face identifications which were immediately corrected by the child. The remaining two children made no errors in identifying the faces. However, the experimenter had to intervene and direct the child's attention to the emotional aspect of the picture. In the fourth age

group, all children performed without error and selected a face and matched it to a relevant emotion without help.

Reviewing these results, several points are worth mentioning. First, children as young as four and a half make few errors regarding the representation of emotions. Secondly, all the children had no problems with identifying and finding the right emotion for the pictures which portrayed a "happy" face. Of the remainder, the "sad" face was identified most frequently, then the "cross" and the "surprised" face. The most difficult face proved to be the "scared" face. However, all these were identified with roughly equivalent accuracy. In sum, pre-school children appear to be operating with a two-phase scheme of emotional representation where happiness is readily distinguished, but all the other states are not clearly differentiated. This finding is in close agreement with Shatz's review (1975) which concludes that by the age of four, children are proficient at identifying situations with happy outcomes and between four and seven, they become increasingly accurate at identifying situations leading to sad, fearful or angry outcomes. Looking at the results of the other age groups, we can say that the ability to identify "sad" faces develops from the ability to identify "cross", "scared" or "surprised" faces. By the age of five and a half, children are quite good at distinguishing happy from sad and cross faces. Scared and surprised faces, however, are still problematic. It is only after the sixth year that children start making finer differentiations (e.g., identifying "scared" faces which originally would have been categorized as "bad" or "sad.")

To conclude, it appears that there is a developmental order to the sequence in which children become capable of differentiating between

emotions. Happiness is the first emotion to be reliably distinguished and this is followed by the emotion of sadness. Then we see the development of the ability to make finer differentiation along the happy-sad continuum.

The "Guess my story" task

Once again, the results illustrate that performance depends on age. However, unlike the previous task, the "guess my story" task was difficult for all the children, particularly the youngest children. One three and a half year old child was unable to perform the task at all. Three others were able to name the objects in the pictures only after the experimenter's prodding. Only one was able to identify the objects on his own. None of the children in this age group was able either to identify a single event in individual pictures or attempt to link the pictures together. We see some development in the children's performances in the second and third age groups. All the children in these groups understood that each picture represented a social event and that these events could be linked together to represent an integrated sequence. However, the children in the second age group were unable to come up with a whole story concerning the four pictures. Instead, they focussed on description and were particularly interested in labelling the event depicted in each individual picture. They also provided the first example of an attempt to link the pictures. Two children attempted this by using connective words. Both used only one such word, the word "and" to link one picture description with another. (See example 1).

Example 1

Experimenter: (shows the picture with the birthday cake and the boy)
(pause)
Experimenter: What is that?
Child (4;7) : A birthday cake. The boy has his birthday.
Experimenter: (points at the second picture which shows presents)
Child : And birthday presents. And a boy opens them.
(pause)
Experimenter: Yes, and then what happens?
Child : Oh a snake! (points at the snake which comes out of the
present box).

Two of the children in the third group and three children in the fourth age group, gave descriptive presentations of the four pictures. Their descriptions were accurate and contained many instances of connective articles and anaphoric references. (See example 2).

Example 2

Child (5;3) : This boy (points at boy figure) has his birthday and (looks around) uh... he has a birthday cake some presents. Well, he sits down and opens one.... then here a snake comes out and the boy is scared. Uh..... then.... a cat eats something, what? (turns looks at experimenter).
Experimenter : I think the cat is eating the birthday cake.
Child : OK, and the cat is eating the cake and breaks the plate, and then it's night and the boy sleeps (pause)..... and the teddy bear sleeps. That's the end of the story (turns looks at experimenter)

In the above example we see some of the child's attempts to generate a story for the four pictures and give a causal interpretation of the events. The linking of the pictures is done by the employment of such language as "then", "and", "well". There was only one child who gave an elaborated and imaginative story to describe the four pictures (See example 3).

Example 3

Child (6;9) : (Looks at the pictures) Ok, I'll start from here (points at the boy in bed) What's his name? (turns looks at experimenter).

Experimenter: I don't know.

Child : Ok, he is David. So, one day David was very ill He was at his bed, and he was very miserable. He falls asleep and he dreams. He dreams that he has his birthday and his mother has a party for him. Here is the birthday cake (shows picture with cake) and here are the presents. One of the presents was a bad joke In the box there is a snake. David did not know that and he opened the box and the snake came out. He was very cross, because the snake was running after the cat that David loved. Well, (looks around at pictures) well... the cat was running away from the snake and he threw the cake down. Oh no! it was a very nice cake. Well, "Mommy will take care of that" David said. He then put the snake into the box again. And...(looks around) and... eh... well, that's the end of the story.

(pause)

Child : I can make up another story, Ok? (looks at experimenter).

Experimenter: No, let's play something else.

Overall, the children found the task difficult. Although most children in the last two age groups showed some ability to make causal inferences in order to describe social events, they had difficulty elaborating stories which contain motivational and imaginary statements. The task is more difficult because it not only requires an understanding of social events and their sequence, but also the ability to talk about them in a sophisticated and imaginative way. We can thus say that most of our five and seven year-old children were able to understand what a description of a social event should be and what the relevant sequence of the several steps of a birthday is. However, they generally were not able to produce an elaborated verbal presentation of the four pictures and arrive at a unique story.

The Hiding task

Here again the results indicate that the children's performances improve with age. Two children in the first age group were unable to respond at all. Three others hid the doll, but did so right out in the open. By four and a half or five years, we see some developments. All children in this age group understood the purpose of the task and what was expected of them. However, they all made errors in hiding the doll. Two children hid the doll out in the open and turned the doll's head round so that it was looking away from the "seeker" doll and three children hid it under the table. Turning the doll around so that it looks away is an interesting response. As Light (1980) points out, the child in this case confuses the "not being able to see" with the "not being seen". Several mothers mentioned similar instances when playing hide and seek with their children. For example, one mother said that her child often goes away and hides his face into the sofa pillows. "He thinks, that when he himself cannot see, he cannot be seen by other as well." The "under the table" response was equally interesting. It is worth noting that two children in the third age group hid the doll under the table. Although incorrect, this response is more advanced than the others. It seems that the meaning of the word "under" itself is very powerful and makes children believe that something "under" an object is well hidden. This of course is partly true. Hiding something under a table is better than hiding it right in the middle of the room. For the seeker to find the object under a table he must carry out certain actions (like bending) which might be seen as being equivalent to lifting a pillow and searching for a hidden object. Apart from the "under the

table" error, no other major errors were performed by the children in the third age group. Two children made minor errors. In both cases, the error was corrected by the child himself. All the children in the oldest age group had no problems with the task and all performed in correct ways.

To conclude, three and a half to four year old children have real difficulties in taking the visual perspective of another person and responding appropriately. By four and five years of age, children still have major difficulties in such a task. However, we see the first attempts to understand what it is to hide something so that another person cannot find it. The children start by understanding that hiding something "under" an object makes it more difficult to find. They also start understanding that "not being seen" must have something to do with "not being able to see". So, in an immature way, they either attempt to close the doll's eyes or turn the doll around so that she can not see the object. It is in the fifth year that we see real progress. Here, three children performed with minor errors. At seven years, however, we see the development of a further ability. Four children not only performed correctly, but they also were able to hide the object in a place where the seeker doll could not see it, but they could. That behaviour is very advanced. The child not only understands how to successfully hide, but does so without reference to his own visual perspective.

In discussing our socio-cognitive task results, there are three general issues which we feel need mentioning. First of all, there is the issue of "egocentricity" in the child's thinking. We will be brief here. As we have already pointed out, our children did not seem totally egocentric. At four and a half, they had some ability to understand "happy" faces and to appreciate the situations which generate such

feelings. They were also able to understand that a particular picture represents a happening and that these individual happenings might be linked together to describe a social event. As far as their visual perspective taking abilities are concerned, they are still rather egocentric. Although their performances were better than the three and a half year olds' (who hide things right in the open), they were not successful. But by the fifth year, the children are far more competent at role-taking and making inferences about the other's internal states. These children were able to produce good descriptions of social events, to distinguish between "happy" and "sad", "cross" and "scared" faces, and, in most cases, to hide an object in places where a seeker doll could not find it. Despite these achievements, their performances did suffer some limitations. Finer distinctions between similar emotional states were not made (i.e. between the "cross" and "scared" faces), elaborated descriptions of events were not given and their visual perspective taking was flawed in minor ways. Only among children of the last age group did we observe error free role-taking and visual perspective taking.

In this light, we believe that the dichotomy of "egocentricity vs sociality" fails to see the real complexities of children's responses in the intermediate groups. The responses of our two intermediate age groups need further explication. We refer to Flavell's (1978) developmental analysis of role-taking. He argues that there are five important things that a child must know in order to achieve a role-taking mediated end: existence, need, prediction, maintenance and application. "Existence" refers to a simple awareness that others and oneself apprehend the same object or the same event differently. "Need" consists of a "growing

awareness that certain situations which do not explicitly call for role-taking activity do so implicitly; that certain situations constitute a signal to engage and utilize one's role-taking capabilities." A further knowledge is achieved when the child, assuming he knows all the foregoing, succeeds in actually carrying out the intended analysis of the other person's role attributes, (prediction), and yet a further knowledge is achieved when the child reaches an equilibrium between his own point of view and the others (maintenance). The last concern, application, refers to the remaining task to "behave appropriately" in light of one's understanding of another's perspective and to translate this into an effective verbal message.

It is because of children's inability to "apply" that our understanding of children's limitations are often incorrect. As Flavell argues, "if a child produces a poor solution to some problem which entails role-taking activity, it may not be and often will not be obvious where the trouble lies." He may have been unaware of perspective differences, unaware that the present task has an implicit role-taking requirement, unable to achieve or maintain an adequate representation of the other's perspective, unable to use the information contained in his representation, or some combination of these. Unfortunately, this is the major limitation of any psychological research on children. Because there are so many alternatives which can be marshalled to account for the child's failure to produce an appropriate response, we have chosen not to concentrate on the child's failures but rather on the child's success. Looking at our results, we can see that children at different developmental ages demonstrate different role-taking abilities. As we have seen, our three and a half to four year-old children failed to

perform adequately in most of our tasks. Our four and a half to five year olds showed the first signs of role-taking abilities. They seemed to have grasped both the "existence" and the "need" parameters of role-taking. They understood that "what is known to me might not be known to you", that "people have internal feelings and emotions which are different from mine", and that when you hide an object from somebody else, you have to hide it so that "the other does not see it whereas you can see it". Their problem seemed to lie with the "prediction" element of role-taking ability. It is because of that that we see errors, like "hiding the cake under the table", or giving descriptions of events which were very concrete and did not include any complicated processing of the other person's motives and emotions. By five and a half to six years of age, most of the role taking problems have been solved. What most children seemed to lack was an ability to apply their inferences and their social cognitions and translate them into an effective verbal message.

The second general issue is that of individual differences in performance on the socio-cognitive tasks. In Flavell's (1968) studies of role-taking, he repeatedly observed a very wide range of individual differences between children of the same age. Others (e.g. Hughes, 1975) have made the same observations. We did not find a great deal of individual variation in the performance of children in the same age group. Two points must be taken into account here. First, it is important to remember that the size of each of our age groups is very small. Second, Flavell has attributed some of the individual differences to environmental variation. For example, different maternal styles, different school environments, and different socialization practices may

lead to individual differences in the rate of relevant skill acquisition. Our group was very homogeneous. All the children attended the same school, came from middle class families and were members of a small community in California. In our analysis of individual differences in the mother's conversational style, we did not discover a great degree of maternal variation and we speculate that the socialization practices might be equally invariant. This suggests that although there is little individual difference in our present sample, this result has to be interpreted with caution. Our small group size together with our unusually homogeneous population can give us only one picture - the picture of homogeneity in performance.

The third issue is that of the comparability of a child's performances across the socio-cognitive tasks. Can you speak of role-taking and social awareness of contexts as a general skill or disposition? When reviewing studies of social cognition, Shatz (1980) concludes: "while some studies have shown unexpectedly high levels of correlation, the overall picture is of only moderate relationships among the various role-taking skills." In contrast, Light (1974) found important correlations among his various role-taking and visual-perspective-taking tasks. When we correlated performances among our tasks, we found that a significant correlation exists between the "Guess my story" task and the "Face recognition" task and between the "Guess my story" task and the "Hiding" task. The first correlation is hardly surprising. Performance on the "Guess my story" task depends partly on the ability to make accurate emotional inferences about the psychological states of other people. Face recognition, on the other hand, depends on the ability to know the existence of certain emotions

and to recognize a representation of them. At the same time, performance on the "Guess my story" task depends on the ability to conceive of a set of events and create a story which accounts for them. We found a significant correlation between this and taking the visual perspective of another person. However, performance on the "Face recognition" task is not significantly correlated with performance on the "hiding" task. This finding leads us to agree with Flavell's rather than with Light's argument. As Flavell (1968) has pointed out, a distinction must be made between "visual perspective" taking and "perspective taking which is concerned with the affective side of role-taking." Young children develop first the ability to role-take the emotions of the other person and then the ability to role-take the other person's visual perspective. Although, the present study provides evidence in support of Flavell's argument, the evidence should be interpreted with caution. The present study cannot yield firm conclusions because, when controlling for age, the cell sizes become so small that they do not allow for meaningful statistical analysis.

INTERCORRELATIONS OF THE SOCIAL COGNITIVE TASKS
WITH THE SOCIAL AND CONVERSATIONAL PARAMETERS

Here, we examine the relationship between speech and other aspects of social functioning. In particular, we are interested in the interrelations among the child's language use, person perception, event knowledge, perspective taking and social interactional abilities. To statistically test for such relationships, the intercorrelations of the above mentioned variables were computed. The results are presented in Table 41.

TABLE 41 CORRELATION MATRIX

	HTASK	GTASK	FTASK	AGE	PAS	NAS	SS	USS	UCP
HTASK	1.000								
GTASK	0.764	1.000							
FTASK	0.752	0.698	1.000						
AGE	0.768	0.645	0.796	1.000					
PAS	0.815	0.848	0.813	0.796	1.000				
NAS	-0.817	-0.838	-0.781	-0.776	-0.992	1.000			
SS	0.869	0.804	0.901	0.839	0.905	-0.992	1.000		
USS	-0.708	-0.755	-0.751	-0.761	-0.776	0.755	-0.835	1.000	
UCP	-0.730	-0.539	-0.793	-0.640	-0.745	0.763	-0.813	0.421	1.000

(*) NOTE:PAS=Positive Social Acts, NAS=Negative Social Acts,

SS =Successful Speech, USS=Unsuccessful Speech,

UCP=Uncooperative Speech.

All the above correlation coefficients are significant at the 0.05 level. However, because all the above variables are also significantly related to age, we carried out several regression analyses to control for age. One of the main beliefs of the present study is that the production of successful speech is related to performance on the three socio-cognitive tasks. Table 42 presents the regression coefficients and the t value for successful speech when scores on HTASK and age are controlled.

TABLE 42 REGRESSION TABLE OF SUCCESSFUL SPEECH
WHEN HTASK AND AGE ARE CONTROLLED

DEPENDENT VARIABLE :SS

VAR	REGRESSION COEFFICIENT	STD.ERROR	t (1, 16)
HTASK	0.3591	0.1063	3.37
AGE	0.2942	0.1140	2.6

As Table 42 shows there is a significant relation between successful speech and scores on HTASK ($t=3.37$, $p<0.05$) even when the effect of age is controlled.

Table 43 presents the regression coefficients and the t value for successful speech when scores on the GTASK and age are controlled.

TABLE 43 REGRESSION TABLE FOR SUCCESSFUL SPEECH
WHEN GTASK AND AGE ARE CONTROLLED

DEPENDENT VARIABLE : SS

VAR	REGRESSION COEFFICIENTS	STD.ERROR	t (1,16)
GTASK	0.2950	0.0903	3.3
AGE	0.3860	0.0968	4.0

Table 43 demonstrates that there is a positive and significant relation between successful speech and GTASK ($t=3.3$, $p<0.05$) when the effect of age is controlled.

Table 44 presents the regression coefficients and the t values for successful speech when FTASK and age are controlled.

TABLE 44 REGRESSION TABLE FOR SUCCESSFUL SPEECH
WHEN FTASK AND AGE ARE CONTROLLED

DEPENDENT VARIABLE : SS

VAR	REGRESSION COEFFICIENTS	STD. ERROR	t (1,16)
FTASK	0.3928	0.0979	4.01
AGE	0.2336	0.1116	2.1

Here again, we have a positive and significant relationship ($t=4.02$, $p<0.05$) between successful speech and FTASK when age is controlled.

We also found a positive and significant relationship ($t=4.1$, $p<0.05$) between successful speech and positive social acts, and a negative and significant relationship ($t=4.42$, $p<0.05$) between successful speech and negative social acts. Tables 45 and 46 present the regression coefficients and t values for these two analyses.

TABLE 45 REGRESSION TABLE FOR SUCCESSFUL SPEECH
WHEN POSITIVE SOCIAL ACTS AND AGE ARE CONTROLLED

DEPENDENT VARIABLE: SS

VAR	REGRESSION COEFFICIENTS	STD. ERROR	t (1, 16)
PAS	0.7010	0.1682	4.2
AGE	0.2273	0.1093	2.1

TABLE 46 REGRESSION TABLE FOR SUCCESSFUL SPEECH
WHEN NEGATIVE SOCIAL ACTS AND AGE ARE CONTROLLED

DEPENDENT VARIABLE: SS

VAR	REGRESSION COEFFICIENTS	STD. ERROR	t (1, 16)
NAS	-0.7220	0.1632	4.42
AGE	0.2408	0.1016	2.4

Positive social acts were also positively and significantly related to scores on HTASK ($t=2.5$, $p<0.05$), to scores on FTASK ($t=2.2$, $p<0.05$) and to scores on GTASK ($t=4.8$, $p<0.05$) when the effects of age are controlled. Tables 47, 48 and 49 present the regression coefficients and the t values of positive social acts for the three socio-cognitive tasks when age is controlled.

TABLE 47 REGRESSION ANALYSIS OF POSITIVE SOCIAL ACTS
WHEN HTASK AND AGE ARE CONTROLLED

DEPENDENT VARIABLE: PAS

VAR	REGRESSION COEFFICIENTS	STD. ERROR	t (1,16)
HTASK	0.3013	0.1218	2.5
AGE	0.2691	0.1306	2.1

TABLE 48 REGRESSION ANALYSIS OF POSITIVE SOCIAL ACTS
WHEN FTASK AND AGE ARE CONTROLLED

DEPENDENT VARIABLE : PAS

VAR	REGRESSION COEFFICIENTS	STD. ERROR	t (1,16)
FTASK	0.2788	0.1246	2.2
AGE	0.2644	0.1419	1.9

TABLE 49 REGRESSION ANALYSIS OF POSITIVE SOCIAL ACTS
WHEN GTASK AND AGE ARE CONTROLLED

DEPENDENT VARIABLE: PAS

VAR	REGRESSION COEFFICIENTS	STD. ERROR	t (1,16)
GTASK	0.3476	0.0827	4.2
AGE	0.2770	0.0887	3.1

To conclude, the present results support the study's original expectations. The children's ability to produce successful speech (i.e. speech which is placed in the appropriate discourse context and is relevant to the hearer's perspective) is closely related to their ability to take the visual perspective of another person, to recognize the causal links in social events and to understand other people's inner feelings. At the same time, their ability to engage in a cooperative way in social interactions is related to their ability to perform the above social tasks and to use language successfully.

CHAPTER 7

CONCLUDING REMARKS

The present thesis focused on how children learn to use language in interaction with their mother. For the most part, the results confirmed the original expectations. All participating children had a good grasp of the language and were able to use it as a powerful tool for communicating with their mother. Even the children in the youngest age group were adequate communicators. They were able to understand most speech addressed to them, had clear intentions to communicate and, in most cases, were able to do so. Despite these accomplishments, we found that the language use of three and a half and four and a half year old children was limited. Their language served only a limited number of functions and their speech was not yet fully social. Moreover, their conversational exchanges were short and the interactions of the younger children contained significantly less utterances (per speaking turn) than did the interactions of older ones. The mother-child interactions of the youngest group was dominated by the mother. She controlled, directed and maintained the conversational flow. For the children, the interaction was therefore pedagogical in nature and unequal.

In the present study, we witnessed a gradual improvement in the child's ability to use language and to engage in purposive social acts. In the beginning, the child's use of language is tied up to the immediate environment and the child often lacks the ability to take his listener's perspective. However, contrary to the Piagetian perspective, we found that the child's conversations with his mother were dialogues. But, these conversations revolved around only the immediate context, were

short and the topic was exhausted in two turns. By the age of four and a half we observe the beginning of extended themes where a topic may be maintained for 4 or 5 turns. By the age of five and six, the child becomes increasingly competent. He is able to produce relevant talk and to shape his utterances according to his listener's needs. He also becomes more of an equal participant in the conversation. Despite these accomplishments, the child at this stage still has difficulty comprehending and producing complicated speech (e.g. hints) in which the desired goal of communication is not stated explicitly. By age seven, several new developments occur. The child becomes an equal partner in communicating with his mother. Cooperative discourse is sustained for longer periods of time and coherence is achieved by the employment of several cohesive devices and anaphoric references. We also see the beginning of language use which is non-literal or indirect and includes attempts to go beyond the immediate present of the conversational context.

A central hypothesis of the present study was that conversational competence is only one aspect of successful social functioning and therefore achievements in one area are necessarily linked with achievements in the other. To explore this hypothesis, we isolated certain parameters of social functioning that we felt were relevant to successful conversational participation. We then designed certain socio-cognitive tasks to test these parameters. We found that there is a close relationship between performance on the socio-cognitive tasks and successful speech and a significant negative relationship between them and unsuccessful or uncooperative speech. In addition, we found that positive social acts during the language interaction are positively related to the production of successful speech and negatively related to

unsuccessful or uncooperative speech. On this basis, we conclude that person perception, event knowledge and knowledge of the social context are all closely associated with the child's acquisition of communicative and conversational competence. The conceptual underpinnings of language are broader than much of the existing literature would suggest. In order to manipulate socially influenced alternatives, engage in discourse, and interpret speech acts, young children draw on their knowledge of people, sequences of events and different types of perspectives.

Before concluding the present thesis there is an important issue which needs to be raised and clarified. One can easily misunderstand the present purpose and conclude that the intention was to explain language development in terms of social cognitive development and thereby to reduce language explanation to social explanation. As Atkinson (1982) has argued:

"It is immediately apparent that, if we view this task as that of relating theories of language development to theories of general cognitive development, it bears some resemblance to the problem of reductionism... Summarizing there are three necessary conditions that we must impose on reductive explanations:

- 1) Theoretical terms in the reduced theory must be systematically related to theoretical terms in the reducing theory.
- (2) Formal operations in the reduced theory must be identifiable in the reducing theory.
- (3) The relevant terms and operations must appear in the sequence of theories of general cognitive development before they appear in the sequence of theories in D." (pp.22-23)

Here, however, we make no reductionist claims regarding language development. First, we do not do so in the sense that Atkinson proposes. We have concentrated on only one aspect of language development - conversational competence. Our aim was to argue that because it was more social than linguistic, conversational competence can only be understood when it is placed within the framework of the child's general social functioning. This is not to suggest a solely social explanation of conversational competence, but rather to broaden the analysis so as to include the consideration of social functioning. Second, we do not wish to make any claims concerning the order of development. We have no basis for claiming that social functioning precedes language ability or vice versa. To speculate, it is probable that development in one area coincides with development in the other.

In this context, one can wonder about the value of a study of language functioning which does not seek to explain it with reference to another variable. It is valuable in following three respects:

(1) It broadens the scope of theorizing about language. To do so, an attempt was made to apply a philosophical model of conversational participation to the study of child language and to isolate those aspects of that participation which would be particularly problematic for young children. The result provides strong support for the belief concerning the importance of studying language as face-to-face interaction which involves a social setting and requires social skills.

(2) It provides a detailed description of the development of children's language use between the ages of three and a half to seven. The emphasis was not only on what children cannot do, but also

on what they can. In this vein, the focus was on discovering the various strategies they adopt to cope with their inadequacies.

(3) It provides a new framework within which to analyze speech problems. For example, it may be that autistic children's language problems are related to communicative problems rather than syntactic or semantic problems. If this is the case, any successful education designed for autistic children's language should be directed towards their social inadequacies rather than to language per se. As suggested by this example, a conceptual framework that elucidates the social side of language is potentially of great value.

Directions for Future Research

The thesis demonstrates that a close analysis of children's conversations can be made so as to reveal both the social functions children perform with language and the devices they use to initiate and sustain coherent and appropriate discourse. However, the results presented do not provide a detailed picture of the development of the children's overall conversational abilities. Future research is needed to address other important aspects of conversational participation. In particular, there is a need to address the development of certain conversational processes (e.g. turn-taking and repairs) and to link this development to other parameters of social functioning. As suggested before, the present results account only for one kind of social interaction, namely mother-child interaction. Future research is needed to determine the relationship of the picture we have depicted here to child-child conversations and stranger-child conversations.

There are several other limitations of the present study which suggest additional directions for future research. The main limitation is the size of the subject population. Nineteen cases limit both the sophistication of the statistical analyses which can be employed and the extent of the generalizations which can be made. In the present thesis, numbers were sacrificed to allow for the development of more detailed and careful content analysis of conversations. In future research, larger numbers of children must be studied. Similarly, the present study investigated one situation where language is used, namely the mother-child situation. Literature on mothers' conversational behaviour (Howe, 1978; Nelson, 1978) has consistently reported that there are individual differences in the mother's conversational style. Although in the present thesis, we did not witness a great variability in the mother's conversational style it might be the case that we did not because our sample was a very homogeneous one (i.e. middle class mothers, resident in one particular community, where their children attend the same school). Future research is needed to clarify if that is the case when a heterogeneous sample is included. A second limitation is the crudeness of the scoring method for the child's performance on the socio-cognitive tasks. The present work chose to concentrate on arriving at a detailed and coherent picture of the child's language functioning. Future research, however, should combine this with an attempt to develop a more elaborated basis for examining social functioning. In place of quantitative measures of performance, more detailed and qualitative constructs for understanding social functioning are needed. Finally, future research should seek to elaborate our sketchy picture of the child's abilities concerning non-literal and indirect speech-acts. These

speech-acts cannot be naturally investigated since they do not occur as frequently as anticipated. Thus, any transcript of naturally occurring conversations will contain so few instances that any kind of analysis will be impossible. However, indirect and non-literal speech-acts can be tested by controlling the speech situation and manipulating it in such a way which ensures their production. In this vein, it would be interesting to discover what children at different developmental periods do when they are placed in a position where they have to ask something from a stranger (and thus investigating politeness phenomena) or where they have to argue an issue (and thus investigating subtlety in expressing wants/desires).

APPENDIX 1

1. Transcription Conventions and Transcription Symbols for Utterances

2. Extracts from the Video-tape transcripts

TRANSCRIPTION CONVENTIONS

(i) Units

A Unit is an utterance and/or an act performed by one participant at a given time. It is bounded by a significant pause or by an utterance or an act of the other participant. Each unit is numbered separately in the sequence in which it occurred. Pauses are not precisely timed. However, significant pauses between utterances of the same participant are taken to represent a "floor change" and are recorded as a different unit with a different number. Behaviours that occurred at the same time by two different participants are marked with the same number.

(ii) Transcription Symbols for Utterances

Loudness : Was marked by using capital letters.

E.g. " Come HERE "

Emphasis : Was marked by underlying parts of the specific word within a given utterance.

E.g. " You mean you want this?"

Lengthened : Was marked by colons ":".

Syllable E.g. " This is gre::en"

Intonation : ", " marks low rise

: "? " marks high rise. Reference to the general ongoing activity was also paid in identifying questions

- : "." marks low fall
- : "!" marks exclamatory utterances
- (Utterance) : Used whenever an utterance was unclear to the observer but tentative interpretation was possible of words or phases.
- (U) : Used whenever an utterance was uninterpretable by the observer

The transcriptions of Non-Verbal Acts were adapted from the Behaviour Catalogue, compiled by JIM CHISHOLM, FAE HALL, NICK BLURTON-JONES, and ROB WOODSON, April, (1974).

Child : 6;9

CHILD		MOTHER	CONTEXT
Non-Verbal	Verbal	Verbal	Non-Verbal
1. Sits down	1. Ok! Let's play it	-	1.Sits,looks at child
2. looks where M. points	-	2.What is 3.this?	2. points at board
3.looks at board	3.Go (-),4.this is the starting point	4.Right!	3.looks at board 4. " " "
5.points at pathways	5.And you can move into here		5. looks at board 6. " " "
6. Raises head looks M.	6.into two turns		
7.Looks at board		7. And how do you get turns?	7. Looks at child
8. Looks around	8. Eh, we....,		8. Looks at child
9.point at dice	9. we, eh, pick a number on this!		9. Looks down at board

CHILD		MOTHER	CONTEXT
Non-Verbal	Verbal	Verbal	Non-Verbal
1.turns dice	1.//you turn// 2.that's a dice	//you//	1.extends hand takes dice 2.glances at c.
2.Sits,3.watches		3.A number?	3.Looks at dice
4. plays with feet,5,6.looks M.	4. Ye::ah! 5.like you pick a six and 6.I'll be two and that's		4.looks at c. 5. " " " 6. nods head
7.turns looks	7.a number(!)		7.looks at c.
8.sits back, 9.looks at M.		8.ok, you roll it,9.like that?	9.rolls dice
10.Looks atM.	10. Yeah(!)		10. Looks at child
11.Looks at dice		11.But, I don't see any NUMBERS!	11. Looks closely at dice
12. looks at M. then 13. at dice	12.You can 13.make them UP.		12. Raises head 13. looks at child

CHILD		MOTHER	CONTEXT
Non-Verbal	Verbal	Verbal	Non-Verbal
1. Looks at M.		(pause)	1. Looks at board
2. Looks where		2. You know	2. looks at dice
M. looks		what we could	3. raises head
3. looks at M.		3. do?	looks at child
4. shakes head	4. What?		4. shows dice
looks at M.			to child
5. looks at M.		5. We could roll	5. rolls dice
		the dice, and 6.	6. points at
6. watches M.		whatever colour	colours on
		comes on top we	
7. watches M.		go 7. there!	7. turns looks
			at child
8. Nods head	8. Ok!		8. Smiles
9. Takes dice		9. And where are	9. Looks at board
		we going to?	
10. Leans	10. The		10. Watches child
forward	finishing line		
points	is here		

CHILD		MOTHER	CONTEXT
Non-Verbal	Verbal	Verbal	Non-Verbal
1. Looks at board		1. Ok, that's what we get, because what is in there?	1. Looks at board
2. turns looks at candies	2. I don't know, 3. what that?		2. leans forward, looks closely at board?
3. turns looks M.			
4. looks at M.		4. I think these are candies!	4. Looks at board
5. Nods head		5. Who do you want to be?	5. makes pig stand
6. Takes pig	6. I'll be the pig		6. looks down
7. Raises head looks at M.	7. And you'll be the cow, 8. ok?		7. Takes cow 8. looks at child
9. Looks at M.		9. Ok!	9. Puts cow to starting point

APPENDIX 2

1. The Relationship of Utterances and Speech-Acts
2. Definitions of Speech-Acts and their Sub-Categories
3. Definitions of the Social Interactional Acts

1. The Relationship of Utterances and Speech-Acts

In the present analysis two different measures have been taken for analysing each verbal unit.

(i) Utterances = Any uttered sound which occupied a speaking turn.

No attention was paid to full stops. Each utterance had finished when there was either a pause or when the speaking turn was taken by the other person.

(ii) Speech-Act = A particular utterance could be coded as representing several speech-acts. For example, the utterance "Look, the boy doesn't have a head" was coded as being an assertion about an event and an attention seeking act.

2. DEFINITION OF SPEECH-ACTS

ASSERTIVES

Any utterance which
reports facts, states
rules, conveys attitudes

(a) Assertions about Objects

(Labelling) = Any one-word
assertion which merely labels a
perceivable object.

E.g. "Yellow", "Cow".

(b) Assertions about Events

Any statement which predicates
events, properties, locations,
and describes objects, events,
people or states definitions of
social rules.

E.g. "It fell on the floor", "That
happens later"

(c) Assertions about Internal

Phenomena = Any assertions about
emotions, sensations, intentions,
and any other internal events.

E.g. "I like it", "I don't know".

RESPONSIVES

(a) Supply Solicited One-Word

Information = A one word response
to a prior requestive.

E.g. "Yes", "Green"

RESPONSIVES

Any utterance which supplies solicited information to a prior requestive act.

(b) Supply Extended Response =

An elaborated response to a prior requestive act.

E.g. " Because it must go in here".

REQUESTIVES

Any utterance which solicits information or action .

(a) Questions =

Any utterance which requests information.

E.g. "What is that?"

(b) Requests for Action =

Any utterance which seeks the performance of an action by the hearer.

E.g. "Go over there"

(c) Suggestions =

Any utterance which recommends the performance of an action by hearer or speaker.

E.g. "Shall we do that?"

COMMISSIVES

Any utterance which looks forward and promises an offer or a claim to the hearer.

E.g. "I promise I'll do that"

"When we reach this point we'll have to go back three spaces".

EXPRESSIVES

(a) Exclamations=

Convey attitude. E.g. "Oh", "Ah"

EXPRESSIVES

Any non-propositional utterance which conveys attitudes or repeats or acknowledges others.

(b) Accompaniments =

Maintain contact by supplying information which is redundant in respect to some contextual feature.
E.g. "Here you are", "There you go".

(c) Repetitions =

Repeat own or the speaker's prior utterance.

(d) Attention-Getting Devices =

E.g. "Hey John", "Look!".

ACKNOWLEDGEMENT

Any non-propositional utterance which recognizes prior non-requestive utterance, and helps the maintenance of the conversational flow.

(a) Utterances that agree or reject .

prior utterances. E.g. "Yeah", "Ok".

(b) Utterances that praise or thank.

E.g. " Good Boy", "Thanks".

(c) Utterances that apologize.

E.g. "Oh sorry".

(d) Utterances that greet

E.g. "Hello".

PERSONAL

Any utterance which is directed to self rather than others.

E.g. "I'll put that here, and that there"
the child utters this sentence without looking at the adult and while she is playing by herself.

UNCODABLE

Any utterance which is
either uninterpretable or
uncodable (i.e. does not fall
in any of the above categories)
to the observer at the stage of
transcription.

DEFINITIONS OF THE CATEGORIES FOR SCORING SOCIAL INTERACTIONAL ACTS

POSITIVE BEHAVIOURS

INITIATIONS

Any verbal or non-verbal act which looks forward and requires another person to speak.

(a) Labelling : The child initiates conversation by labelling objects in the immediate environment.

E.g. "Cow"

(b) Stating : The child initiates conversation by stating extra information.

E.g. "This goes here".

(c) Requesting : The child initiates conversation by requesting information or action from his partner.

E.g. "What do we do now?"

(d) Non-Verbal : The child initiates conversation by non-verbal means.

E.g. (takes, shows pig to mother).

RESPONSIVES

An act which supplies information to a prior requestive act.

(a) One Word Responses : The child responds with a one-word utterance.

E.g. " Yes".

(b) Extended : The child responds with a more than one-word utterance.

E.g. " You'll be the pig".

(c) Non-Verbal: The child responds by non-verbal signs.

SHARED ACTIVITY

(a) Watches : The child watches what his partner does.

(E.g. Mother: "Oh, I'll go here" (moves on right colour on board). Child : Watches closely mother's actions.

(b) Gives/Takes : E.g. When the child has finished with his turn, he gives the dice to the mother for her turn.

(c) Laughs/Smiles: The child laughs or smiles during a shared joke.

(d) Concentrates on Relevant Activity : The child's attention is directed to an activity or an object which is directly relevant to the immediate context of the interaction.

E.g. Mother throws dice, and child attempts to make cow stand on the right place on board.

(e) Acts following Agreed Rules: The child acts in a way which takes into account the rules that have been decided. E.g. The child at his turn, takes and throws the dice.

NEGATIVE BEHAVIOURS

WAITING FOR INITIATION

- : (a) Staring : The child sits and stares at game board or mother.
- (b) Motionless:The child sits motionless , looks around him or straight ahead of him, showing complete disinterest.

NON-SOCIAL BEHAVIOURS

- : (a) Child cries.
- (b) Child attempts to leave the room or to terminate the game interaction.
- (c) Child acts against agreed rules.
- (d) Child concentrates on different activity from his partner without attempting to share it with her.
- (e)Child talks to self.

UNRESPONSIVENESS

- : (a) Child fails to respond to prior request because he concentrates on a different activity.
- (b) Child fails to respond to prior request and sits motionless looking at mother.

APPENDIX 3

1. Individual Results of the Speech-Acts Analysis.

2. Individual Results of Mothers' and Child's Indirect Speech.

INDIVIDUAL RESULTS OF SPEECH ACTS ANALYSIS

FIRST AGE GROUP

CHILD1 : 3;7

<u>ASSERTIVES</u> :37	Labelling	:	7
	Assertions of Events	:	15
	Assertions Internal	:	15
<u>RESPONSIVES</u> :24	One-Word Response	:	13
	Extended Response	:	11
<u>DIRECTIVES</u> :12	Real Questions	:	2
	Test Questions	:	-
	Verbal Reflective Quest.:	:	-
	Requests for Clarificat.:	:	-
	Requests for Action	:	10
	Suggestions	:	-
	Requests for Permission :	:	-
<u>COMMISSIVES</u> :-			
<u>EXPRESSIVES</u> :3	Exclamations	:	2
	Accompaniments	:	-
	Repetitions	:	1
<u>ACKNOWLEDGMENT</u> :8	Agrees/Rejects	:	8
	Thanks/Greets etc.	:	-
<u>UNCODABLE</u> :1			
<u>PRIVATE</u> :9			
	<u>TOTAL</u>	:	94

FIRST GROUP

CHILD2 : 3;9

ASSERTIVES : 21

Labelling : 10

Assertions of Events : 5

Assertions Internal : 6

RESPONSIVES : 23

One-Word Responses : 18

Extended Responses : 5

DIRECTIVES : 6

Real Questions : 2

Test Questions : -

Verbal Reflective : -

Clarification Request. : -

Requests for Action : 4

Suggestions : -

Permission Requests : -

COMMISSIVES : -

EXPRESSIVES : 4

Exclamations : 4

Repetitions : -

Accompaniments : -

Attention Getters : -

ACKNOWLEDGMENT: 3

Agree/Rejects : 3

Thanks/Greets etc. : -

UNCODABLE : 7

PRIVATE : 5

TOTAL : 64

INDIVIDUAL RESULTS FROM THE SPEECH-ACT ANALYSIS
FIRST AGE GROUP

CHILD3 : 3;5

<u>ASSERTIVES</u>	: 7	Labelling	: 5
		Assertions of Events	: 1
		Assertions Internal	: 1
<u>RESPONSIVES</u>	: 4	One-Word Responses	: 4
		Extended Responses	: -
<u>DIRECTIVES</u>	: 1	Real Questions	: -
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request.	: -
		Requests for Action	: 1
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: -		
<u>ACKNOWLEDGMENT</u>	: -		
<u>UNCODABLE</u>	: 6		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 18

INDIVIDUAL RESULTS FROM THE SPEECH-ACTS ANALYSIS
FIRST AGE GROUP

CHILD4 : 4;0

<u>ASSERTIVES</u>	: 13	Labelling	: 7
		Assertions of Events	: 2
		Assertions Internal	: 4
<u>RESPONSIVES</u>	: 11	One-Word Responses	: 10
		Extended Responses	: 1
<u>DIRECTIVES</u>	: 2	Real Questions	: 1
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Requests	: -
		Requests for Action	: 1
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 3	Exclamations	: -
		Accompaniments	: -
		Repetitions	: 3
<u>ACKNOWLEDGEMENT</u>	: 5	Agrees/Rejects	: 5
		Thanks/Greets, etc.	: -
<u>UNCODABLE</u>	: 7		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 41

INDIVIDUAL RESULTS FROM THE SPEECH-ACTS ANALYSIS

FIRST AGE GROUP

CHILD 5 : 3;8

<u>ASSERTIVES</u>	: 31	Labelling	: 21
		Assertions of Events	: 8
		Assertions Internal	: 2
<u>RESPONSIVES</u>	: 12	One-Word Responses	: 12
		Extended	: -
<u>DIRECTIVES</u>	: 1	Real Questions	: 1
		All other questions	: -
<u>COMMISSIVES</u>	/ -		
<u>EXPRESSIVES</u>	: 2	Exclamations	: 1
		Attention-Getters	: 1
		Repetitions	: -
		Accompaniments	: -
<u>ACKNOWLEDGEMENT</u>	: 4	Agrees/Rejects	: 4
		Thanks, Greetings, etc.	: -
<u>UNCODABLE</u>	: 1		
<u>PRIVATE</u>	: 1		
		<u>TOTAL</u>	: 52

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

CHILD 1 : 4;7

<u>ASSERTIVES</u>	: 28	Labelling	: 2
		Assertions of Events	: 9
		Assertions Internal	: 17
<u>RESPONSIVES</u>	: 38	One-Word Responses	: 27
		Extended Responses	: 11
<u>DIRECTIVES</u>	: 9	Real Questions	: 3
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request	: 3
		Requests for Action	: 1
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 8	Exclamations	: 3
		Repetitions	: 1
		Accompaniments	: 4
<u>ACKNOWLEDGMENT</u>	: 10	Agrees/Rejects	: 10
		Thanks, Greetings, etc.	: -
<u>UNCODABLE</u>	: 7		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 100

INDIVIDUAL RESULTS FROM THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

CHILD 2 : 4;5

<u>ASSERTIVES</u>	: 9	Labelling	: 2
		Assertions of Events	: 5
		Assertions Internal	: 2
<u>RESPONSIVES</u>	: 13	One-Word Responses	: 10
		Extended Responses	: 3
<u>DIRECTIVES</u>	: 1	Real Questions	: 1
		All other questions	: -
<u>COMMISSIVES</u>	: 0		
<u>EXPRESSIVES</u>	: 4	Exclamations	: 3
		Accompaniments	: 1
		Repetitions	: -
<u>ACKNOWLEDGMENT</u>	: 3	Agree/Rejects	: 3
		Thanks, Greetings, etc.	: -
<u>UNCODABLE</u>	: 10		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 39

INDIVIDUAL RESULTS FROM THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

CHILD 3 : 4;8

<u>ASSERTIVES</u>	: 57	Labelling	: 10
		Assertion of Events	: 19
		Assertions Internal	: 28
<u>RESPONSIVES</u>	: 21	One-Word Responses	: 9
		Extended Responses	: 12
<u>DIRECTIVES</u>	: 20	Real Questions	: 4
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request.	: 4
		Requests for Action	: 12
		Suggestions	: -
		Permission	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 6	Exclamations	: 2
		Accompaniments	: 3
		Repetitions	: 1
<u>ACKNOWLEDGMENT</u>	: 20	Agrees/Rejects	: 19
		Thanks	: 1
<u>UNCODABLE</u>	: 7		
<u>PRIVATE</u>	: 1		
		<u>TOTAL</u>	: 132

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

CHILD 4 : 4;7

<u>ASSERTIVES</u>	: 35	Labelling	:18
		Assertions of Events	:15
		Assertions Internal	:2
<u>RESPONSIVES</u>	:21	One-Word Responses	:15
		Extended Responses	: 6
<u>DIRECTIVES</u>	: 3	Real Questions	: 1
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request:	-
		Requests for Action	: -
		Suggestions	: -
		Permission Requests	: 2
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 6	Exclamations	: 1
		Accompaniments	: 3
		Repetitions	: 2
<u>ACKNOWLEDGEMENT</u>	: 5	Agrees/Rejects	: 5
		Thanks, Greet	: -
<u>UNCODABLE</u>	: 2		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:73

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

CHILD 5 : 4;6

<u>ASSERTIVES</u>	: 56	Labelling	:11
		Assertions of Events	:16
		Assertions Internal	:29
<u>RESPONSIVES</u>	:45	One-Word Responses	:24
		Extended Responses	:21
<u>DIRECTIVES</u>	: 17	Real Questions	: 1
		Test Questions	: -
		Verbal Reflective	: 2
		Clarification Request	: 1
		Requests for Action	: 6
		Suggestions	: 3
		Permission Requests	: 1
<u>COMMISSIVES</u>	: 4		
<u>EXPRESSIVES</u>	:11	Exclamations	: 4
		Accompaniments	: 3
		Repetitions	: 4
<u>ACKNOWLEDGEMENT</u>	:15	Agrees/Rejects	:15
		Thanks, Greet	: -
<u>UNCODABLE</u>	:12		
<u>PRIVATE</u>	: 2		
		<u>TOTAL</u>	:162

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

CHILD 1 : 5;7

<u>ASSERTIVES</u>	: 23	Labelling	: 7
		Assertions of Events	: 13
		Assertions Internal	: 3
<u>RESPONSIVES</u>	: 26	One-Word Responses	: 18
		Extended Responses	: 8
<u>DIRECTIVES</u>	: 9	Real Questions	: 5
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request	: -
		Requests for Action	: 4
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 5	Exclamations	: 4
		Accompaniments	: 1
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 3	Agrees/Rejects	: 3
		Thanks, Greet	: -
<u>UNCODABLE</u>	: 4		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 70

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

CHILD 2 : 5;8

<u>ASSERTIVES</u>	: 52	Labelling	: 7
		Assertions of Events	: 43
		Assertions Internal	: 2
<u>RESPONSIVES</u>	: 18	One-Word Responses	: 14
		Extended Responses	: 4
<u>DIRECTIVES</u>	: 18	Real Questions	: 15
		Test Questions	: -
		Verbal Reflective	: 1
		Clarification Request	: -
		Requests for Action	: 2
		Suggestions	: -
		Permission Requests	: 2
<u>COMMISSIVES</u>	: 6		
<u>EXPRESSIVES</u>	: 2	Exclamations	: -
		Accompaniments	: 2
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 7	Agrees/Rejects	: 7
		Thanks, Greet	: -
<u>UNCODABLE</u>	: 4		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 107

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

CHILD 3 : 5;8

<u>ASSERTIVES</u>	: 42	Labelling	: 7
		Assertions of Events	:18
		Assertions Internal	:17
<u>RESPONSIVES</u>	:29	One-Word Responses	:18
		Extended Responses	:11
<u>DIRECTIVES</u>	:20	Real Questions	: 5
		Test Questions	: -
		Verbal Reflective	: 1
		Clarification Request:	-
		Requests for Action	: 8
		Suggestions	: 4
		Permission Requests	: 2
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 15	Exclamations	: 5
		Accompaniments	: 7
		Repetitions	: 3
<u>ACKNOWLEDGEMENT:</u>	12	Agrees/Rejects	:10
		Thanks, Greets	: 2
<u>UNCODABLE</u>	: 3		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:121

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

CHILD 4 : 5;9

<u>ASSERTIVES</u>	: 61	Labelling	:14
		Assertions of Events	:33
		Assertions Internal	:14
<u>RESPONSIVES</u>	:10	One-Word Responses	: 4
		Extended Responses	: 6
<u>DIRECTIVES</u>	: 17	Real Questions	: 3
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request	: 6
		Requests for Action	: 5
		Suggestions	: 3
		Permission Requests	: 2
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 11	Exclamations	: -
		Accompaniments	: 7
		Repetitions	: 4
<u>ACKNOWLEDGEMENT</u>	: 23	Agrees/Rejects	:23
		Thanks, Greetings	: -
<u>UNCODABLE</u>	: 3		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:126

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

CHILD 5 : 5;6

<u>ASSERTIVES</u>	: 9	Labelling	: 6
		Assertions of Events	: 3
		Assertions Internal	: -
<u>RESPONSIVES</u>	: 6	One-Word Responses	: 4
		Extended Responses	: 2
<u>DIRECTIVES</u>	: 1	Real Questions	: 1
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request	: -
		Requests for Action	: -
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 5	Exclamations	: 1
		Accompaniments	: 2
		Repetitions	: 2
<u>ACKNOWLEDGEMENT</u>	: 8	Agrees/Rejects	: 8
		Thanks, Greet	: -
<u>UNCODABLE</u>	: 14		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 43

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

CHILD 1 : 6;9

<u>ASSERTIVES</u>	: 43	Labelling	: 7
		Assertions of Events	: 29
		Assertions Internal	: 7
<u>RESPONSIVES</u>	: 23	One-Word Responses	: 12
		Extended Responses	: 11
<u>DIRECTIVES</u>	: 18	Real Questions	: 11
		Test Questions	: -
		Verbal Reflective	: 2
		Clarification Request	: 2
		Requests for Action	: 1
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: 7		
<u>EXPRESSIVES</u>	: 6	Exclamations	: 1
		Accompaniments	: 3
		Repetitions	: 2
<u>ACKNOWLEDGEMENT</u>	: 15	Agrees/Rejects	: 11
		Thanks, Greetings	: 4
<u>UNCODABLE</u>	: 8		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 120

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

CHILD 2 : 6;6

<u>ASSERTIVES</u>	: 41	Labelling	:17
		Assertions of Events	:16
		Assertions Internal	:8
<u>RESPONSIVES</u>	:20	One-Word Responses	:13
		Extended Responses	: 7
<u>DIRECTIVES</u>	:18	Real Questions	:10
		Test Questions	: -
		Verbal Reflective	: 2
		Clarification Request	: 2
		Requests for Action	: 2
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 12	Exclamations	: 7
		Accompaniments	: 4
		Repetitions	: 1
<u>ACKNOWLEDGEMENT</u>	: 10	Agrees/Rejects	:10
		Thanks, Greet	: -
<u>UNCODABLE</u>	: 7		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:108

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

CHILD 3 : 6;7

<u>ASSERTIVES</u>	: 58	Labelling	: 20
		Assertions of Events	: 14
		Assertions Internal	: 24
<u>RESPONSIVES</u>	: 28	One-Word Responses	: 18
		Extended Responses	: 10
<u>DIRECTIVES</u>	: 39	Real Questions	: 20
		Test Questions	: -
		Verbal Reflective	: 1
		Clarification Request	: 2
		Requests for Action	: 11
		Suggestions	: 3
		Permission Requests	: 2
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 16	Exclamations	: 11
		Accompaniments	: 5
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 11	Agrees/Rejects	: 11
		Thanks, Greet	: -
<u>UNCODABLE</u>	: -		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 148

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

CHILD 4 : 6;7

<u>ASSERTIVES</u>	: 38	Labelling	:16
		Assertions of Events	:12
		Assertions Internal	:10
<u>RESPONSIVES</u>	:24	One-Word Responses	:19
		Extended Responses	: 5
<u>DIRECTIVES</u>	:19	Real Questions	: 7
		Test Questions	: -
		Verbal Reflective	: 1
		Clarification Request	: 4
		Requests for Action	: 3
		Suggestions	: 2
		Permission Requests	: 2
<u>COMMISSIVES</u>	: 3		
<u>EXPRESSIVES</u>	: 6	Exclamations	: 2
		Accompaniments	: 4
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 20	Agrees/Rejects	: 8
		Thanks, Greet	: 2
<u>UNCODABLE</u>	: -		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:106

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FIRST AGE GROUP

MOTHER 1: INTERACTING WITH CHILD AGE : 3;7

<u>ASSERTIVES</u>	: 24	Labelling	: -
		Assertions of Events	: 23
		Assertions Internal	: 1
<u>RESPONSIVES</u>	: 1	One-Word Responses	: 1
		Extended Responses	: -
<u>DIRECTIVES</u>	: 44	Real Questions	: 24
		Test Questions	: 3
		Verbal Reflective	: 7
		Clarification Request	: 4
		Requests for Action	: 4
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 2	Exclamations	: -
		Accompaniments	: 2
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 11	Agrees/Rejects	: 8
		Thanks, Greet	: 3
<u>UNCODABLE</u>	: 2		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 84

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FIRST AGE GROUP

MOTHER 2: INTERACTING WITH CHILD AGE : 3;9

<u>ASSERTIVES</u>	: 28	Labelling	: 2
		Assertions of Events	:20
		Assertions Internal	: 6
<u>RESPONSIVES</u>	: 2	One-Word Responses	: 1
		Extended Responses	: 1
<u>DIRECTIVES</u>	:42	Real Questions	:17
		Test Questions	: 3
		Verbal Reflective	: 9
		Clarification Request	: 3
		Requests for Action	:10
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 8	Exclamations	: -
		Accompaniments	: 7
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 19	Agrees/Rejects	:11
		Thanks, Greet	: 8
<u>UNCODABLE</u>	: 1		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:100

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FIRST AGE GROUP

MOTHER 3: INTERACTING WITH CHILD AGE : 3;5

<u>ASSERTIVES</u>	: 32	Labelling	: 3
		Assertions of Events	:19
		Assertions Internal	:10
<u>RESPONSIVES</u>	: -	One-Word Responses	: -
		Extended Responses	: -
<u>DIRECTIVES</u>	:28	Real Questions	:14
		Test Questions	: 3
		Verbal Reflective	: 3
		Clarification Request:	-
		Requests for Action	: 8
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 5	Exclamations	: 1
		Accompaniments	: 5
		Repetitions	: -
<u>ACKNOWLEDGEMENT:</u>	13	Agrees/Rejects	:13
		Thanks, Greetings	: -
<u>UNCODABLE</u>	: 6		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 85

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FIRST AGE GROUP

MOTHER 4: INTERACTING WITH CHILD AGE : 4;0

<u>ASSERTIVES</u>	: 44	Labelling	: 2
		Assertions of Events	: 22
		Assertions Internal	: 20
<u>RESPONSIVES</u>	: 2	One-Word Responses	: 1
		Extended Responses	: 1
<u>DIRECTIVES</u>	: 42	Real Questions	: 6
		Test Questions	: 5
		Verbal Reflective	: 7
		Clarification Request	: 1
		Requests for Action	: 9
		Suggestions	: 6
		Permission Requests	: 8
<u>COMMISSIVES</u>	: 4		
<u>EXPRESSIVES</u>	: 9	Exclamations	: 3
		Accompaniments	: 6
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 17	Agrees/Rejects	: 11
		Thanks, Greets	: 6
<u>UNCODABLE</u>	: 1		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 118

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FIRST AGE GROUP

MOTHER 5: INTERACTING WITH CHILD AGE : 3;8

<u>ASSERTIVES</u>	: 29	Labelling	: 8
		Assertions of Events	: 18
		Assertions Internal	: 3
<u>RESPONSIVES</u>	: -	One-Word Responses	: -
		Extended Responses	: -
<u>DIRECTIVES</u>	: 40	Real Questions	: 8
		Test Questions	: 8
		Verbal Reflective	: 3
		Clarification Request	: 5
		Requests for Action	: 11
		Suggestions	: 1
		Permission Requests	: 4
<u>COMMISSIVES</u>	: 3		
<u>EXPRESSIVES</u>	: 13	Exclamations	: 1
		Accompaniments	: 8
		Repetitions	: 4
<u>ACKNOWLEDGEMENT</u>	: 5	Agrees/Rejects	: 5
		Thanks, Greets	: -
<u>UNCODABLE</u>	: 1		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 91

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

MOTHER 1: INTERACTING WITH CHILD AGE : 4;7

<u>ASSERTIVES</u>	: 29	Labelling	: 1
		Assertions of Events	:11
		Assertions Internal	:17
<u>RESPONSIVES</u>	: 4	One-Word Responses	: 1
		Extended Responses	: 3
<u>DIRECTIVES</u>	:69	Real Questions	:28
		Test Questions	: 6
		Verbal Reflective	:11
		Clarification Request	: 4
		Requests for Action	: 8
		Suggestions	:10
		Permission Requests	: 2
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 4	Exclamations	: 1
		Accompaniments	: 2
		Repetitions	: 1
<u>ACKNOWLEDGEMENT</u>	: 22	Agrees/Rejects	:20
		Thanks, Greet	: 2
<u>UNCODABLE</u>	: 2		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	:130

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

MOTHER 2: INTERACTING WITH CHILD AGE : 4;5

<u>ASSERTIVES</u>	: 18	Labelling	: 3
		Assertions of Events	: 8
		Assertions Internal	: 7
<u>RESPONSIVES</u>	: -	One-Word Responses	: -
		Extended Responses	: -
<u>DIRECTIVES</u>	: 31	Real Questions	: 4
		Test Questions	: 9
		Verbal Reflective	: 6
		Clarification Request	: 2
		Requests for Action	: 2
		Suggestions	: 6
		Permission Requests	: 2
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 5	Exclamations	: 2
		Accompaniments	: 2
		Repetitions	: 1
<u>ACKNOWLEDGEMENT</u>	: 11	Agrees/Rejects	: 5
		Thanks, Greet	: 3
<u>UNCODABLE</u>	: 5		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 70

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

MOTHER 3: INTERACTING WITH CHILD AGE : 4;8

<u>ASSERTIVES</u>	: 64	Labelling	: 10
		Assertions of Events	: 20
		Assertions Internal	: 34
<u>RESPONSIVES</u>	: 21	One-Word Responses	: 9
		Extended Responses	: 12
<u>DIRECTIVES</u>	: 21	Real Questions	: 4
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request	: 4
		Requests for Action	: 12
		Suggestions	: -
		Permission Requests	: 1
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 6	Exclamations	: 5
		Accompaniments	: 1
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 20	Agrees/Rejects	: 20
		Thanks, Greet	: -
<u>UNCODABLE</u>	: 8		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 140

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

MOTHER 4: INTERACTING WITH CHILD AGE : 4;7

<u>ASSERTIVES</u>	: 31	Labelling	: 4
		Assertions of Events	: 20
		Assertions Internal	: 7
<u>RESPONSIVES</u>	: 1	One-Word Responses	: 1
		Extended Responses	: -
<u>DIRECTIVES</u>	: 57	Real Questions	: 20
		Test Questions	: 9
		Verbal Reflective	: 10
		Clarification Request	: 6
		Requests for Action	: 8
		Suggestions	: 3
		Permission Requests	: 1
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 9	Exclamations	: 3
		Accompaniments	: 5
		Repetitions	: 1
<u>ACKNOWLEDGEMENT</u>	: 31	Agrees/Rejects	: 27
		Thanks, Greet	: 4
<u>UNCODABLE</u>	: 1		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 130

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
SECOND AGE GROUP

MOTHER 5: INTERACTING WITH CHILD AGE : 4;6

<u>ASSERTIVES</u>	: 32	Labelling	: 6
		Assertions of Events	:13
		Assertions Internal	:16
<u>RESPONSIVES</u>	: 6	One-Word Responses	: 2
		Extended Responses	: 4
<u>DIRECTIVES</u>	: 54	Real Questions	:20
		Test Questions	: 2
		Verbal Reflective	:21
		Clarification Request	: 4
		Requests for Action	: 5
		Suggestions	: 1
		Permission Requests	: 1
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 14	Exclamations	: 3
		Accompaniments	: 8
		Repetitions	: 2
<u>ACKNOWLEDGEMENT</u>	: 48	Agrees/Rejects	: 37
		Thanks, Greetings	: 11
<u>UNCODABLE</u>	: 10		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 165

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

MOTHER 1: INTERACTING WITH CHILD AGE : 5;7

<u>ASSERTIVES</u>	: 32	Labelling	: 5
		Assertions of Events	: 21
		Assertions Internal	: 6
<u>RESPONSIVES</u>	: 2	One-Word Responses	: 2
		Extended Responses	: -
<u>DIRECTIVES</u>	: 63	Real Questions	: 35
		Test Questions	: 11
		Verbal Reflective	: 5
		Clarification Request	: 5
		Requests for Action	: 5
		Suggestions	: 2
		Permission Requests	: -
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 12	Exclamations	: 10
		Accompaniments	: -
		Repetitions	: 2
<u>ACKNOWLEDGEMENT</u>	: 14	Agrees/Rejects	: 14
		Thanks, Greets	: -
<u>UNCODABLE</u>	: 3		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 127

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

MOTHER 2: INTERACTING WITH CHILD AGE : 5;8

<u>ASSERTIVES</u>	: 25	Labelling	: 8
		Assertions of Events	: 12
		Assertions Internal	: 5
<u>RESPONSIVES</u>	: 6	One-Word Responses	: 5
		Extended Responses	: 1
<u>DIRECTIVES</u>	: 27	Real Questions	: 16
		Test Questions	: 1
		Verbal Reflective	: 3
		Clarification Request	: 2
		Requests for Action	: 3
		Suggestions	: 2
		Permission Requests	: -
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 9	Exclamations	: 1
		Accompaniments	: 8
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 15	Agrees/Rejects	: 15
		Thanks, Greetings	: -
<u>UNCODABLE</u>	: 6		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 65

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

MOTHER 3: INTERACTING WITH CHILD AGE : 5;8

<u>ASSERTIVES</u>	: 38	Labelling	: 4
		Assertions of Events	: 25
		Assertions Internal	: 9
<u>RESPONSIVES</u>	: 5	One-Word Responses	: 4
		Extended Responses	: 1
<u>DIRECTIVES</u>	: 38	Real Questions	: 20
		Test Questions	: -
		Verbal Reflective	: 7
		Clarification Request	: 5
		Requests for Action	: 2
		Suggestions	: 4
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 6	Exclamations	: -
		Accompaniments	: 5
		Repetitions	: 1
<u>ACKNOWLEDGEMENT</u>	: 10	Agrees/Rejects	: 9
		Thanks, Greetings	: 1
<u>UNCODABLE</u>	: 3		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 100

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

MOTHER 4: INTERACTING WITH CHILD AGE : 5;9

<u>ASSERTIVES</u>	: 65	Labelling	: 8
		Assertions of Events	: 45
		Assertions Internal	: 12
<u>RESPONSIVES</u>	: 4	One-Word Responses	: 2
		Extended Responses	: 2
<u>DIRECTIVES</u>	: 15	Real Questions	: 9
		Test Questions	: -
		Verbal Reflective	: -
		Clarification Request	: 3
		Requests for Action	: 2
		Suggestions	: 1
		Permission Requests	: -
<u>COMMISSIVES</u>	: 2		
<u>EXPRESSIVES</u>	: 7	Exclamations	: 2
		Accompaniments	: 11
		Repetitions	: 4
<u>ACKNOWLEDGEMENT</u>	: 15	Agrees/Rejects	: 12
		Thanks, Greetings	: 3
<u>UNCODABLE</u>	: 4		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 112

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
THIRD AGE GROUP

MOTHER 5: INTERACTING WITH CHILD AGE : 5;6

<u>ASSERTIVES</u>	: 42	Labelling	: 6
		Assertions of Events	: 28
		Assertions Internal	: 8
<u>RESPONSIVES</u>	: -	One-Word Responses	: -
		Extended Responses	: -
<u>DIRECTIVES</u>	: 16	Real Questions	: 7
		Test Questions	: -
		Verbal Reflective	: 3
		Clarification Request	: 4
		Requests for Action	: 1
		Suggestions	: -
		Permission Requests	: 1
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 16	Exclamations	: 5
		Accompaniments	: 8
		Repetitions	: 3
<u>ACKNOWLEDGEMENT</u>	: 13	Agrees/Rejects	: 13
<u>UNCODABLE</u>	: 12	Thanks, Greetings	: -
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 99

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

MOTHER 1: INTERACTING WITH CHILD AGE : 6;9

<u>ASSERTIVES</u>	: 38	Labelling	: 2
		Assertions of Events	: 32
		Assertions Internal	: 4
<u>RESPONSIVES</u>	: 8	One-Word Responses	: 6
		Extended Responses	: 2
<u>DIRECTIVES</u>	: 30	Real Questions	: 22
		Test Questions	: -
		Verbal Reflective	: 3
		Clarification Request	: 2
		Requests for Action	: 1
		Suggestions	: 2
		Permission Requests	: -
<u>COMMISSIVES</u>	: 1		
<u>EXPRESSIVES</u>	: 7	Exclamations	: -
		Accompaniments	: 7
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 20	Agrees/Rejects	: 20
		Thanks, Greetings	: -
<u>UNCODABLE</u>	: 6		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 110

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

MOTHER 2: INTERACTING WITH CHILD AGE : 6;6

<u>ASSERTIVES</u>	: 36	Labelling	: 9
		Assertions of Events	: 23
		Assertions Internal	: 4
<u>RESPONSIVES</u>	: 6	One-Word Responses	: 4
		Extended Responses	: 2
<u>DIRECTIVES</u>	: 22	Real Questions	: 16
		Test Questions	: -
		Verbal Reflective	: 2
		Clarification Request	: -
		Requests for Action	: 4
		Suggestions	: -
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 21	Exclamations	: 9
		Accompaniments	: 11
		Repetitions	: 1
<u>ACKNOWLEDGEMENT</u>	: 21	Agrees/Rejects	: 20
		Thanks, Greet	: 1
<u>UNCODABLE</u>	: 4		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 110

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

MOTHER 3: INTERACTING WITH CHILD AGE : 6;7

<u>ASSERTIVES</u>	: 57	Labelling	: 3
		Assertions of Events	: 22
		Assertions Internal	: 32
<u>RESPONSIVES</u>	: 14	One-Word Responses	: 6
		Extended Responses	: 8
<u>DIRECTIVES</u>	: 45	Real Questions	: 13
		Test Questions	: 2
		Verbal Reflective	: 3
		Clarification Request	: 5
		Requests for Action	: 13
		Suggestions	: 8
		Permission Requests	: -
<u>COMMISSIVES</u>	: -		
<u>EXPRESSIVES</u>	: 1	Exclamations	: 1
		Accompaniments	: -
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 10	Agrees/Rejects	: 8
		Thanks, Greets	: 2
<u>UNCODABLE</u>	: -		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 137

INDIVIDUAL RESULTS OF THE SPEECH-ACTS ANALYSIS
FOURTH AGE GROUP

MOTHER 4: INTERACTING WITH CHILD AGE : 6;7

<u>ASSERTIVES</u>	: 30	Labelling	: -
		Assertions of Events	: 13
		Assertions Internal	: 17
<u>RESPONSIVES</u>	: 10	One-Word Responses	: 4
		Extended Responses	: 6
<u>DIRECTIVES</u>	: 31	Real Questions	: 9
		Test Questions	: -
		Verbal Reflective	: 10
		Clarification Request	: 7
		Requests for Action	: 2
		Suggestions	: 2
		Permission Requests	: 1
<u>COMMISSIVES</u>	: 2		
<u>EXPRESSIVES</u>	: 11	Exclamations	: 1
		Accompaniments	: 10
		Repetitions	: -
<u>ACKNOWLEDGEMENT</u>	: 19	Agrees/Rejects	: 19
		Thanks, Greet	: -
<u>UNCODABLE</u>	: -		
<u>PRIVATE</u>	: -		
		<u>TOTAL</u>	: 103

CHILDREN'S INDIRECT SPEECH ACTS

		STANDARDIZED			PRAGMATIC	HINTS	TOTAL
		Wh-Imperp.	Imposit.	Qeclarat.			
A1	S1	-	-	-	-	1	1
	S2	-	-	-	-	2	2
	S3	-	-	-	-	1	1
	S4	-	-	-	-	-	-
	S5	-	-	-	-	-	-
A2	S1	-	1	-	1	1	2
	S2	-	-	-	2	-	2
	S3	-	-	-	1	1	2
	S4	-	-	-	-	-	-
	S5	-	-	-	-	-	-
A3	S1	-	-	-	-	2	2
	S2	-	-	-	-	1	1
	S3	-	1	-	1	1	3
	S4	-	-	-	1	2	3
	S5	-	-	-	1	-	1
A4	S1	1	2	-	2	6	11
	S2	-	3	-	3	6	12
	S3	-	1	-	2	5	8
	S4	1	1	-	1	4	7

(*) Note: A1, A2, A3, A4 = The four age groups.

S1, S2, S3, S4, S5 = The five subjects in each group.

MOTHER'S INDIRECT SPEECH ACTS

		STANDARDIZED			PRAGMATIC	HINTS	TOTAL
		Wh-Imperat.	Imposit.	Qeclarat.			
A1	S1	2	3	-	-	2	7
	S2	2	1	-	1	-	4
	S3	1	1	-	-	-	2
	S4	2	-	-	-	2	4
	S5	-	2	-	-	-	2
A2	S1	2	4	-	2	1	9
	S2	3	3	-	-	1	7
	S3	1	2	-	3	2	8
	S4	-	1	-	-	-	1
	S5	2	1	-	-	-	3
A3	S1	1	3	-	1	2	7
	S2	-	2	-	3	3	8
	S3	2	1	-	4	2	9
	S4	-	1	-	1	3	5
	S5	-	2	-	-	-	2
A4	S1	2	6	-	2	5	15
	S2	1	3	-	3	7	14
	S3	1	1	-	2	4	8
	S4	2	1	-	2	5	10

(*) A1,A2,A3,A4 = The four Age Groups.

Appendix 4

1. Children's Positive Social Acts.

2. Children's Negative Social Acts.

CHILDREN'S POSITIVE SOCIAL ACTS

	INITIATIONS	RESPONSIVENESS	SHARED ACTIVITY	TOTAL	
A1	S1	31	25	70	126
	S2	25	32	45	102
	S3	23	15	62	100
	S4	25	18	66	109
	S5	44	46	85	175
A2	S1	57	39	49	145
	S2	58	38	52	148
	S3	43	40	47	130
	S4	49	25	51	125
	S5	77	47	40	164
A3	S1	56	14	120	190
	S2	52	13	110	175
	S3	48	18	132	198
	S4	58	19	111	188
	S5	58	25	103	186
A4	S1	81	25	140	246
	S2	70	31	128	229
	S3	83	18	116	217
	S4	50	23	149	222

(*) NOTE : A1=3.6-4.0, A2=4.6-5.0, A3=5.6-6.0, A4=6.6-7.0

CHILDREN'S NEGATIVE SOCIAL ACTS

	WAITING FOR INITIATION	NON-SOCIAL BEHAV.	UNRESPONSES	TOTAL	
A1	S1	12	21	18	51
	S2	13	22	15	50
	S3	9	18	19	46
	S4	10	15	12	37
	S5	13	25	23	61
A2	S1	6	8	16	30
	S2	5	5	21	31
	S3	10	3	13	26
	S4	11	9	24	44
	S5	14	11	11	36
A3	S1	3	5	4	12
	S2	1	2	6	9
	S3	-	4	7	11
	S4	4	3	2	9
	S5	6	6	9	21
A4	S1	-	-	2	2
	S2	-	-	-	-
	S3	1	1	1	3
	S4	-	-	-	-

BIBLIOGRAPHY

- Acredolo, L. (1977) Developmental Changes in the ability to coordinate perspectives of a large scale space. In Developmental Psychology 13, 1-8.
- Atkinson, R.M. & Griffith, P. (1973) Here is here, there is there and here. Edinburgh Working Papers in Linguistics, 3, 29-73.
- Atkinson, R.M. (1979) Prerequisites for Reference. In E.Ochs & B.Shieffelin, (ed), Developmental Pragmatics. New York, Academic Press.
- Atkinson, R.M. (1982) Explanations in the Study of Child Language Development. Cambridge Studies in Linguistics. Cambridge University Press.
- Austin, J.L. (1962) How to Do Things with Words. Oxford: Clarendon Press.
- Auwera, J.V. (1980) Indirect Speech Acts Revisited. Indiana University Linguistic Club.

- Bach, K. & Harnish, R.M. (1979) Linguistic Communication and Speech Acts. Cambridge, Mass : MIT Press.
- Bates, E. (1976) Language and Context : The Acquisition of Pragmatics. New York. Academic Press.
- Bates, E. (1977) From Gesture to The First Word: on cognitive and social prerequisites. In Lewis, M. & Rosenblum, L. (Ed), Interaction, Conversation and the Development of Language. New York, Wiley.
- Bates, E. (1979) The Acquisition of Performatives Prior to Speech. In E. Ochs & B. Schieffelin (eds) Developmental Pragmatics. New York: Academic Press.
- Bellinger, D. (1979) Changes in the Explicitness of mother's directives as children age. Journal of Child Language, 6, 443-58
- Berlinger, G. & Garvey, C. (1981) Relevant Replies to Questions: Answers versus Evasions. Journal of Psycholinguistic Research, 10, (4), 403-20

- Bloom, L. (1975) Language Development In Review of Child Development Research, Vol. 4 (Ed.)
- Bloom, L. (1973) One Word at a Time. The Hague:Mouton.
- Bowerman, M. (1981) Cross-Cultural Perspectives on Language Development. In Triandis (Ed). Handbook of Cross-Cultural Psychology. Boston:Allyn & Bacon, Inc.
- Borke, H. (1971) Interpersonal Perception of Young Children:Egocentrism or Empathy?. In Developmental Psychology,5,263-9
- Borke,H. (1973) The Development of Empathy in Chinese and American Children Between 3 and 6 years of age. In Developmental Psychology,9,102-8
- Braine,M.D.S. (1963) The ontogeny of English Phrase Structure: The first Ph#ase. In Language,39,1-13

- Brown, R. & Fraser, C. (1964) The Acquisition of Syntax. In U. Bellugi & R. Brown (eds) The Acquisition of Language. Monographs of the Society for Research in Child Development, 29, (Serial No.92), 43-79
- Brown, P. & Levinson, S. (1978) Universals in Language Usage: Politeness Phenomena. In E. N. Goody, (ed) Questions and Politeness: Strategies in Social Interaction, Cambridge: Cambridge University Press.
- Bruner, J. (1975) The Ontogenesis of Speech-Acts. In Journal of Child Language , 2, 1-20
- Bruner, J. (1978) On Pre-linguistic Prerequisites of Speech. In Campbell, R. N. & Smith, P. T. (eds) Recent Advances in the Psychology of Language: Language Development and mother-child Interaction. New York & London : Plenum Press.
- Bruner, J. (1981) The Social Context of Language Acquisition. In Language and Communication Vol. 1, No. 2/3, 155-78

- Bryant, P. (1975) The Development of Social Cognition. In Hetherington, E. (ed) Review of Child Development Research, Vol.5, Chicago:University of Chicago Press.
- Carter, A. (1978) From Sensori-motor vocalizations to words : A case study of the evolution of attention directing communication in the second year. In A. Lock, (ed) Action Gesture and Symbol: The Emergence of Language. New York, Academic Press.
- Campbell, R.N. (1979) Cognitive Development and Child Language. In P. Fletcher and M. Garman (eds) Language Acquisition, Cambridge:Cambridge University Press.
- Chandler, M.J. (1977) A Selective Review of Current Research . In W.F. Overton & J.M. Gallagher, ^(eds) Knowledge and Development Vol.1, New York & London:Plenum Press.
- Chomsky, N. (1965) Aspects of the Theory of Syntax. Cambridge, Mass:MIT Press.

- Cicourel, A.V. (1981) The Role of Cognitive and Linguistic Concepts in Understanding Everyday Social Interactions. Annual Review of Sociology, Vol.17
- Clark, H.H. & Clark, E.V. (1975) Understanding What is Meant from What is Said: A Study of Conversationally Conveyed Requests. In Journal of Verbal Learning and Verbal Behaviour, Vol.3, 56-70
- Clark, E.V. (1978) Strategies of Communication. In Child Development, 49, 953-59
- Clarke-Stewart, A. (1978) The Development of Social Understanding. New York: Gardner Press.
- Cooper, D. (1973) Philosophy of the Nature of Language. Place: Longman
- *
Damon, W. (1977) The Social World of the child. San Fransisco: Jossey Press.
- de Villiers, J.C. & de Villiers, P.A. (1979) Language Acquisition. Harvard University Press.
- * Dale, P.S. (1972) Language development: structure & function. Hinsdale, Dryden

Dore, J.

(1975) Holophrase, Speech Acts and Language Universals. In Journal Of Child Language , 2,21-40

_____ (1977a) Children's Illocutionary Acts. In R. Freedle, (ed), Discourse Production and Comprehension, Hillsdale, N.J., Laurence Erlbaum Associates.

_____ (1977) Oh them Sheriff: A Pragmatic Analysis of Children's Responses to Questions. In S.Ervin-Tripp & C. Mitchell-Kernan, (eds), Child Discourse , New York, Academic Press.

_____ (1979) What's so conceptual about the acquisition of linguistic structures? In Journal of Child Language,6,129-37

Ervin-Tripp, S.

(1970) Discourse agreement: How children answer questions. In J.R. Hayes (ed) Cognition and the Development of Language, New York: Wiley.

_____ (1977) Wait for me Roller-Skate! In ^{e. Mitchell-} S.Ervin-Tripp & M.Kernan, (eds)

Child Discourse, New York: Academic Press.

- Ervin-Tripp, S. (1977a) Early Discourse: Some Questions about Questions. In Interaction, Conversation and the Development of Language, Lewis, M.& Rosenblum, L. (eds) New York: Wiley
- _____ (1978) Some features of early child-adult dialogues. In Language in Society, 7, 357-73
- _____ (1978a) Whatever happened to Communicative Competence? In proceedings of the Linguistic Forum, University of Illinois, Champaign-Urbana, (Sept)
- _____ (1979) Children's Verbal Turn-Taking. In E.Ochs and B.Schieffelin, (eds), Developmental Pragmatics. New York: Academic Press.
- Ervin-Tripp, S.& Gordon, D.P. (1980) The Development of Requests. In R.E. Schieffelin, (ed), Communicative Competence: Acquisition & Intervention. Baltimore, Univ. Press.

- Ervin-Tripp, S. (1980) Ask and it shall be given you: Children's Requests. Georgetown Monograph In Language.
- Ervin-Tripp, S. (1981) How to make and understand a request. In H. Parret M. Sbisà, & J. Verschueren (eds) Possibilities and Limitations of Pragmatics. Studies in Language Companion Series.
- Fantz, R.D. (1965) Visual Perception from Birth as shown by pattern Selectivity. New York Academy of Science, 188, 793-814
- Fein, D.A. (1972) Judgement of Causality to physical and social picture sequences. In Developmental Psychology, 8, 147
- Flavell, J.H. (1968) The Development of Role-Taking and Communication Skills in Children. New York & London : Wiley.

- Flavell, J.H. (1974) The Development of Inferences about others. In T. Mischel (ed) Understanding other Persons. Oxford: Blackwell.
- Flavell, J.H. & Ross, L. (1981) Social Cognitive Development: Frontiers and possible futures. New York: Cambridge University Press.
- *
Garvey, C. & Hogan, R. (1973) Social Speech and Social Interaction: Egocentrism Revisited. In Child Development , 44, 562-8
- Garvey, C. (1975) Requests and Responses in Children's Speech. In Journal of Child Language, 2, 41-63
- Garvey, C. (1977) Play with Language and Speech. In S. Ervin-Tripp & C. Kernan (eds) Child Discourse New York: Academic Press.
- Garvey, C. (1979) Contingent queries and their relations in discourse. In E. Ochs and B. Shieffelin (eds) Developmental Pragmatics. New York: Academic Press.
- Fogel, A. (1977) Temporal Organization in mother-child face-to-face interaction. In H.R. Schaffer (eds) Studies in mother-child interaction. London: Academic Press.

- Ginsberg, E. H. & (1982) Linguistic Input and the Child's Acquisition of Language. In Psychological Bulletin, Vol. 92, No.1 3-26
- Goldman, S.R. (1982) Knowledge Systems for Realistic Goals. In Discourse Processes, 5, 279-303
- Gruber, J. (1967) Topicalization in Child Language. In Foundations of Language, 3:37-65
- Grice, H.P. (1975) Logic and Conversation. *In P. Cole & J.L. Morgan, Syntax & Semantics, Vol. 3, Speech Act.*
*
Gumperz, J.J. (1972) Introduction. In J.J. Gumperz and *New York: Academic Press.*
D. Hymes (eds) Directions in Socio-Linguistics. The Ethnography of Communication. New York: Holt, Rinehart & Winston.
- Gumperz, J.J. (1982) Discourse Strategies. Cambridge: Cambridge University Press.
- Halliday, M.A.K. (1975) Learning how to mean. London: Edward Arnold.
- * Grice, H.P. (1978) Further notes on Logic & Conversation. In P. Cole (ed), Syntax & Semantics, Vol. 9. Pragmatics. New York: Academic Press.

- Hamlyn, D.W. (1978) Experience and the growth of Understanding. London:Routledge and Kegan Paul.
- Hee-Seo Park, L. (1980) Sensitivity to Social Situations. Unpublished Ph.D. thesis, Presented at UCI, Irvine, California.
- Hirst, P. (1975) Language and Thought. In Education and the Development of Reason. London: Routledge & Kegan Paul.
- Howe, C.J. (1978) Acquiring Language in a Conversational Context. New York: Academic Press.
- Howe, C.J. (1983) Concepts and Methods in the Study of Conversation: A reply to L. Olsen-Fulero. In Journal of Child Language, 10, 231-237
- Hughes, M. (1975) Egocentrism in pre-school children. Unpublished Doctoral Dissertation, University of Edinburgh.

- Huttenlocher, J. & Presson, C. (1973) Mental Rotation and the Perspective Problem. In Cognitive Psychology, 4, 277-99
- Hymes, D. (1971) On Communicative Competence. In T. Lee (ed) Language Development. London: Open University Press.
- Ireson, J. & Shields, M. (1985) Visual versus Verbal Clues in the recognition of emotion by children. Unpublished manuscript distributed at the University of London, Institute of Education.
- Jaffe, S. & Feldstein, S. (1970) Rhythms of Dialogue. New York: Academic Press.
- Karmiloff-Smith, A. (1979) A Functional Approach to Child Language. Cambridge: Cambridge University Press.
- Kaye, K. & (1981) Conversational Asymmetry between Mothers and Children. In Journal of Child Language, 8, 35-49

- Keasy, P. (1979) Children's Developing Awareness and Usage of Intentionality and Motives. In C. Blake Keasey, Motivation, Nebraska Symposium on Motivation, University of Nebraska Press.
- Keenan, E.O. (1974) Conversational Competence in Children. In Journal of Child Language 1(2), 163-83
- Keenan, E.O. & Klein, E. (1975) Coherency in Children's Discourse. Journal of Psycholinguistic Research, 4, 365-78
- Keenan, E.O. (1976) The Universality of Conversational Postulates. In Language and Society, Vol. 5 67-79
- Keenan, E.O. & Schieffelin, B. (1976a) Topic as ^{or} Discourse notion. In C. Li, (ed) Subject and Topic. New York : Academic Press.

- Keenan, E.O. (1977) Making it Last : Repetition in Children's Discourse. In S.Ervin-Tripp & Mitchell-Kernan (eds) Child Discourse New York : Academic Press.
- Langer, S. (1965) Philosophy in a New Key. Cambridge: Harvard University Press.
- Levin, S. (1976) Concerning what kind of a poem a Speech-Act is. In Van Dijk, Pragmatics of Language and Literature. Amsterdam : North Holland.
- Levine, L. & Hoffman, M. (1975) Empathy and Cooperation in 4 year olds. In Developmental Psychology, 11, 53-4
- Levinson, S.C. (1985) Pragmatics. Cambridge, Cambridge University Press.
- *
Masangay, McCluskey, McIntyre, Simms-Knight, & Flavell, (1974) The Early Development of Inferences about the visual percepts of others. In Child Development, 45, 357-66
- McDonald, L. & Pien, D. (1982) Mother's Conversational Behaviour as a function of Interactional Intent. In Journal of Child Language ,9,337-58
- *Knight, P. (1979) *The development of Social Sensitivity : a study of social aspects of role taking in young children*. Cambridge: Cambridge University Press.

- McNeill, D. (1970a) The Development of Language. In P.H. Mussen (ed) Carmichael's Manual of Child Psychology, Vol.1, New York: Wiley.
- McNeill, D. (1970b) The Acquisition of Language: The Study of Developmental Psycholinguistics. New York: Harper & Row.
- McShane, J. (1980) Learning to Talk. Cambridge: Cambridge University Press.
- McTear, M. (1978) Repetition in Child Language: Imitation or Creation? In R. Campbell & P. Smith (eds) Recent Advances in the Psychology of Language. Language Development and mother-child Interaction. New York: Plenum Press.
- McTear, M. (1985) Children's Conversations. Oxford: Blackwell.
- Miller, P.H., Kessel, F.S. & Flavell, J.H. (1970) Thinking about people thinking about people thinking about..... A study of social cognitive development. In Child Development, 41, 613-23

- Morris, C. (1946) Signs, Language and Behaviour.
Englewood Cliffs, N.J.: Prentice Hall.
- Nelson, K. (1973) Structure and Strategy in Learning
to Talk. In Monographs of the Society
for Research in Child Development, 38,
(1-2, Serial No. 149).
- Nelson, K. , (1978) Early Lexicons: What do they mean?
Rescorla, L., Child Development, 49, 960-968
Grundel, J., &
Benedict, H.
- Ochs, E. (1979) What Child Language can contribute
to Pragmatics. In E. Ochs & B.
Schieffelin, Developmental Pragmatics,
New York: Academic Press.
- Olsen-Fulero, L. (1983) Acquiring Language in a Conversational
Context. In Journal of Child Language,
10, 223-229
- Peterson, C.L. & (1972) Developmental Changes in children's
Danner, E.W. & responses to three indications of
Flavell, J.H. communicative failure. In Child
Development, 43, 1463-8

- Piaget, J. (1959) The Language and Thought of the Child, London: Routledge and Kegan Paul.
- Piaget, J. & Inhelder, B (1956) The Child's Conception of Space. London: Routledge & Kegan Paul.
- Rodgon, M.M. (1979) Knowing what to say and wanting to say it : Some communicative and structural aspects of single word responses to questions. In Journal of Child language, 6, 81-91
- *
Searle, J.R. (1969) Speech-Acts. Cambridge: Cambridge University Press.
- Searle, J. R. (1975) Indirect Speech Acts. In ^{P. Cole & J.L. Morgan} (eds) Syntax and Semantics 3: Speech-Acts. New York: Academic Press
- Searle, J.R. (1976) The Classification of Illocutionary Acts. In Language and Society, 5, 1-24
- Searle, J.R. (1979) Expression and Meaning. Cambridge: Cambridge University Press.
- * Sacks, H., Schegloff, E.A. & Jefferson, G. (1974) A simplest systematics for the organization of turn-taking for conversation. Language 50, 696-735

- Shatz, C. (1975) The Development of Social Cognition. In Hetherington, E. (ed) Review of Child Development Research, Vol.5, Chicago: University of Chicago Press.
- Shatz, C. (1982) Children's Understanding of Social Rules and the Social Context. In F.C. Serafica, (ed) Social Cognitive Development in Context. Guilford Press
- Shatz, M. & Gelman, R. (1973) The Development of Communicative Skills : modifications in the speech as a function of listener. In Monographs of the Society for Research in Child Development, Vol.38, No.5.
- Shatz, M. (1975) How young children respond to Language: Procedures for answering. Papers and reports on Child Language Development, No.10, Stanford University.

- (1978) Children's Comprehension of their mother's question-directives. In Journal of Child Language, 5, 39-46
- Shotter, J. (1980) Action, Joint Action and Intentionality. In Brenner, M. (ed) The Structure of Action. Oxford, Basil Blackwell.
- Snow, C.E. (1972) Mother's speech to children learning language. In Child Development, 43, 549-565
- Snow, C.E. (1977) The development of conversations between mothers and babies. In Journal of Child Language, 4, 1-22
- Spilton, D. & Lee, L.C. (1977) Some determinants of effective communication in 4 year olds. In Child Development, 48, 968-977
- Stefferson, M.S. (1978) Satisfying inquisitive adults: some simple methods of answering yes/no questions. Journal of Child Language 5, 221-36

- StClair, R.N. (1980) The Social and Psychological Context
Giles, H. of Language. Hillsdale, New Jersey:
Laurence Erlbaum Associates Publishers.
- *₁
Sugarman-Bell, S. (1978) Some Organizational Aspects of
Pre-Verbal Communication. In I.
Markova (ed) The Social Context of
Language, New York:Wiley
- Tipton, I.C. (1977) Locke on Human Understanding: Selected
Essays. Oxford:Oxford University Press.
- *₂
Voyat, G. (1978) Cognitive and Social Development
London:Routledge & Kegan Paul.
- Werth, P. (1981) Conversation and Discourse:Structure
and Interpretation. London:Croom Helm.
- Wittgenstein, L. (1958) Philosophical Investigations. Oxford:
Blackwell.
- *₁ Strawson (1971) Intentions & Conventions in
Speech Acts. In J. Searle (ed)
The philosophy of Language,
Oxford: oxford University Press.
p. 23-39
- *₂ Turiel, E. (1983) The development of Social
Knowledge: morality & conventions.
Cambridge: Cambridge
University Press.