PATTERNS IN VERBAL INTERACTION: THE EFFECT OF SITUATIONAL INFLUENCES ON THE LANGUAGE PERFORMANCE OF EIGHT-YEAR-OLD CHILDREN

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ABSTRACT

The investigation of children's language performance seems often to have proceeded on the assumption that a sample of verbal behaviour elicited in one type of situation is typical of the child's language in general. Frequently, the sample has been obtained in a laboratory-type, setting and sometimes with activities that involved either no other people or only minimal participation by an adult experimenter, who may have been relatively unfamiliar to the child. Over recent years concern has been expressed by a growing number of researchers that language sampled in these ways may not give a true indication of the child's actual language behaviour nor, of the factors that influence performance in this or that situation.

The present study was designed to survey children's language behaviour in natural settings and under different conditions. Recorded conversations, both in the home and at school, were obtained from a group of 12 eight-year-old boys and girls in a range of interaction situations. The children came from the same school, situated in a largely middle-class suburb in a provincial New Zealand city. The subjects were all caucasians, spoke English as their first language, and had been rated as average or above in oral language by class teachers. Sampling was carried out over a six-week period with the group divided in half, and tape recorders were left in the home for a week at a time, alternating between the two groups. Concurrent with the home sampling, conversations were also recorded at school.

In the home setting, four samples in each of five situations were obtained (mother-child; father-child; parents-child; other adult-child; and child-child), and at school four samples in each of three situations (teacher-child; teacher-children; and children only). Adults were encouraged to talk with the children in the home setting about topics they would ordinarily discuss (e.g. family interests and local events), and at times when such conversations would normally occur (e.g. after school, before bed, in the bath). At school, teachers worked with children in situations where dyadic and small group discussions usually took place (e.g. talking about stories the children had read or written,

discussing pictures). To counter-balance any practice effect in the school interactions, the order in which pupils undertook the tasks and the order in which the different tasks occurred was specified.

As well as exploring the characteristics of children's language behaviour under different sampling conditions and with different people, the study was also designed to test the wider application of a modified coding system developed initially to analyse classroom verbal interaction. From the sampling, over 40 hours of language behaviour was obtained and 2,000 pages of transcript were analysed using specially written computer programmes. The results were unequivocal. The language of these children did vary markedly from situation to situation, particularly when home and school comparisons were made. Whenever adults were involved in the interactions they tended to dominate and control the verbal exchanges, mainly through the questions they asked. This adult dominance was most extreme in the teacher-child interactions, where the child did little else but answer the teacher's questions, which were mainly of the memory-recall, simple opinion, or comprehension types. Children showed, however, in the exchanges involving only their peers, that they were capable of using most of the various types of verbal behaviour used by the adults.

Supplementary analysis indicated that verbal sequences tended to be simple, in that few moves were used and these were generally very short consisting of one or two utterances. The study provided detailed descriptions of children's language behaviour in a range of situations and the types of happenings and events that were of personal significance to those involved. In addition, the results of the study highlighted the importance of taking due cognizance of the interpersonal factors operating in interaction situations, and the influence these appear to exert on the language which participants (particularly children) were able, and were in fact allowed by the situation, to use.

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CONTENTS

CHAPTER 1: INTRODUCTION

The systematic investigation of how children use language in 'real-life' situations is of comparatively recent origin and has not really formed part of the mainstream of research on verbal behaviour. Instead, the major impetus in research has been directed towards the definition of language structure. This focus on structure has meant, in essence, the isolation of language from the contexts in which it has occurred and the consequent emphasis on delineating parameters of competence rather than on explaining the realities of performance. Over the past decade, however, an increasing number of writers have made reference to general social and contextual influences on language behaviour (Hymes, 1967; Cazden et al, 1972; Tough, 1974; Schwartz, 1975; Edelsky, 1976; Edmonds, 1976). The channelling of more research effort to the investigation of verbal behaviour in naturalistic settings would seem to offer a necessary complement to the continuing linguistic study of child language.

Descriptions of children's conversations at home and in the classroom have provided ready, albeit limited, evidence that the words we use in daily exchanges often have a meaning in context that can be quite different from their meaning in isolation. For example, the word 'Mary' which in isolation might be identified as 'person's name', could in a social context mean 'Come over here, Mary, there is someone I would like you to meet' or 'I want Mary to answer this question'. In a verbal exchange the label of identity (Mary) may be subsumed by a context of meaning which includes not only the syntactic arrangement of words but also a system of non-verbal cues and a set of norms and roles to guide the speech act. Therefore, while language provides the medium by which meaningful exchanges can occur, the catalyst is the social environment.

For these reasons, it is perhaps more appropriate to consider verbal behaviour in the context of a general communicative ability rather than under the more limited rubric of linguistic competence. A focus on language in use highlights the interaction that takes place in verbal exchanges. Unfortunately, the investigation of children's verbal behaviour has too often been confined to the

passive side of the child's role - to the child as a recipient rather than an initiator. It is difficult to reconcile views that see mainly a unidirectional pattern in verbal exchanges between adult and child with intuitive observations in real-life situations that indicate a reciprocal relationship. However, studies that are prepared to investigate the more active aspects of the child's role in language situations are gaining mounting support (Bell, 1971; Harper, 1971; Fiedler, 1975).

The investigation of language behaviour in natural settings raises a whole series of questions related to the functions language performs, the roles and relationships between participants, the nature of the physical setting, and the influence these various factors may have on actual verbal exchanges. An earlier piece of research conducted by the writer (Hanlon, 1973) had shown significant differences in the structure of language that children used in different situations. However, the nature of the tasks used to elicit verbal behaviour in that study tended to be very structured.

The present study was planned as a means of obtaining similar information in a less structured manner. As several writers have observed, there is a paucity of information about the normal behaviour patterns of parents with their children (Yarrow, 1963), about how children use language in natural settings (Cazden et al, 1972; Tough, 1974), and even about adult verbal interaction(Hinde, 1976). The investigation which forms the subject of this thesis then was primarily a systematic attempt to describe the verbal behaviour and explore the interactional relationships within it of a group of eight-year-old children in a number of situations within two primary settings: home and school. The contexts within which the interactions occurred were selected to preserve, as far as possible, verbal behaviour that could normally be expected within these settings. It was hoped that the analysis of the language, used by the participants in the different situations, would enable identification of those aspects of language behaviour that varied from setting to setting, and the conditions under which this happened. While the focus, therefore, was very much on describing language behaviour, the interactional flow of verbal exchanges was also an important concern.

The thesis takes the following form:

Chapter 2 contains a review of the literature within the context of a very general paradigm of communicative competence. The review considers relevant studies that identify factors associated with or influencing language behaviour: these have been grouped as person-experiential, structural situational, or dynamic situational influences. The chapter concludes with a statement of three major hypotheses, derived from the foregoing discussion.

Chapter 3 deals with the research design and contains a detailed account of the procedures adopted in selecting the subjects and the data-collection plan. An overview is given of the coding system and associated coder training and coder agreement procedures. The chapter also details the process of computer analysis and of the statistical techniques used in the treatment of data.

Chapter 4 presents and discusses the results for those situations sampled in the home setting. The major characteristics of the language behaviour observed in these situations is identified and described with supporting illustrative examples from the transcripts.

Chapter 5 presents and discusses the results for those situations sampled in the school setting and follows a similar pattern to that outlined above for Chapter 4.

Chapter 6 compares and contrasts the findings of the previous two chapters with specific reference to the research hypotheses. While this chapter mainly summarizes earlier material some new considerations are introduced including data on episode patterns.

Chapter 7 presents a summary of findings and draws conclusions from the study, discusses their implications, makes reference to the limitations of the research, and finally suggests lines for further investigation.

It should be noted that all Figures and Tables, as well as Appendices, are included in a separate volume for easier

reference. In that volume they occur in the order in which they are cited in the main text. The list of References is also included at the end of Volume 2.

CHAPTER 2: REVIEW OF THE LITERATURE

Overview. The research literature is discussed in the context of a paradigm for individual communicative performance which identifies a number of personal-experiential factors and a range of situational factors (both structural and dynamic) within the social environment. Together these factors seem to influence an individual's verbal behaviour in specific interaction situations. Arising out of this discussion, hypotheses, on which the research will be based, are formulated.

2.1 Children's language behaviour.

Historically, the systematic study of children's language can be traced back at least to the late eighteenth century diary observations by the philosopher Tiedman on the psychological development of his young son. From this early beginning, a considerable interest has grown in language behaviour and at the present time this is represented by a number of different research orientations. The psycholinguists, for example, focus mainly upon basic questions of language competence and search for universals in language behaviour. In contrast, other researchers study subcultural differences in language by systematically investigating the language behaviour of children from various social and ethnic groups. A third type of language research has explored the relationship between verbal behaviour and thought processes, and is an important area of research in cognition. Another type of language research relates very much to behaviour modification. Workers in this area are using a range of conditioning techniques to influence specific facets of the children's verbal performance. Finally, a number of researchers are investigating language behaviour, generally of the younger child, in more naturalistic settings. This ecological-type research is usually conducted in situations familiar to the child, such as homes and pre-school institutions.

These investigations have resulted, as one might expect, in the accumulation of a considerable amount of data on the characteristics of children's language, the factors involved in its development, and explanations for its occurrence. However, in spite of this diversity of research effort, the nature of the

relationship between a range of contextual factors and an individual's language performance is still far from clearly understood. For example, a sampling of this extensive body of literature suggests that the descriptive aspect of children's language performance has received greater and more specific attention than that given to aetiological factors. Typically, the researcher has collected language samples in one or more situations and then subjected the data collected to analysis designed to explore the development of speech sounds, the growth and character of vocabulary, the acquisition of syntax, and so on. In most such studies no further consideration is given to the situation in which the sample was produced. The language thus obtained is described and discussed as though an individual's performance is affected little, or not at all, by the context within which it occurs.

To continue to ignore the context within which verbal behaviour occurs would risk overlooking factors that might enhance our understanding of the reasons behind variations in an individual's language performance. There is evidence to suggest that such variations in performance, in a whole range of situations with differing participants, do occur (Cazden, 1967; Dickie and Bagur, 1972; Jones and McMillan, 1973; Tizard et al., 1972; Hanlon, 1973; Rose et al., 1975), and over recent years some attention has been directed to investigating the relationship between the situation and the language that occurs within it (Hymes, 1967; Ervin-Tripp, 1968; Barnes, 1971; Hopper, 1971; Bramwell, 1972; Loflin et al., 1972; Wells, 1975). However, while the influence of situational factors may have been acknowledged from a "common-sense" point of view, particularly with regard to semantic interpretation, it has been generally underemphasized in considering language from a developmental perspective.

The situational influences seem complex enough to be considered as at least two separate sets of factors. On the one hand is a set that might be labelled structural situational factors. These are variables that remain relatively constant for the duration of the language episode, such as familiarity with the language setting, the size of the interacting group, and the nature of the relationship between the participants (e.g. mother-

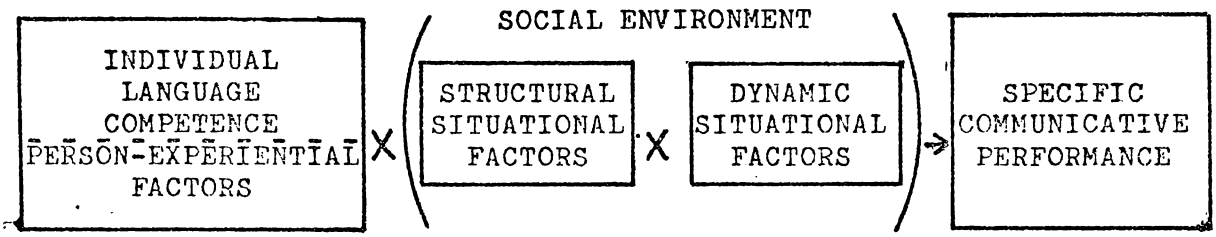
child, child-child, adult-child). Another set might be labelled dynamic situational factors. These are variables which can be used and manipulated, either intentionally or unintentionally, by the participants throughout the course of the language episode. Such dynamic situational factors might relate either to stimuli that initiate individual language performance, or to the resulting interactions that sustain and provide feedback on that performance. The initiating stimuli might be, for example, questions, directions, showing a picture, setting up a task, while the sustaining stimuli might include a range of verbal and/or non-verbal reinforcers.

In addition to this range of situational factors on language production, an individual's language performance at any given time would seem to involve at least two other groups of competence variables. One group comprises a number of person variables, and the influence on language behaviour of factors such as sex, age, and intelligence has been extensively studied. The other group includes experiential factors that are very much person-related, such as socio-economic status, level and type of schooling, and so on. Socio-economic status is included in this grouping because the discussions of the sociolinguists seem to indicate that social classes can be differentiated on the basis of the types of experience that members of the class are exposed to, and the manner in which language is used to translate this experience into some communicable form.

The relationship between language competence, communicative performance[1], and the interposing influences is without doubt an

1. Language competence as used here refers to a person's potential linguistic ability at any given period in time (which will include an interaction between innate and experiential factors). Communicative performance is the sampling of this linguistic competence influenced by contextual factors that include a range of social learnings. Definition of competence and performance in these terms seems to be consistent not only with their usage in the general literature on language behaviour (more specifically in accord with the writings of Chomsky and the psycholinguists) but also incorporates the influence of sociolinguists such as Dell Hymes. In other words, language in use goes beyond linguistic competence to include social rules and norms and also a perceptive awareness of the nuances of specific contexts. What finally emerges in a verbal exchange is more than a syntactic array of words - it is a communication appropriate to the social demands of the situation.

extremely complex one. The paradigm below attempts a simple representation of this relationship. For the purposes of the Review which follows, the paradigm provides a structural framework for the discussion of factors said to influence verbal behaviour.



A simple paradigm for individual communicative performance

2.2 Person-experiential factors associated with language behaviour

Research workers have identified a number of person-experiential factors that appear to be associated with individual language performance. In this section the following factors are discussed: age, sex status, intelligence, temperament, social class, and ethnicity. The list is not intended to be exhaustive but the association with language behaviour of most of these factors has received considerable support from research.

A person entering into communication brings to that situation a complex set of characteristics that make him what he is; in other words, his personality. Although attempts have been made broadly to relate personality and language behaviour (Sanford, 1942; Moerk, 1972a), the problems in identifying and isolating many personality traits has made this avenue of research, up till the present time, a somewhat difficult one. Moerk (1972a), for example, analysed the content of subjects' short stories in an attempt to find relationships between linguistic variables and psychological characteristics as measured by a battery of tests: the MMPI, Rorschach, WAIS, and Kuder Preference Scale. While some support was found for a connection between various personality traits and such style phenomena as word length, vocabulary, sentence length, and sentence structure, Moerk (1972a, p.267) concluded that 'the range of style variables correlated with personality traits is so wide and diversified that no clear pattern can be discerned at present'. However, there are person-

experiential factors that can be more readily identified and associated with language performance.

2.2.1 The influence of age on language performance. When age differences in language behaviour are being discussed, the critical factor is probably not so much age per se, but rather the language experiences that occur with the passing of time: experiences which may alter, enrich, or even retard one's linguistic ability. The nature of these changes has been investigated by many researchers. In a longitudinal study, with his own daughter as subject, Boyd (1927) found developmental trends in a number of language forms. His results showed, for example, that over a six-year period the percentage of different types of sentences in her speech came to approximate more closely the percentages of the same types occurring in adult language.

The increasing complexity of the child's language forms that Boyd related to the development of clause and phrase constructions have also been found in more recent studies which have used a transformational model for the analysis of syntactic structures (Menyuk, 1964c). Similar developmental changes have been found in the composition of children's vocabularies. Smith (1935) found, for example, proportionate increase with age in the use of abstract nouns, of the definite article, and of adjectives, together with a proportionate decrease with age in the use of adverbs of place, of modal adverbs, and of qualitative adjectives. To explain these changes Smith suggested that, as a child's experiential background widened, the concomitant sophistication of expression and growth of vocabulary led to the use of more precise and of more abstract words. This development was paralleled by a decrease in the frequency of usage of some other vocabulary forms.

Other researchers have investigated the age factor in relation to much more specific aspects of language behaviour (for example, Berlyne and Frommer, 1966; La Civita et al., 1966; Cowan et al., 1967; Quereshi, 1967; Shriner, 1967; Goulet, 1968; Krauss and Rotter, 1968; Hass and Wepman, 1974; Fraser and Roberts, 1975). The mean length of response (MLR), although used less frequently in more recent research on language, has been a

popular measure. Both Cowan et al. (1967) and Shriner (1967) found that while MLR tended to increase with age there was considerable variability in MLR among groups of older children. Perhaps of greater significance than these developmental trends was Shriner's observation that increased length of response did not necessarily equate with greater complexity in sentence structure. Menyuk (1964a) had already noted in an earlier study that while children's usage of grammar became increasingly complex with age this complexity was not related simply to increasing sentence length. For example, conjoining several sentences with "and" results in longer but not necessarily more complex sentences. Support for this view comes from a recent study by Harris and Hassemer (1972) of factors affecting the complexity of sentences used by second and fourth grade children. One of their findings indicated that, while the fourth grade children produced longer sentences than the second graders, there was no difference in the complexity of the sentences used by the two groups[1].

From the interest in transformational and generative grammars over recent years has arisen a body of research that has used this particular theoretical framework as the basis for the analysis of language data elicited from children (O'Donnell et al., 1967; Parisi, 1971; Chomsky, 1972). In a series of interviews with elementary school children, Chomsky (1972) tested their understanding of the grammatical relations which hold among the words in sentences such as, "The doll is easy to see" and "The girl asked the boy what to paint". The results indicated a developmental sequence in the children's competence with various syntactic structures. Although the age boundaries were generally wide, the data clearly showed an age threshold below which a subject did not have success with a particular structure.

O'Donnell et al. (1967) have also used the theoretical framework of the transformational model to investigate grammatical structures in the speech of children between the ages of five years and 13 years. Two short animated films of Aesop's Fables were used as the stimuli, and oral samples of language performance

1. Complexity was determined by categorizing each response as either single word, sentence fragment, simple sentence, simple sentence containing prepositional clause, complex sentence containing at least two clauses, or no response.

were gathered from each child and segmented into syntactic units for linguistic analysis. A number of age related findings emerged. It was found, for example, that the number of sentence-combining transformations per terminable unit increased with grade level, as did sentence-combining transformations forming nominal constructions, adverbial constructions, and co-ordinate constructions. While consistent differences were not found for all syntactic features, age differences were found for the more complex syntactic units. This suggested that the older children, in contrast to the younger children, consistently used more complex structures, as distinct from being able to use them.

2.2.2 Sex differences in language performance. Traditionally sex differences in language performance, as indicated by various language measures, are said to show superior performance by girls (McCarthy, 1929, 1954; Smith, 1935). The results of more recent studies cast some doubt on the validity of earlier findings (Winitz, 1959; Menyuk, 1963; Cowan et al., 1967; O'Donnell et al., 1967; Parisi, 1971; Christensen, 1972; Fox, 1972; Harris and Hassemer, 1972; Mueller, 1972; Phillips, 1973; Cherry, 1975). Indeed some findings have suggested that, contrary to popular belief, superior language performance may in fact be produced by boys (O'Donnell et al., 1967; Mueller, 1972). However, the more general trend of research findings on the sex factor has been to indicate no significant differences between the language performance of boys and girls on a range of language measures.

Fox (1972) investigated syntactic maturity and vocabulary diversity in the oral language of kindergarten and primary school children. She found no evidence in her results to support sex differences on her syntactic (T- unit) and vocabulary (type-token ratio) measures[1]. Fox indicated that her syntactic analysis, in

1. The T- unit, denoted as communication unit by Loban (1963) and as a minimal terminable syntactic unit by Hunt (1965), segments utterances into main clauses plus all subordinate clauses. The type-token ratio (TTR) is the ratio of the number of different words (types) to the total number of words (tokens) in a sample of language.

terms of T- units, did not replicate the superior performance by boys shown in the study by O'Donnell et al. (1967). In a study of the language facility of kindergarten children, Christensen (1972) also used T- units as the major measure for syntactic analysis. Christensen was primarily concerned with investigating the effects of different teaching approaches, social class, and sex upon children's oral language facility. The results for average length of T- units and for the number of T- units suggested that, at kindergarten level, little difference existed in the syntactic development of boys and girls. The results of the study did indicate, however, that the combined effect of teaching approach, social class status, and sex is likely to significantly influence kindergarten children's oral syntactic facility during the early months at school.

An earlier study by Winitz (1959) used a wide range of language measures, including mean length of response, the Templin Screening Test of Articulation, and the Ammons Full-Range Picture Vocabulary Test, to investigate the language skills of male and female kindergarten children. The results of his study indicated that, although on some measures girls performed better than boys, while on others the boys performed better, in very few cases were these differences significant. Winitz concluded that the differences were not sufficiently large to justify considering the two sexes as separate groups in verbalization skills. In a cross sectional study, Fraser and Roberts (1975) investigated the language behaviour of small groups of middle class children between the ages of 18 months and six years. They found that, on a number of measures (including total number of words, mean length of utterance, and grammatical complexity), sex difference was not significant as a main effect.

A useful comment on research into the sex factor was made in a study by Peisach (1965). She found that, at first-grade level, there were no significant differences between the sexes in their ability to comprehend teachers' speech. By fifth-grade level, girls surpassed boys in their ability to cope with grammatical structure and in the preciseness with which they understood the speech sample. On the other hand, boys did as well as girls in gaining general understanding of the speech passages used in the

investigation. In her conclusion Peisach suggested that attempts to attribute superiority to one or the other sex should be precise in identifying the language variable under consideration. There also appears to have been a tendency by some researchers investigating the association with language performance of single factors, such as sex, to overlook the effect of factors interacting with each other to produce differences that cannot be attributed to the influence of the factors separately.

2.2.3 Intelligence and individual language performance. Language as a communication medium relies not only upon the symbols and rules that establish it as a coherent system, but also upon the capacity of the individual to comprehend and utilize the language of his society. The sections above have indicated two factors that appear to be associated with individual language performance. Another very basic and pervasive factor seems to be that of the individual's intellectual abilities. Nowhere is the influence of intelligence on language capacity better demonstrated than in the extensive body of research on mentally retarded children. At the other end of the intellectual scale, however, studies on the language performance of gifted children are not so readily available.

A number of researchers investigating language performance in mental retardates have analysed the vocabularies used by their subjects in language situations (Mein and O'Connor, 1960; Lyle, 1961; Smith, 1962; Wolfensberger et al., 1963; Blount, 1968; Cartwright, 1968). Mein and O'Connor (1960), for example, investigated the oral vocabularies of severely subnormal patients and found that not only was the vocabulary of their sample restricted, but also there was a tendency for a proportion of the same words to be used widely through the sample. To help explain the differences between the variety of words in the oral vocabularies of normal children and the large core vocabulary and smaller fringe vocabularies of the institutional retardates, Mein and O'Connor formulated the concept of communality. This state of affairs is described as a consequence of

> "the influence of routine existence within the hospital which is shared by all patients which

> results in the limitation of vocabulary concerned with individual interests and personal experiences, and tends to lead to the frequent use of a small number of heavy duty words."
>
> (Mein and O'Connor, 1960, p.139)

A common finding from a number of studies (Mein, 1961; Sievers and Essa, 1961; Beir et al., 1969) suggests that the higher the intellectual endowment of mental retardates the more closely the composition of their vocabularies resembles that of normal children. There is some evidence also to suggest that the vocabularies of gifted children are superior to those of children of average ability. Jensen (1973), in an investigation of oral language styles of fifth grade pupils, found that her superior subjects used a larger number of words and displayed more diversified vocabularies than her average subjects.

Another important aspect of language is syntax, and a number of studies have indicated differences in syntactical ability between groups of superior and average children (Renzulli et al., 1971; Deutsch and Stein, 1972; Pringle et al., 1972). In a study already referred to (Jensen, 1973), grammatical control shown by average and superior fifth-grade pupils was one feature of oral language behaviour which was investigated. Grammatical control was defined in terms of structural complexity, variety and frequency in the use of basic structural patterns, and mastering of standard English usage. All the measures of grammatical control taken together revealed a consistent superiority of the high ability sub-group. For example, superior subjects uttered significantly longer communication units[1], used significantly longer clauses, and displayed significantly less incidence of non-standard usage than did the average subjects. Differences in syntactic ability have also been found between groups of mental retardates and normal children (Lyle, 1961; Cartwright, 1968; Milgram and Riedel, 1969). In a study of oral responses to stimulus pictures by groups of mental retardates and normals of the same age, Milgram and Riedel (1969) found that normal children

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1. Loban provided a definition for a "communication unit" which, when utilized to segment oral language, produces virtually identical results as does segmentation by Hunt's T- unit. (See footnote on p.11 for a definition of T- units)

produced more complete and longer sentences than the retardates. The normal children were also more likely to use phrases, clauses, and conjoining in their responses.

The results of research into the development of syntax by normal individuals suggest that almost all the basic structures used by adults to generate their sentences have been acquired during the pre-school years (Brown and Bellugi, 1964; Menyuk, 1964b). There does appear to be, however, some difference of opinion as to whether the acquisition of syntactic forms in the language of retardates follows the same developmental pattern as that identified in normal children. Goda and Griffith (1962) have suggested that with C.A. held constant, less intelligent children generally use the language characteristics of a younger age group. This suggestion of 'same pattern-slower rate' has been strongly challenged by other researchers (Luria, 1963; Menyuk, 1964b, 1969; Vandemark and Mann, 1965; Lee, 1966). The appropriateness of comparing, for the purposes of language research, children of the same mental age but vastly different chronological age has also been questioned (Baumeister, 1967).

The research evidence suggests, therefore, that quality of language behaviour may be associated with level of mental ability. However, the paucity of research on the language behaviour of gifted children makes it difficult to determine whether the marked contrasts noted between the language performance of normal and lower-ability children are sustained to a similar degree in comparisons of the linguistic behaviour of average and gifted children.

2.2.4 Temperament and individual language performance. A group of behaviours that may very well be associated with an individual's language performance are those that can be labelled as 'temperamental' factors. Drever (1963, p.290) defines temperament as the 'general nature of an individual....' while the Concise Oxford Dictionary (1961, p.131) defines temperament as the 'individual character of one's physical organization permanently affecting the manner of acting, feeling, and thinking....'. Unlike such factors as age and sex status, which are (usually!) clearly observable characteristics, a person's

temperamental states are not always as discernible. For most people most of the time is spent in what could be described as a state of emotional equilibrium; they are psychologically more or less in harmony with the external and internal environments. At other times, however, this state of equilibrium is disturbed and the person becomes elated, or depressed, or hyperactive. A search of the literature failed to find any studies that associated long-term temperamental factors with language performance. However, the same search did produce studies that had investigated the association of temporary emotional states with aspects of language performance.

Siegman and Pope (1966) have investigated the effect of temporary anxiety on vocabulary diversity as measured by the type-token ratio (TTR). The subjects for their study were 16 female students from a University School of Nursing. A standard interview pattern involving two topics was used. One of the topics was considered to be anxiety arousing and dealt with family relations, and the neutral topic was concerned with school history. The researchers found that topic anxiety increased productivity in terms of mean segmental TTR's. A study by Höweler(1972) examined the influence of stress on word diversity. One of the experiments conducted by Höweler, with university students as subjects, used an interview situation. During this interview the subjects were asked about their motives for choosing psychology as an area to major in. The control group was treated in a hostile manner. Höweler found that the TTR for the experimental group was significantly lower than that for the control group. She concluded that in an interview situation a positive relationship was likely to evoke more differentiated word usage in response to the same topic stimulus than a negative relationship.

Both the Höweler and Siegman and Pope studies used TTR as the measure of response in an interview situation, and both studies were concerned with the effects of anxiety or stress on word diversity. The Siegman and Pope study found anxiety to be a facilitating factor, whereas Höweler found stress inhibited performance. One explanation for these conflicting findings may well be that stress and anxiety describe two different

behavioural states. However, Höweler, who uses the term stress, also makes reference to situational anxiety and it seems implicit in her discussion that anxiety, frustration, and stress describe, if not the same, then at least related behavioural states. The difference between the findings of the two studies could be explained in terms of a curvilinear relationship between performance and anxiety. It could be that, to a certain level, anxiety as an induced behaviour facilitates performance, but beyond a certain level anxiety results in performance being inhibited. Another explanation might attribute differences in the findings to the manner in which the anxiety was aroused. The Höweler study induced anxiety through an interpersonal interaction situation where the interviewer deliberately frustrated the interviewee. In the Siegman and Pope study however, anxiety was aroused through the nature of the content of the topic discussed in the interview situation. These findings, of course, cannot be generalised to children but suggest a possible course of situational variation in interview-type research.

Another characteristic of temperament or 'general nature' is one's cognitive style. In recent years a large body of research has accumulated relating cognitive style to various facets of general behaviour. There is some evidence to suggest that situational factors may differentially influence style preferences (Campbell, 1973; Davis and Lange, 1973). As far as language behaviour in general is concerned, it is possible that cognitive style may be unrelated to general verbal ability (Messer, 1970; Bigelow, 1971; Satterly and Brimer, 1971). However, when specific aspects of verbal behaviour are investigated some relationships have been established. For example, De Fazio (1973) explored field articulation differences in language abilities. He found that although his 'field independent' subjects were superior to the 'field dependents' for verbal predictability (measured by a Cloze Test) and fluency (measured by the Word Beginnings and Endings Test), there was no significant difference between the groups for verbal comprehension.

2.2.5 Social class influences on language performance.

Social class differences in language behaviour have been of interest to researchers for some time. More recently, under the

influence of and the impetus provided by such pioneers in the field of sociolinguistics as Bernstein, Deutsch, and Labov, social class differences in language performance have been approached from a different perspective (Bernstein, 1961; 1962; Loban, 1963; Deutsch, 1964,1965; John and Goldstein, 1964; Labov, 1975(b). One consequence of this re-directed surge of interest has been a mounting pressure for compensatory programmes of various types, particularly at the pre-school level.

The pattern of findings related to social class differences in language performance seems to be consistent across a number of language variables (Peisach, 1965; La Civita et al., 1966; Rackstraw and Robinson, 1967; Giebink and Marden, 1968; Williams and Naremore, 1969; Parisi, 1971; Turner and Pickvance, 1971; Christensen, 1972; Jones and McMillan, 1973). Children's syntactic performance has provided an area of study for many researchers. Williams and Naremore (1969) investigated syntactic elaboration in a group of children who differed on sex, age, ethnic, and social class variables. Familiar stimulus topics (e.g. games, T.V. programmes) were used in a series of interview situations to obtain oral language samples from the subjects. The language samples were analysed using a code that identified syntactic constituents and sentence parts in the oral language produced. Results indicated significant differences between the social class groups on a number of the indices used. In particular, these differences suggested that the children from the higher social status group tended to use a greater variety and more elaborated syntactic patterns than the children from the lower class group. Similar results have been obtained in other studies that have investigated social class differences in grammatical ability (Giebink and Marden, 1968) and complexity of language usage (Christensen, 1972).

In a study of social class and situational influences on verbal behaviour, Jones and McMillan (1973) found differences between their kindergarten groups on a number of language variables. They concluded that in general the speech of their lower-class sample could be described as less fluent and grammatically less complex than that of the middle-class group. Unlike many research studies that collate language produced in

different stimulus situations and treat it as a homogeneous sample, Jones and McMillan analysed as separate samples the oral language produced in the different stimulus situations. This analysis revealed that the language produced in each of the situations differed significantly on such characteristics as mean phrase length, proportion of mazes, words in mazes, and so on[1].

An individual's language performance in a communication situation is related in part to that individual's understanding of the language produced by others. The relationship between socio-economic status (SES) and the comprehension of syntactic contrasts (e.g. on/under, near/far, singular/plural) has been investigated by Parisi (1971) whose subjects were aged between three years and six years and were of high, middle, or low SES. While the findings indicated that at the age of three years SES was minimally a factor in children's syntactic comprehension, by age six the SES differences were found to be highly significant. In discussion of these findings, Parisi suggested that from the ages of two to three the importance of linguistic stimulation increased and the nature of the language environment for children of low SES increasingly hindered their language performance. A similar developmental trend between social class groups in understanding the language behaviour of others has been found by Peisach (1965).

The mother-child interaction has provided just as popular a situation for studies of social class differences in verbal behaviour as has been the case in the more general field of child language. Kogan and Wimberger (1969), for example, researched the interaction patterns of culturally advantaged and disadvantaged mothers and children. As part of a larger research programme, mother-child dyads were observed in a laboratory where the child played with a selection of toys and then made something together with his mother. Both verbal and non-verbal communication was recorded and analysed on interpersonal behavioural dimensions such

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1. Loban (1963, p.8-9) describes the pattern of language behaviour which involves hesitations, false starts, meaningless repetitions, and so on as language mazes. He suggests that the linguistic difficulty many persons have in everyday communication situations resembles the physical behaviour of an individual caught in a spatial maze.

as relative status[1], affection, and involvement. The findings indicated that while advantaged and disadvantaged mothers and children responded to each other with the same status and affection qualities, the disadvantaged dyads engaged in less active social interchange.

A somewhat novel approach has been used by Bernstein and Henderson (1969) to study the language-social class relationship. Instead of gathering samples of language from mother-child interactions, Bernstein and Henderson questioned mothers using a list of statements which covered major aspects of socialization. The aim of the interview was to examine the relationship between the mother's social class status and her perception of the role language plays in the socialization process. The mothers were asked to respond to the statements and to assess, using a six-point scale, the difficulty they thought dumb parents would experience in dealing with each situation. Bernstein and Henderson found that the middle-class mothers in their sample placed a greater emphasis upon the use of language in the 'person' area, whereas the working-class mothers placed a greater emphasis upon the use of language in the transmission of skills. If such findings can be extrapolated and applied to less artificial interaction situations then the nature of the situation, as a factor influencing children's verbal behaviour, assumes greater importance.

The relationship between social class factors and language performance may be much more complex than the general findings of past research have indicated (Levenstein and Sunley, 1968; Cazden, 1970; Houston, 1970; Dickie and Bagur, 1972; Garvey and Dickstein, 1972; Jones and McMillan, 1973). Many of the issues are raised in a penetrating article by Houston (1970) who re-examined some widely held assumptions about the so-called deficiencies and conceptual inadequacies of the language of the disadvantaged child. Other researchers have investigated more specific factors related to the language behaviour of socially different children.

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1. Relative status in this study related to behaviours which control (e.g. ordering, prohibiting, accepting control), exhibit expertise (e.g. teaching, explaining), or display assertiveness (e.g. demanding, snatching).

Cazden (1970), for example, has explored the situation as a neglected source of social class differences in language usage. Central to her thesis is the notion that the so-called 'inferiority' of lower-class language performance may result from the type of situations in which language performance has been sampled in the past. If greater consideration were given to the selection of the situations in which the verbal behaviour of lower-class children was to be sampled then, Cazden suggests, their language performance might be more 'fluent'. The need to examine the speech of lower-class children in settings other than the school situation, and under spontaneous rather than task-oriented conditions, has also been referred to by Jones and McMillan (1973).

As a result of years of research experience with pre-school children, Dickie and Bagur (1972) identify what they believe are a number of variables influencing language performance that have been consistently overlooked in the past. For example, they suggest that such factors as familiarity with the setting (e.g. the classroom in contrast to a home situation) and the personal meaning a particular setting has for an individual can influence language behaviour. They also draw attention to the importance of the stimulus factor and suggest that the perceived relevance and interest of stimulus materials may vary for individuals or for different groups of children. What Dickie and Bagur have to say about social class influences on language performance reinforces the more general points raised by Cazden (1970) and Jones and McMillan (1973).

2.2.6 Ethnicity and language performance. In many research studies that investigate the influence of socio-economic status upon language performance, ethnicity is often a related variable. Such a situation applies particularly in societies that contain substantial minority groups of different ethnic origin, as is the case, for example, in America. Dickie and Bagur (1972, p.25), in their discussion of factors that may influence the language performance of the young minority group children from low-income families, have commented:

> "The cultural and cognitive differences between the students of language behaviour and a middle socio-

> economic status (SES) child from the majority culture are substantial; but those differences are remarkably increased if the child is low SES and from a minority group culture."

The ethnic factor per se does not appear to have received as much attention from researchers as that given to social class influences upon language performance. The reason for this might quite simply be that in societies where the ethnic factor may be relevant, the ethnic minority group also provides a high proportion of the members of the lower social class groups. Nevertheless, there is some evidence to suggest that when social class status is held constant, ethnic differences can be observed in various aspects of language performance (Peisach, 1965; Entwisle, 1968; Palmer and Masling, 1969; Williams and Naremore, 1969; St George, 1970; Ledvinka, 1971; Stephenson and Gay, 1972; Labov, 1975a).

The study by Williams and Naremore (1969) showed both social class and ethnic influences upon language performance. As part of their experimental design, they matched black and white children by sex and socio-economic status. The black high SES sub-group produced significantly better scores than the equivalent white sub-group on a number of indices including sentence types and subject, adverb, and complement elaboration. However, these differences were not found when low status black and white sub-groups were compared. The performance of the low status ethnic sub-groups on the various syntactic indices was quite similar. Entwisle (1968) has used the percentage of paradigmatic responses[1] occurring in a word association task as a way of studying relative rates of linguistic development in various sub-cultural groups. The results indicated clear differences in paradigmatic rates between low-status white and black children. Notwithstanding the possibility of actual ethnic differences, Entwisle suggested that some interviewer effect could be operating. For example, the dialect difference between middle-class interviewers and lower-class black children may be greater, she

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1. Word associations that come from different form classes (e.g. deep, hole) are called syntagmatic associations. Those that come from the same form class (e.g. mother, father) are called paradigmatic associations.

suggested, than that between these same interviewers and lower-class white children.

Reference to an ethnic interviewer effect has also been made by other researchers (Ledvinka, 1971; Dickie and Bagur, 1972). An investigation by Ledvinka (1971), for example, examined the kind of interviews given black job-seekers. Each job-seeker was interviewed twice, once by a black interviewer and once by a white interviewer. A number of measures were used that analysed language complexity. On each of the six measures used, the black interviewers elicited more complex language from the black job-seekers than did the white interviewers.

The literature, however, does not generally seem to sustain a specific ethnic effect that can be easily divorced from the more pervasive socio-economic factor. The problems of differentiating social class from ethnic influences on language behaviour are highlighted by Williams and Naremore (1969). In their study, discussed above, socio-economic status was decided by occupation, education, and residential factors. Williams and Naremore felt that the superior performance of their high status blacks may have been attributable to differences in the application of criteria by which socio-economic status is determined. They suggested that American society tends to place greater occupational and residential restrictions on blacks than is the case for education. For this reason, they concluded that black and white groups matched for occupational and residential status may not be equally matched on educational factors. The differences found between the groups in their study might, therefore, be attributable to this educational factor rather than to any actual ethnic effect. However, from a study of young Maori and European children's performance on the ITPA, St George (1970) has suggested that children from different cultural backgrounds have familial experiences that differentially affect their language skills. This ethnic factor, St George contends, may be more pervasive than many people think.

2.2.7 Summary. In this section a number of factors that appear to be associated with an individual's language behaviour have been briefly introduced. These factors all have one thing

in common: they describe characteristics of the individual, be it his age, his intellectual ability, or the social class group to which he belongs. Some of the factors are clearly observable characteristics of the individual: his age, sex, and ethnic origin. Other characteristics, such as social class status, intellectual ability, and temperament are often less clearly obvious but nonetheless appear to be associated with his language performance. For some of the factors discussed, such as age, sex, social class status, and intelligence, a large body of research evidence has been accumulated and the findings are clearly indicated, if not always accorded universal agreement. For a factor such as temperament the evidence for some relationship with language behaviour has been inferentially drawn rather than conclusively stated.

Thus, as far as the individual is concerned, his language behaviour is likely to be associated in the first instance with a number of person variables, some of which have been identified above under the heading of Person-Experiential Factors. In the second instance, individual language performance is likely to be influenced also by a number of situational factors. These will be discussed in the following sections.

2.3 Structural situational factors influencing individual language performance

Consonant with the paradigm for individual language performance presented earlier, the individual entering into communication brings to that situation a language capacity or competence which has been influenced, in part, by a range of person-experiential factors. This language competence, however, is not the only factor likely to influence one's language performance. The situation itself has many facets. On the one hand are a set of variables that relate very much to the structure of the situation. These include such factors as the nature of the relationship that exists between the participants in the situation (e.g. mother-child; adult-child; child-child), the number of persons involved in the situation, and how familiar the situation is as a language setting. There is also a different set of factors that stimulate, sustain, and reinforce language performance. The former "static" set of factors are discussed below. The "dynamic" factors will be

discussed in the next section.

2.3.1 Social relationship. In its oral form, at least, language generally implies interaction and verbal exchange between two or more persons. Even though the persons interacting may share a common language it would seem that the process of exchange itself can involve the influence of one person, be he the speaker or listener, on the language performance of another. Different ways of speaking, as well as the general growth of verbal behaviour, arise from a range of social encounters (Harms, 1961; Goffman, 1972; Sachs and Devin, 1976). One dimension on which the participants in a language situation could be aligned is 'degree of relationship'. This 'degree of relationship' can be seen from different perspectives. In a social sense this varies from a very close relationship, such as that which exists between a mother and her child, to a minimal degree of relationship, such as that which exists between the experimenter and a randomly selected subject. The 'degree of relationship' might also be viewed from an age perspective. Thus, on the one hand, in the mother-child dyadic relationship the pair are very close in a social sense yet quite distant in the age sense; on the other hand, in some experimenter-subject relationships, the pair are distant socially yet close in age. While adult-child and child-child relationships provide the prime focus for interaction studies of children's language performance, some studies involving only adults have provided additional information that suggests other kinds of interpersonal influence.

The mother-child and family relationship. While research on child development in general is rich in studies of parent-child interactions (Lytton, 1971), the field is much more limited when the focus is on specific aspects of language behaviour (Merrill, 1946; Walters et al., 1964; Hess and Shipman, 1965; Cazden, 1968; Levenstein and Sunley, 1968; Jones, 1972; Olmstead and Jester, 1972; Snow, 1972; Clarke-Stewart, 1973; Phillips, 1973; Moerk, 1974). The child, during his early years, is in frequent contact with his mother, and the speech used and heard by mothers and their children gives not only some indication of what is perceived as "desirable language behaviour" (Halverson and Waldrop, 1970; Snow, 1972; Phillips, 1973; Harris, 1975), but also of ways in

which this verbal behaviour can be modified (Radin, 1972; Nelson et al., 1973; Shatz and Gelman, 1973; Cherry and Lewis, 1976) or even filtered (Landes, 1975).

Catherine Snow (1972), for example, investigated mothers' speech to their children using groups of mothers and their two- or ten-year-old children as subjects. In a series of experiments that probed such factors as the influence of mother absence or presence, motivation, and task difficulty, Snow explored a commonly held belief that the speech very young children hear is their only source of information about the language they acquire. She found that modification of a mother's speech depended to some extent on the reactions of the child being addressed, that task difficulty was not a significant factor, and that experienced mothers were only slightly superior to non-mothers in predicting modifications they needed to make in their speech to young children. Snow also found that, with young children, mothers markedly reduced the length of their utterances, which were also much less complex than in their normal speech. Another feature was the frequency of repetition of complete sentences. The mothers' repetitions of sentences to their two-year-olds were almost four times as frequent as was the case to their 10-year-olds. It seemed to Snow as if this repetition was related to some notion of the younger child's more limited memory span. She concluded that to some extent the mothers in her sample anticipated what they perceived to be the linguistic needs and limitations of their children, and modified their own oral language accordingly. This modification generally took the form of simplification, repetition, or re-phrasing.

Snow's study provided a basis for an investigation by Phillips (1973) who not only compared child-adult speech, but also searched for mechanisms controlling observed differences in styles of speech adressed to children. In addition to using a number of measures reflecting syntactic complexity, Phillips used measures of vocabulary, including the type-token ratio. Her results supported Snow's earlier finding that the speech addressed to children by their mothers is syntactically less complex, but also indicated that the vocabulary used is less varied and more concrete than that in speech addressed to adults.

It seemed that mothers distinguished between adult-young child and adult-older child interactions as well as adult-adult interactions and controlled their verbal input to the situation accordingly.

Whilst the mother is obviously not the only person a child comes into language contact with, she generally has the earliest and most intensive interaction at a time when language development is passing through its more critical phase. However, the importance of the wider parental and general family influence should not be overlooked (Noel, 1953; Bell, 1968; Cazden, 1968, 1972; Aston and Dobson, 1972; Osofsky and O'Connell, 1972; Jones, 1972; Davis and Lange, 1973; Swick and Willis, 1973; Jacob, 1975). As the result of a comparative study of the relationship between the quality of a child's language usage and the quality and types of language used in the home, Noel (1953) concluded that the home does determine to a very large degree the quality of language a child will use in his early years at school. Cazden (1968) has reported on findings that suggest individual parental factors may be of greater importance in relation to language performance than such a general variable as parents' social class. In an investigation of the relationship between home environment and the development of verbal ability, Jones (1972) found, for example, that her high-verbal boys were from homes where parents provided more opportunities for the use and development of language, and had higher academic and vocational aspirations for their sons.

It is perhaps unfortunate, however, that the parental influence is too often seen as one-way, from adult to child. There is an increasing body of evidence to show that even the young child's behaviour can affect the verbal performance of his parents (Harper, 1971; Yarrow et al., 1971). To discuss child language in the context of 'parent-child interaction' makes little sense without acknowledging the possibility of some reciprocity (Bell, 1968, 1971; Gewertz, 1969).

Adult-child relationship. After the home, the school probably provides the other major influence upon children's general development. As far as language is concerned, there is

an increasing amount of evidence to suggest that children's verbal behaviour can be influenced by such factors as a teacher's verbal style (Hudgins and Ahlbrand, 1970; Friedman and Bowers, 1971; Friedman, 1973; Noble and Nolan, 1976), the sex of the teacher (Shinedling and Pedersen, 1970; Good et al., 1973; Cherry, 1975), and teacher expectations (Rist, 1970; Rothbart et al., 1971; Johnson, 1973; Boydell, 1974).

Since the pre-school and early school years seem vital ones for language acquisition a great deal of interest is being shown in this period of development. For example, Granowsky and Krossner (1970) chose to compare the speech of kindergarten teachers with each other and with their pupils. They found that the sample of kindergarten teachers in their study simplified their language patterns both syntactically and semantically when interacting verbally with their five- and six-year-old pupils. Granowsky and Krossner suggested that, since the child has mastered the rudiments of language by the age of three years, the kindergarten classroom should introduce a level of language closer to adult speech rather than a simplification in the direction of child speech. Similar conclusions were reached by Hall (1976).

In contrast to this school-type interaction situation is the more extended adult-child contact effected in institutional settings. Institutional living has often been categorized as providing a minimal contact situation, and Tizard et al. (1972) investigated the influence on language behaviour of residence in long-stay nurseries. Tizard and her co-workers made observational studies of 85 pre-school children in a number of residential nurseries. Their aim was to relate the language development of the children to the amount and quality of adult talk directed at them. The quality of staff talk directed at the children was measured according to the type of talk (explanation, commands, supervisory, informative, and so on) and the complexity of sentences used. In this study complex sentences were defined as those containing subordinate clauses, and the children's language development was measured using the Reynell Developmental Language Scales (Reynell, 1969).

The results of the study supported a positive relationship between the children's language scores and the quality of talk directed at them. This relationship was also influenced by the way in which the nurseries were organized to either maximize or minimize contact between staff and individual children. The importance of encouraging and developing interaction in pre-school institutions has also been stressed by Thomas (1973).

But the child, as has been pointed out, is an active participant in the communication 'game' and not simply the passive recipient of incoming verbal messages. Not only does the young child initiate verbal interaction and maintain this with a surprising degree of sophistication (Garvey and Hogan, 1973), but self-initiated verbal performances apparently vary from situation to situation, as is indicated in the results of a study by Francis (1969). From a number of samples of spontaneous speech collected from her son, she identified a number of characteristically different episodes. Three types of social discourse were readily discernible; monologue, dialogue, and social monologue. Francis found that both types of social speech showed a higher proportion of transformed structures than occurred during the monologue. She analyzed the remarks made during these recorded sessions and constructed a simple categorization of syntactic structures involving: active kernel sentences, other singulary structures, and generalized transformations. The results also indicated that dialogue required a clearer specification of reference, whereas both types of monologue showed an excess of fragmentary and functionally incomplete remarks.

Thus, with the very young child it seems two complementary processes are occurring. On the one hand, in the presence of adults the child is acquiring and adding to his repertoire of vocabulary and syntax. On the other hand, through monologue he expresses and shows his own modes of operating in the world. As he matures, linguistically speaking, his '<u>own</u>' mode becomes more and more similar to that of the adults who people his world.

2.3.2 <u>Group factors and language performance</u>. Whilst much verbal communication undoubtedly occurs in dyadic interaction situations, such as those already discussed, interpersonal

communication obviously occurs in groups of other sizes. An early study by Williams and Mattson (1942) investigated the effect of different social groupings upon the language of pre-school children. Each child in their sample participated in several different-sized group situations. Williams and Mattson used a number of language measures in the analysis of the data, including type of sentence and parts of speech, and found that the greatest amount of talking occurred when there were one or two children in the room at the same time. Generally, relative proportions of the various parts of speech used remained constant regardless of the size of the group, except in the case of adjectives and adverbs. As the size of the group increased the percentage of adjectives decreased while the use of adverbs increased. Williams and Mattson also found that the length of utterance was not affected by the size of the interacting group, but as the group became larger the language used by the children became more sociable and less egocentric.

The Tizard et al. (1972) study, discussed in the previous section, included an examination of the effect of variations in staff-child ratios and differing staff roles on language interaction with the children. Tizard and her co-workers found that increasing the number of children in a group had no significant effect on the amount of staff 'informative' talk, 'social' activity, or percentage of talk to the children. Informative remarks were related to such verbal behaviours as reading to the child, telling or asking the child about activities, and asking for or giving opinions. Social activity related to the amount of time staff spent in playing with the children, teaching or talking to them, and responding affectionately to the children. An interesting finding emerged when the number of children in the group remained constant but the number of staff present varied. They found that when only one nurse was on duty the children received more staff attention and talk. However, when the same number of children were supervised by two nurses there was much less talk to the children. Tizard and her colleagues suggested two reasons for this: first, when two staff were together they often talked to each other rather than to the children; and, second, because one of the two staff was always understood to be

in charge the staff member not in charge tended to interact with the children much less.

Torrance (1970) has examined the relationship between group size and the question-asking behaviour of a group of five-year-old children. He assigned his subjects to groups ranging in size from four to 24 and encouraged the children to ask questions about pictures they were shown. Torrance found a negative relationship between group size and the number of questions asked. For example, the four-child groups, on the average, asked almost twice as many questions as the 24-child groups. The smaller groups also asked more questions about discrepant events, and repeated fewer questions than did the larger groups.

It seems then that a group size factor may operate to affect a child's language experience and performance. However, the relationship between group size and an individual's verbal behaviour does not appear to be a simple one, but is affected also by the composition of the group. If the number of children in the interaction situation increases, changes in quantitative and/or qualitative aspects of the language used may occur. In other circumstances it appears that if the number of adults present in the situation increases this can result in decreased adult-child interaction. The group influence on verbal behaviour may also be further complicated by a range of behaviours that relate to one's role and status in that situation.

2.3.3 Situational familiarity and language performance. Some research on children's language performance appears to be giving greater recognition to a range of physical situational influences on verbal behaviour (Ervin, 1964; Cazden, 1967; Hymes, 1967; Cazden, 1970; Hopper, 1971; Dickie and Bagur, 1972; Moerk, 1972b; Hanlon, 1973; Landes, 1975; Rose et al., 1975; Schwartz, 1975; Wells, 1975). This trend reflects the concern felt by some for the direction research on child language has taken in the immediate past. Bandura and Harris (1966), for example, have been critical of the emphasis in psycholinguistic research on the definition and categorization of syntactic structures which has led, in their opinion, to insufficient concern for the variables governing the acquisition and alteration of syntactic structures.

Their criticism is extended to studies that add to our knowledge of specific characteristics of language yet give little insight into the dynamics of how that language has been acquired. Such a view recognizes the particular linguistic skills and abilities available to the individual (his language "competence") while acknowledging the inhibiting or facilitating influences that may be present in the situations within which language is produced and developed (his "performance").

A number of variables that may influence language performance have been identified by Dickie and Bagur (1972), and it appears to them a key variable is familiarity, both with the situation and the people within the situation. For example, implicit in their discussion of this factor seems to be the notion that unfamiliarity with the situation will have some inhibiting effect on the qualitative and/or quantitative aspects of the language produced by the child. This assumption is not inconsistent with findings from other areas of behavioural research that have investigated the effects of a so-called familiarity factor (Tajfel and Billig, 1974; Rosenkrantz and Van de Riet, 1974).

One possible and specific influence of the situational variable arises from an investigation by Silverman (1971) of the disfluent speaking behaviour of pre-schoolers. Silverman found a higher frequency of disfluency per 100 words spoken in the home situation than in either the pre-school or interview situations. Such findings might be consistent with a view that suggests greater tolerance of disfluency is possible in a situation where a greater degree of familiarity exists between the persons involved in the interpersonal interaction. Perhaps there is also an implicit recognition of 'situational familiarity' in a very early study by McCarthy (1929) when she compared children's language in different situations and its relation to personality characteristics. Referring to the correlation obtained between the mean lengths of response in two different situations, McCarthy commented on the children's reactions. As she said:

> "...some subjects who were inclined to be shy when taken into the room with the experimenter talked freely when playing with other children. Others were fairly quiet on the playground... yet were sufficiently stimulated to talk much more in the

first situation."
McCarthy, 1929, p.587)

Cazden (1970) has also examined the situational factor as an influence on the language produced in any given setting. Her major concern has been for social class differences in language usage but what she has to say is, nevertheless, pertinent in the context of the immediate discussion. According to Cazden, accounts that attempt to explain social class differences in language usage in terms of either "less" language or "different" language overlook two very important factors. First, both explanations ignore the "power of environments" to shape the behaviour that occurs within them. In other words, language in use is determined in very specific ways by the actual speech events that occur. Second, they fail to take account of what has been described as "communicative competence", the ability of the individual to perceive and categorize the social situations of his world and to differentiate his ways of speaking accordingly. Cazden is critical of the tradition in research on child language that has been concerned only with the utterances of the child without recognition that the situational factor itself may be an independent variable.

2.3.4 Summary. The discussion in this section has centred around the idea that, within communication situations, there exist a number of structural situational factors that may influence qualitative and/or quantitative aspects of the language produced by the participants. These factors include the type of social relationship that exists between the language participants, and a very common relationship used in research on children's language is, perhaps naturally enough, that of mother and child. However, there is some evidence to suggest that other adults, when interacting with children, also make variations to the language they normally use. The size of the group in which language interaction occurs may be another factor influencing aspects of the language produced by individuals in that group situation. The relationship between group factors and verbal behaviour, however, seems likely to be complicated by other behaviours associated with one's role and status in the group. Finally, a strong feeling has been expressed by some researchers that familiarity with the

situation may itself be a factor influencing an individual's language behaviour.

The body of research assembled to support the notion of structural situational factors influencing language performance is not great in terms of number of studies made. There does appear, however, to be a growing interest in the area of situational influences on language performance, and the case for developing this area of study is put forward very forcefully in a paper by Hymes (1967, p.13). As he says:

> "...there must be a study of speaking that seeks to determine the native system and theory of speaking; whose aim is to describe the communicative competence that enables a member of the community to know when to speak and when to remain silent, which code to use, when, where, and to whom, etc."

2.4 Dynamic situational factors influencing individual language performance

In addition to structural situational factors, there appears to be a set of variables that relate much more to the actual stimulation and process of verbal interactive behaviour. This set, which could be labelled "dynamic situational factors", initiates and sustains language performance in a number of ways.

2.4.1 Initiating stimuli. To obtain language samples researchers have used a variety of initiating stimuli which may be non-verbal, verbal, or a combination of these two. The use of non-verbal stimuli, particularly pictures, appears to be popular with many researchers, and such stimuli are generally presented to the subject with minimal verbal instruction. Verbal initiators involve the use of questions, directions, explanations, and so on to stimulate the use of language by the subject. Other researchers use a combination of these two broad categories of initiating stimuli. A typical approach here would be to present a picture and then, through the use of verbal stimuli, direct attention to various features.

A review of the literature on child language also indicates a strong tendency by researchers to acquire samples of language performance in only one kind of stimulus situation. The assumption

that would seem to underlie such a position is that a child's language performance is consistent from situation to situation. While such an assumption is in itself open to question, there is also some evidence which suggests that, even when similar stimuli are used, language performance may vary across individual instances of a stimulus, as follows:

Non-verbal stimuli. A number of researchers have used pictures as stimuli for eliciting language from their subjects (Cowan et al., 1967; Shriner and Sherman, 1967; Hawkins, 1969; Strandberg and Griffith, 1969). A study by Cowan et al. (1967), with five- to 11-year-old children, used as a stimulus for language a number of pictures showing adults and children in different activities. Mean length of response (MLR) was the language measure used, and significant differences among pictures were found when the average MLR's for each stimulus picture were arranged in ascending order. In an attempt to account for this finding Cowan and his colleagues examined a range of variables, such as number of persons in each picture, background patterns, and amount of detail in each picture. They arrived at no definite conclusions and suggested that further research was needed on the stimulus effect in which pictures are systematically varied according to form and content.

In a study of the relationship between verbal behaviour and social class factors, Hawkins (1969) used as one of his stimulus tasks a series of four picture cards which together depicted a simple story. An interesting finding was the difference between the two social class groups of five-year-olds in the amount of information conveyed in their spoken responses. Hawkins found, for example, that the presence of the pictures was almost essential for the meaning of the oral language of the lower-class children to be clearly understood. Verbal versions of the same picture, however, given by middle-class children were such that the oral language used was quite explicit in conveying information about who performed the actions and what objects or persons were affected by such actions. One inference that can be drawn from this study is that, for some individuals, the typical language emitted would require interpretation within a surrounding context. Without either information about this context, or involvement in the

context, the listener's ability to comprehend the communication would be severely limited.

Verbal stimuli. The discussion above has suggested that non-verbal stimuli have some influence as initiators in determining the type of language used by an individual in a specific situation. More commonly, however, language occurs in response to other verbal behaviour, and many studies have been directed at the child's ability to respond to oral language (Kaplan and Yonas, 1967; Osser et al., 1969; Scholes, 1969; Parisi, 1971; de Villiers and de Villiers, 1972). A pattern of communication involving initiation of a linguistic communication, response to that initiation, and reaction to the response is probably a very typical sequence in oral performance. One language form that serves commonly as an initiator in such a pattern is the question. Reference to the role of the interrogative form in language has been made by a number of researchers (Carner, 1963; Brown, 1968; Gall, 1970; Moon, 1971; Holzman, 1972; Meyer and Shane, 1973; Mischler, 1975; Olmo, 1975; Riegle, 1975; Ross and Balzer, 1975; Kearsley, 1976). A great deal of the research on questioning behaviour has been conducted in the school environment and related to performance aspects of classroom achievement and teacher effectiveness (Wright and Nuthall, 1970; Ryan, 1973) and to developing questioning behaviour (Sanders, 1966).

Researchers frequently refer to different types and levels of questioning behaviour and the manner in which responses may be influenced by these. For example, the question "What were the circumstances leading up to Cook's circumnavigation of New Zealand?" calls not only for a different type of response than "When did Cook first sight New Zealand?" but also creates possibilities for a different language situation. In an article on levels of questioning, Carner (1963) indicated ways in which questions can structure response possibilities. Gall (1970) raised this same issue in a review of the literature on the use of questions in teaching. What he has to say on questioning behaviour in the teaching situation would seem to be of general pertinence to the wider field of child language research. In particular, Gall suggested that questions are powerful determiners of the type of

response that can logically follow their asking, yet in the research field of child language there appears to be little evidence of systematic studies of the effects of initiating verbal stimuli such as questions, directions, and statements, on the language performance of the subjects.

The data from a study by Leach (1972) shows a relationship between an adult's verbal demands and a child's language response capability which seems to be consistent with the general thesis raised above. Such a relationship may assume greater importance when initiating stimuli, such as questions, are intentionally used to constrain the response elicited. For example, the verbal responses possible to such alternative interrogative forms as "Did you go to town to-day?", "What did you do in town to-day?", or "Why did you go to town to-day?" vary considerably. In a situational context where only the subject's utterances are analysed, a child asked only the first type of question would give constrained answers, while another child asked the second or third type of question would be encouraged to speak out. Do we then conclude, on the basis of that analysis, that the first child is inarticulate, has a poor command of language, or whatever other term may be appropriate to describe a paucity of language produced? Thus, the incidence and type of verbal questioning in a segment of interpersonal interaction may be of particular significance, especially where the responses themselves are to be the focus for linguistic analysis.

The prevailing trend in research on children's language has been to place emphasis almost totally on obtaining children's verbal responses and analysing these, with little apparent recognition of the structuring influences inherent in differences in the verbal stimuli used to initiate those verbal responses.

Combination of stimuli. In contrast to studies that have used either non-verbal or verbal stimuli to initiate verbal behaviour, others have recognized the need to sample from a range of stimulus situations (Menyuk, 1963; Cazden, 1967; Gerber and Hertel, 1969; Lee and Canter, 1971). Unfortunately, most of these studies then treat the language samples obtained as a single sample without comparing performance between the different stimulus

situations in which they were elicited. In a small pilot study, Cazden (1967) gathered samples of the language performance of two children in such situations as a free conversation, a telephone interview, responses to pictures from TAT, story re-telling, and so on. While most of these situations involved the use of verbal stimuli, a significant finding was that the variation between situations for each child, in terms of length of utterance and use of conjunctions, was greater than the overall difference between the two children. Support for the conclusions drawn in the Cazden study comes from a more recent piece of research by Hanlon (1973), who compared the language performance of a group of five-year-olds in a number of different stimulus situations. This study made a much clearer distinction between stimulus situations and involved the use of non-verbal stimuli (jig-saw puzzle and model construction), verbal stimuli (an interview situation), and a combination of non-verbal and verbal stimuli (discussion of a large picture). The results of a number of quantitative and qualitative measures, including the length-complexity index, indicated significant differences in aspects of individual language performance between these different stimulus situations.

2.4.2 Feedback stimuli. Everyday involvement in a continuous series of language interchanges suggests that an individual's verbal behaviour does not always consist simply of a language response to some stimulus. These utterances are often sustained or extended by means of a number of feedback stimuli which may be verbal and/or non-verbal. The verbal feedback stimuli would appear to consist mainly of reinforcement comments that serve to indicate approval, disapproval, or seek elaboration or clarification of what is being said. Non-verbal feedback stimuli seem to complement the verbal feedback stimuli, and typically include smiles, nods, frowns, gestures, and so on, which may either accompany verbal forms of feedback or appear in place of them.

Verbal feedback stimuli. While a great deal of research evidence is available to show the influence of various types of verbal feedback on subject behaviour, much of this relates to tightly controlled experimental situations and focuses on learning *per se* rather than on language performance. Where language

behaviour does receive specific attention the findings are often stated in quantitative terms such as an increase in the number of responses from the subject, rather than in a qualitative analysis of the subject's verbal behaviour prior to and following the feedback conditions. Nevertheless, some inferences that are relevant to the present discussion can be drawn from this research.

A considerable proportion of these studies have been conducted in the classroom situation where a wide range of verbal behaviours have been investigated (Reynolds and Risley, 1968; Gall, 1970; Zahorik, 1970a; Zahorik, 1970b; Hall et al., 1971; McLaughlin and Malaby, 1972; Zimmerman and Pike, 1972; Friedman, 1973). The effects of modelling and reinforcement on the acquisition and generalization of question-asking behaviour have been investigated by Zimmerman and Pike (1972). They found that modelling, in conjunction with reinforcement, increased the incidence of questions asked by their second-grade Mexican-American subjects. However, praise alone was not sufficient to maintain optimal responding by the children. Similar results were obtained by Henderson and Garcia (1973) who also investigated the question-asking behaviour of Mexican-American children. They noted that the change in question-asking behaviour following modelling extended beyond the experimental situation. For example, it persisted on a visit to a wild life display when the children were observed to be asking far more questions than was usual. Other research conducted in the classroom has indicated the effectiveness of verbal feedback in encouraging pupil-initiated interactions (Reynolds and Risley, 1968; Friedman, 1973) and discouraging inappropriate verbal behaviour (Hall et al., 1971; McLaughlin and Malaby, 1972).

A number of researchers have considered or commented on the roles of modelling and tutoring in general verbal behaviour (John and Goldstein, 1964; Deutsch, 1965; Scott et al., 1967; Cazden, 1968; Hutinger and Bruce, 1971; Portuges and Feshback, 1972; Whitehurst and Novak, 1973). Deutsch (1965) was strongly of the opinion that the active verbal engagement of people who surround the child was the operative influence in the child's language development. Tutoring was one way in which this verbal engagement was manifested. Deutsch suggested that the amount of tutoring and help available was a key factor contributing to

differences noted in the acquisition of the more precise and abstract use of language between children of different social classes. The 'tutoring' factor identified by Deutsch would seem to be closely related to what Cazden (1968) has identified as the 'quality of language models available'. The importance of 'tutoring' or 'modelling' in the process of language development is that they provide, according to John and Goldstein (1964), feedback for the individual using language. There is no reason to suspect that feedback is any the less important in everyday language situations.

Another important function that verbal feedback techniques play is to sustain verbal exchanges. Mueller (1972) has explored this area through an investigation of the language behaviour of pre-school children. He identified a number of factors that influenced verbal exchanges in a naturalistic setting. Some of these were non-verbal, such as looking at the speaker or listener, and touching the speaker or listener. However, others were clearly verbal. Mueller found, for example, that one of the most powerful predictors as to whether a verbal exchange would be maintained or not was the production of utterances that were grammatically well-formed. Verbal feedback, then, can take many forms and the question, while serving an important initiating function, can also provide feedback for the individual producing the previous utterances. The feedback question provides an individual with information as to the correctness of his response (Zahorik, 1970b), and/or can be used as a technique to prompt an individual to clarify a response he has already given (Brown, 1968).

Non-verbal language. Equally important a situational factor as any thus far discussed is non-verbal language. In its written form the meaning of a message can be conveyed only by the structure and the vocabulary the writer uses, and the sense which a reader derives from written language is dependent to a large extent upon the writer's vocabulary and syntactic skills. While the same skills are important in the use of oral language, the speaker has a range of additional support and cueing devices available to him. The general label of non-verbal language has been given to this extra dimension of communication. Non-verbal language has been defined by Koch (1971, p.231) as "Any message we send or receive

outside of words". Like words, most non-verbal signals need to be considered in context. For example, a sigh might either indicate relief or imply exasperation. It has been suggested by several writers that most people are unaware of the power and potential of non-verbal language in conveying explicit meanings to observers (Galloway, 1971; Koch, 1971; Love and Roderick, 1971; Keith et al., 1974). All of this expressive activity seems so natural and spontaneous that the fact we influence and are influenced by others through non-verbal behaviour is often overlooked. Koch (1971) has also suggested that, where verbal and non-verbal communications do not agree, the non-verbal message is often the one believed. This appears to be the case, particularly with children who are said to be much more attuned to the non-verbal mode than are adults (Moerk, 1972b).

The continuity of verbal behaviour in an interaction relies heavily on orderly participation and this is achieved as much by non-verbal means as through verbal indicators. A number of writers (Bramwell, 1972; Duncan, 1972, 1974; Rochester, 1973) describe a variety of signals and devices to aid or hinder the maintenance and exchange of control in verbal interactions.

This may help to explain the growing interest in the relationship between non-verbal language and behaviour generally in the classroom situation (Lail, 1968; Dunning, 1971; Koch, 1971; Love and Roderick, 1971, Keith et al., 1974). For example, a category system has been developed by Love and Roderick (1971) to record teacher non-verbal behaviour. Their system is based on the notion that non-verbal cues accompanying verbal statements can reinforce or contradict the meaning of words.

Beyond the classroom the influence of non-verbal language on various aspects of general behaviour has been quite widely demonstrated (Scheflen, 1964; Sherman, 1964; Baxter et al., 1968; Kashinsky and Wiener, 1969; Kogan and Wimberger, 1969; Hore, 1970; Mueller, 1972). An interesting conjecture on the relationship between verbal interaction and non-verbal behaviour has been presented in a paper by Scheflen (1964) on the significance of posture in communicating systems. The basis of Scheflen's thesis seems to be that the verbal milieu of an interaction situation is

paralleled on the non-verbal plane by a series of postural units that indicate the beginnings and endings of sequences of communicative behaviour with much the same effect as that produced by punctuation in written language.

One might expect those who are less able verbally to make greater use of non-verbal language as a compensatory mode for communication. However, there is some evidence to show a linear relationship between verbal ability and the use of non-verbal forms of behaviour (Baxter et al., 1968; Schmidt and Hore, 1970). If given wider support such findings would suggest that non-verbal language may be of a supplementary nature rather than substitutive.

The techniques for the analysis of data used in the study described in the present report did not include measures of non-verbal language. This omission was due mainly to the technical difficulty of recording such data in the types of situation used. The emphasis placed on non-verbal language in this section of the report simply affirms the very important complementary role that this type of behaviour plays in the oral communication situation.

2.4.3 Summary. This section has considered elements in a situation that initiate and sustain verbal behaviour. Because of the functional nature of these influences, they have been labelled dynamic situational factors. Initiating stimuli have been considered as one of three types; non-verbal, verbal, or a combination of non-verbal and verbal. The use of non-verbal stimuli appears to be popular with many researchers, and, of the range of non-verbal stimuli available, pictures are very commonly used. It has been found that even the use of a relatively similar group of stimulus pictures can result in the production of different verbal behaviours. However, most researchers have tended to overlook the possible differential effect of the stimuli they have employed.

As a verbal stimulus, the use of the interrogative form appears to exert a considerable influence on the quality of the language elicited. Much of the research available on questions and questioning behaviour has been directed at improving the quality of classroom teaching. There does not appear to have been widespread investigation of the influence of questioning behaviour

in the general field of child language.

Only a few studies have used a combination of non-verbal and verbal stimuli but where this has happened the general tendency has been to treat the language so obtained as a homogeneous sample. The findings from studies that have used both non-verbal and verbal stimuli and have analysed the samples separately suggest that children's verbal behaviour does vary from situation to situation.

It seems clear that in most situations where oral language is used, a range of verbal and/or non-verbal feedback stimuli are applied to reinforce, sustain, or inhibit verbal productions. In particular, growing recognition is being accorded to the influence of non-verbal feedback stimuli on children's verbal behaviour.

The available evidence from the research findings, however, suggests that as far as the specific field of child language is concerned the dynamics of language situations have been until recently of very marginal interest. Most researchers appear to think of child language only in terms of the content of the responses elicited, and the possible effects on those responses of a wide range of initiating, sustaining, and feedback stimuli have been consistenly overlooked.

2.5 Individual language performance: a summary comment

In the previous sections of this chapter a number of factors, identified from a search of the literature, have been discussed within the context of a very general paradigm for individual language performance. A general criticism of research in this area can be made, that there appears to have been a tendency for many researchers to treat the situation within which verbal behaviour has been sampled as incidental to the whole process of language performance. Even in those studies where language behaviour has been sampled under a number of quite different stimulus conditions, in almost all of these cases the researchers make minimal or no reference to the possibility that variations in stimulus conditions might lead to the production of different verbal behaviours. Thus, an individual's language performance may result from a much more dynamic interactive process than many research findings would indicate. One wonders also why the use of

picture stimuli and other inanimate objects figure so prominently in many research procedures, often to the exclusion of samplings of the spontaneous speech of the subjects. There is little doubt that most inanimate objects can be moved easily from one sampling environment to another. They also provide a relatively constant stimulus, but most language would seem to occur in communication situations where the exact nature and patterning of stimuli is far less predictable.

Nevertheless, descriptive research of the nature questioned above has provided a detailed analysis of the characteristics of an individual's verbal behaviour. Theoretical viewpoints, though often conflicting, have given a range of insights into possible explanations for the process of language acquisition. But even when a child has acquired a reasonable degree of language facility it seems there are factors still operating to influence the choice of language an individual uses in any specific communication situation. It is here that the gaps in our knowledge seem most apparent. The nature of the relationship between the communication situation and the language occurring within it is far from clear, although the research interest of many sociolinguists and ethnolinguists has led, in some cases, to a direct appraisal of the influence of situational characteristics on verbal behaviour (Cazden, 1970; Dickie and Bagur, 1972).

The review of the literature, presented in previous sections, has identified a number of variables that appear to be associated with, or to have an influence on, an individual's language performance. The factors discussed in the section on person-experiential variables appear to be associated with language competency, which was earlier defined as one's basic language ability resulting from an interaction of innate and experiential factors. Of these, the involvement of such factors as age, intelligence, and social class status derive considerable research support. The association between language competence and sex status, ethnicity, temperament, or cognitive style, is not so easily established. In particular, the research evidence on sex status is somewhat equivocal, while one difficulty that arises in assessing the relationship between ethnicity and language behaviour is distinguishing the ethnic factor from related social class variables. The most nebulous of

the factors discussed in this chapter was 'temperament'. A search of the literature failed to find studies that associated long-term temperamental states with language behaviour. There was some evidence, however, to support the notion that temporary emotional states can influence aspects of language performance in very specific situations. Similarly, there is some research support for a relationship between one's cognitive style and specific aspects of verbal behaviour.

The factors discussed in the sections on situational influence are concerned very much with language in use (i.e. language performance) in contrast with language ability (i.e. language competence). Clear research support for the involvement of the situational factors discussed is more difficult to find, in spite of the considerable amount of effort that has been directed to exploring the language behaviour occurring in certain types of interaction situation. A very frequently used dyadic relationship for this type of research has been that of mother and child. In the analysis of these interactions, however, very general behavioural categories are often employed and reference to specific linguistic features does not always receive much discussion (Lytton, 1971). Further, many of these studies investigate the behaviour of very young children at early stages in the development of language. Another important element of a communication situation is the number of participants taking part. The influence of group size on problem-solving behaviour has been extensively researched, but again the data available to indicate the nature of this type of influence on individual language performance is not extensive. However, there is good reason to suspect that varying the number of persons involved in a communication situation will influence the verbal behaviour of those participating (Williams and Mattson, 1942; Torrance, 1970).

For the factors discussed under 'dynamic situational influences' (e.g. initiating stimuli, and feedback stimuli) research evidence has to be derived, in the main, from studies not directly related to specific investigation of children's language. For example, a viewpoint that suggests verbal behaviour might be facilitated in familiar situations has logical appeal, even if empirical proof is somewhat lacking at the present time. On the

other hand, an impressive body of research can be related to the notion of feedback. A large number of studies have investigated the relationship between reinforcement contingencies and language behaviour. However, these studies have generally been conducted under laboratory-type conditions and have focussed on extremely limited aspects of verbal performance. There appears to be little evidence of a general transfer of this laboratory-type investigation to studies of feedback influences in more spontaneous speech situations.

The influence on language behaviour of non-verbal forms of communication has been referred to briefly in a previous section. While attention is very easily focussed on the verbal messages in a communication situation, this occurs against a backdrop of non-verbal supports, such as gesture, posture, and so forth, that add something extra to the spoken word. Similarly, most verbal interaction does not involve a continuous uninterrupted flow of oral language. More typically the interaction will be punctuated by a series of pauses and, as Rochester (1973) has indicated, long pauses in a speech sequence can result in changes in control of the verbal input into that situation. As findings from the research on non-verbal communication permeate the general literature on language behaviour, they are likely to make a considerable impact on our understanding of the dynamic influences operating in communication situations.

It seems to follow from the above that a major difficulty of any research in the area of child language is that so much has to be left untouched or unsaid. This is, in part, a reflection of the complexity of language behaviour and the large number of person, situational, and linguistic factors that need to be considered. Even singly, any one of these sets of factors can present major research difficulties. In consequence, even the most extended piece of language research can seem like a very small bite of a very large cherry. From another perspective, a parallel might be drawn between the psychological concept of a gestalt and the concept of language performance. In the past, research seems to have handled the 'parts of the whole' adequately, and to have described and defined a range of person, situational, and linguistic factors with varying degrees of specificity. What

seems to be lacking is the gestalt - what it is that makes language in use more than simply the sum of all the elements related to andinvolved in its production. The language 'gestalt' may well be found in the further exploration of the dynamic properties of one's communicative competence, and the literature is not entirely barren of research in this direction. For example, from his sampling of mother-child interactions, Moerk (1972b) has presented a detailed analysis of the interaction process involving both persons and settings. The role of the mother in developing her child's language can be seen through her use of a variety of techniques: imitation with expansion, modelling, questioning, nursery rhymes, structuring, and so on. Moerk suggests that interpersonal interaction between mother and child does not proceed in a uniform flow of communication, but rather in a series of, what he calls, 'linear and circular episodes', with each episode definable in terms of some change in content and form.

2.6 Rationale for the research

The world of social encounters is a varied one, and social interaction often involves a great deal of talking. However, we do not always interact in the same setting, in the same sized groups nor with people of the same social relationship. The review of the literature in the preceding sections has indicated factors that might influence an individual's communicative performance. Of critical importance, of course, is whether or not the sampling of performance in a range of situations produces sufficient and consistent differences to indicate the nature of the factors influencing the behaviour. Thus, in keeping with the general thesis regarding situational factors developed in the previous sections, the following specific hypotheses were formulated for testing:

Hypothesis 1.

> The patterning of children's verbal behaviour elicited in home settings will differ significantly from that produced in school situations.

The evidence supporting qualitative differences in verbal behaviour from situation to situation tends to be inferential rather than empirical. A number of researchers have discussed

situational differences in very general terms (Bandura and Harris, 1966; Cazden, 1970; Dickie and Bagur, 1972; Rose et al., 1975), and a few have provided specific examples. McCarthy (1929) noted in her study of pre-school children's verbal behaviour that boys tended to use longer responses in a playground situation than in an indoors experimental situation. Cazden (1967) collected a number of speech samples from two children in eight structured situations and found differences in Length of Terminal Unit and use of conjunctions. In a study of the verbal behaviour of a group of five-year-old children, Hanlon (1973) found significant differences in noun phrases, verb phrases, and the complexity of utterances elicited under different stimulus conditions.

At the more general level, comments about proscribing speech in certain settings (Hymes, 1967), learning the speech demands of various communication contexts (Hopper, 1971), and acting out different patterns of verbal behaviour (Goffman, 1972) suggest situational variations in verbal behaviour even if the exact nature of these differences is not stated. The focus for Hypothesis 1 was thus on the two most influential settings in which the child finds himself.

Hypothesis 2.

> The patterning of verbal behaviour will differ significantly among groups with two, three, or four participants.

While conversations in 'real-life' involve varying numbers of people at different times, most language research has focussed either on the child as a member of a dyad, or on group data. The group referred to here is the nominal group not the real group since the data generally comes from individuals performing separately on structured tasks rather than in verbal interaction with others. Groups of varying sizes within the one research design have not commonly been used in investigations of children's language. Whether or not the general patterns and characteristics of verbal behaviour remain constant when group size is varied remains largely unknown.

However, in an early study of group factors and language

behaviour (Williams and Mattson, 1942) found little difference between groups of different sizes in the percentage of various parts of speech used with the exception of adjectives and adverbs. They also found that sentence length was constant across different sized groups. On the other hand, Torrance (1970) found that the question asking behaviour of a group of five-year-old children varied quite considerably according to the size of the group. For example, children in smaller groups asked proportionately more questions than children in larger groups.

The limited evidence available suggests that the influence of group size on language behaviour may go beyond the simple numerical factor to considerations of the dynamics of group interaction. As has been shown in the Tizard et al. (1972) study, for example, assigning more adults to the same-sized group of children does not necessarily result in an increase of adult to child talk as might be expected. In like vein, Jaffee and Lucas (1969) have indicated that choosing a leader by a group is sometimes done on the basis of the amount of talking rather than the quality of that talk. A leader chosen under these conditions may be more successful in diverting attention from the group's raison d'etre than in maintaining an 'on-target' focus.

An increase in group size may also influence the degree to which various members feel willing to participate (Hackman and Vidmar, 1970; Frank and Anderson, 1971), and reluctance to do so may not allow an individual to demonstrate his real linguistic ability. Similarly, there is evidence to suggest that group interactions pass through different phases (Tuckman, 1965; Morris, 1970). Therefore, sampling specific phases of an interaction may reveal different characteristics of language which, again, may have little to do with an individual's language competence but instead reflect the influence of changing constraints on verbal exchanges as an interaction develops.

There has been, as yet, little explicit research support for the hypothesis as formulated, and the sample in the present study was not large enough to allow size to be varied independent of social relationship, which was likely to be a confounding variable. However, it seemed reasonable to expect that the general

behavioural variations noted in various types of group situation might provide indicators of the specific language differences likely to occur under more controlled sampling conditions.

Hypothesis 3.

> The patterning of verbal behaviour will differ significantly between situations where the social relationship of the participants varies.

A key factor in any verbal exchange is the nature of the relationship between those taking part. The information available (or lack of it) on other persons helps define a pattern of expectations which will influence the manner in which people react to one another. There is a great deal of evidence accruing to suggest that speakers modify and adapt speech patterns in accord with those to whom they speak (Giles et al., 1973). The camaraderie between close friends establishes the tone of a relationship not likely to exist between two strangers meeting for the first time. Brown and Keller (1973) discuss this perception of the influence and expectations of other people within the general framework of reference groups.

For the young child, three important reference groups are provided by the family, the school, and peers. In the first, the child has learned, through close and relatively continuous experience, basic patterns of verbal interaction, and researchers have shown how adults moderate their language according to the perceptions they have of the children with whom they interact (Halverson and Waldrop, 1970; Cherry and Lewis, 1976). Halverson and Waldrop (1970) found that mothers were much more negative in their behaviour towards their own two-year-olds than they were to other toddlers. On the other hand, there is some evidence to indicate that the children themselves respond differentially according to their perceptions of adults and other children (Gewirtz, 1969; Osofsky, 1971; Sachs and Devin, 1976). For example, Sachs and Devin (1976) observed that their small group of pre-school subjects did not talk to younger listeners in the same way they talked to their peers or their mothers.

While very little research has been done on the effect of social relationship on language behaviour, the evidence that does exist suggests that people do modify and adapt their speech according to their perceptions of those with whom they are interacting. Hypothesis 3,therefore, was framed with the intention of describing the nature of these modifications (if any) as they affected the children in the present study.

Although the three hypotheses stated above provided a very necessary framework within which the study was to be conducted, it is emphasized that the study itself was envisaged as primarily descriptive in an area of language research in which little was clearly defined. Consequently it was expected to generate, as much as to test hypotheses.

CHAPTER 3: METHOD

Overview. This chapter describes the research design, details the method used to select the subjects, and outlines the plan for sampling within the home and school settings. The preparation of transcripts, verification, and problems of transcription are dealt with. An overview of the coding system is given, and coder training and coder agreement procedures are also outlined. The chapter concludes with a description of how the data was prepared for computer analysis, of the computer programmes written for this purpose, and of the procedures used for the statistical analysis.

3.1 Research approach

The present study was based primarily on an ethological approach to investigating children's language behaviour. This approach, involving detailed observation and description - or as Jones (1972) so aptly describes it "trawling for facts" - offers a viable first stage method of identifying significant characteristics of verbal behaviour in natural situations.

In spite of the fine work by researchers such as Brown, Cazden, and Tough, the study of child language, unfortunately, is not rich in ethological studies. More typically child language has been investigated under experimental-type conditions with unfamiliar tasks administered or observed by a strange adult. As Fraser and Roberts (1975) have pointed out, the investigation of behaviour under laboratory conditions may create effects that do not normally exist. Conversely, language occurring in natural social situations and under typical conditions of interaction may display characteristics that would be suppressed in the structured, experimental setting. While there are limitations to the usefulness of an ethological approach, particularly in establishing cause-effect relationships, a major advantage of a systematic descriptive phase of research is that it provides an opportunity to establish what it is that needs to be explained: appropriate hypotheses can then be formulated for testing, some immediately, others at a later stage.

Nevertheless, it is almost impossible to gather completely natural samples of language except by surreptitious means.

Accordingly, some structure had to be imposed within the study in order to make it organisationally feasible, acceptable to those adults participating, and also capable of meeting the requirements of the relevant educational authorities. However, structure was minimised as much as possible, naturally occurring stimuli for verbal behaviour were relied upon, and the gathering of data was left largely in the hands of familiar adults already participating in language interchange in the particular settings.

Although the present study was basically ethological in orientation, the data collection plan was also influenced by current approaches to the analysis of classroom interaction. Some of the observation category systems developed for this purpose have the advantage of being relatively simple and reliable analytic tools for the study of a variety of interactional behaviour, and would seem to offer a useful complement to the naturalistic description of language. To the investigator's knowledge, there have been no previous studies which have attempted to combine these two approaches.

The influence of the interaction analysis approach is seen in the development and use of a coding system for categorizing verbal behaviour. This was a deliberate attempt to extend to situations beyond the school environment the application of techniques that have, up till now, been confined largely to the observation of classroom or organised situations. The requirements of the present study were for a system with verbal behaviour categories that could be applied to the utterances of a speaker, irrespective of the role status of the various participants (e.g. teacher, pupil, or parent) or the kind of situation (home or school). The reciprocal system, developed specifically for this purpose, will be described later in this chapter (Section 3.5).

The verbal categories in the coding system were used as the basis for analysis, in preference to more traditional linguistic tools such as MLR, type-token ratio, generative transformational grammar, and the like. The investigator was interested primarily in the interactive nature of verbal behaviour and many of the more traditional language measures did not seem particularly appropriate for exploring this, whereas the types of category used in classroom interaction systems would allow a more holistic

description to be made of the patterning of children's verbal behaviour. Adopting this type of analytic approach also made it possible to examine the relationships between differing categories of verbal behaviour, as well as between the verbal behaviour of different participants in the same conversational setting. Thus, a level of analysis was aimed at which could not be achieved through the use of traditional linguistic measures.

3.2 Description of sample

It soon became obvious that the selection of the subject group would be a critical factor in developing the research plan. It was intended to sample the language behaviour of children in both home and school situations. Further, within the limitations of the recording devices used, it was hoped that the language samples would be representative of "normal" interaction in those two types of setting.

3.2.1 Criteria for selection of subject sample. The population from which the sample would be drawn was determined in accordance with the following criteria:

Age. The main problem was to select an age group where the children would be likely to adapt easily to the recording situation and thus to being observed while behaving in a natural manner. The investigator dismissed from consideration the pre-school age groups, as examination of transcripts from an earlier piece of research with five-year-old children (Hanlon, 1973) suggested that younger children are not readily able to sustain spontaneous interchanges of verbal behaviour over extended periods of time.

The likely reaction of older children to the type of communication situations the investigator wished to explore had also to be taken into account. Informal recording and discussions with older children suggested that 10-year-olds were likely to view the recording programme, particularly in the home setting, in a less natural way than might younger children. Thus, initially, a lower limit of five years and an upper limit of 10 years was established.

Because it was necessary for practical reasons to limit the size of the sample, it was decided to define a more homogeneous age group within this larger age population. The decision to select a sample with ages between seven years six months and eight years six months, at the commencement date for the data collection phase, was arrived at with regard to the developmental change in cognitive behaviour that Piaget has suggested occurs for many children when they reach approximately seven years of age. There was the possibility that the type of language the child used would reflect particular characteristics in children's style of thinking at this age. Although it was not intended specifically to examine the relationship between patterns of language behaviour and characteristic styles of thinking in the present study, the data so gathered might illuminate other problems if it were obtained from a cognitively homogeneous sample.

Ethnicity. It was decided that the children should be of European origin with English as their first language. Discussion in the relevant section of Chapter 2 has indicated that ethnic factors have an influence on language behaviour apart from the general association that has been found between ethnicity and social status; unless ethnicity were controlled this could lead to a very heterogeneous sample indeed.

Verbal ability. It was also decided that the children would be selected bearing their verbal ability in mind, since the success of the data collection could otherwise have depended largely upon the child's ability to use language. The criterion used to determine verbal ability was the child's current ranking for Oral Expression on the Primary School Progress & Achievement Card. Only those children rated one, two, or three on a five point normalized scale were included in the population considered. The advantage of selecting children rated as average or above in verbal ability was to have a group of subjects likely to participate freely in the various interaction situations.

The research sample was drawn from children attending a school in a provincial city servicing a large rural area. This school was chosen for its proximity to the local University which was to be the base for the research project. A population

of 54 children at the school met the above three criteria. From this population a research sample of 12 children (six boys, six girls) was required. The sample size was determined largely by the facilities available to cope with data collecting together with the capacity of the investigator to transcribe, code, and analyze the resulting observations.

Support and co-operation from parents and teachers was an essential requirement for the success of the study and this, rather than random-selection techniques, determined the type of subject selection procedures adopted. A circular, with accompanying letter of approval from the School Principal (Appendix A), was sent to the parents of the 54 children who comprised the research population. It included a tear-off slip on which parents indicated their willingness, or otherwise, to participate in the project. Replies were received from 39 parents, 29 of whom indicated their willingness to participate.

Because teachers were to be heavily involved in the project, an arbitrary decision was made to draw the children from three classrooms only and to take four subjects from each room. The three teachers involved were all females. It was also decided to maintain a balance between the verbal ability of the children, and thus six of the children finally selected were rated above average on Oral Expression and six were average. These ratings were also evenly spread by sex, thus three boys and three girls were rated one or two, and the other three boys and three girls were rated three on verbal ability.

In one classroom the four subjects were all boys, in the second classroom all girls, and in the third classroom two boys and two girls. This pattern of grouping was determined largely by the class placement of children according to replies to the circular. The age range for the girl subjects was 8.0 - 8 years 1 month, and for the boys 7 years 7 months - 8 years 2 months, with mean ages of 8 years and 7 years 10 months respectively.

Thus the sample was not randomly selected but rather was a specially chosen group matched on a number of criteria. A further six children (three girls, three boys) participated in a number of school group situations. These six children were

selected from those whose parents responded to the initial circular and who met the various criteria stated above.

3.3 Design of the study

The data collection plan was devised to sample language behaviour in the two types of settings - home and school - over a six week period. Although consideration had been given to the use of video recordings there was evidence, from a study by Lytton (1973), to suggest the problems of video taping in the home setting far outweighed the advantages of a visual-auditory record of interactions. Therefore, audio tapes were used throughout.

3.3.1 Initial procedures. As soon as the subjects had been selected the investigator arranged to interview separately each parent pair. The three teachers were interviewed as a group. Two briefing booklets had been prepared, one for parents and one for teachers (see Appendices B-1 and B-2), and these contained background information on the study, comments on recording procedures, and record forms for recording sessions. The recording procedure was explained to each pair of parents, using the booklet as a discussion guide. A similar procedure was followed with the three teachers.

3.3.2 Division of sample groups. The children were divided into two groups of six for home recording purposes, with groups drawn evenly from the three classrooms concerned. The sampling of language behaviour in the home was done during three periods each of one week's duration, with a rest break of one week in between each sampling period. While the parents were recording in the home a small portable tape-recorder was left with them for the whole week. At the end of the week the investigator collected the recorder and tape, and passed the recorder, together with a new cassette, on to a parent in the second group. At the end of the next week the recorder was passed back to a parent in the first group and so on through the entire sampling period. Technical details of the equipment used are given in Appendix C.

The school recording was done over the whole of a six week

data collection period (running parallel to the five weeks required for home data collection) so as to reduce the teacher involvement in the project to an acceptable limit. Teachers were issued with tape-recorders which they kept with them for the whole period. Throughout the data collection phase the investigator checked with parents and teachers at regular intervals to ensure recorders were in operating condition, to check for audibility on the recordings being made, and to answer any questions. Further supporting detail is given in Appendix C. The home visits were carried out during school hours so that the children were not present. This was felt to be in keeping with the general desire to preserve the naturalness of home interaction as much as possible. It was felt necessary to make these regular checks so that if faults were detected substitute recordings could be made before the data collection phase expired. The success of this checking procedure became apparent when the transcripts were being prepared and not one of the 297 interactions was lost to any substantial degree through inaudibility of tapes.

3.3.3 Home situation sampling procedures. Over the spaced three week period, parents were asked to make, or to arrange for, the recording of twenty separate interactions, four in each of the following situations: mother-child, father-child, parents-child, other adult-child, child-child. The other adult could be a neighbour, relative, or friend but had to be somebody with whom the child was relatively familiar. In the child-child situation it was suggested that the other child should be of the same sex and of a similar age as the subject. This child could be a sibling, relation, or friend. A specific order for these interactions was not imposed upon the parents but it was suggested that they should try to space them out over the whole recording period by not recording more than two interactions a day, unless a special series of experiences or events provided opportunities for interaction that should not be missed. Obviously if a child was going to a birthday party, having someone to stay for the weekend, or making a trip at school, a wealth of material for discussion could be missed if too rigid a sampling procedure had been adopted. Further, to adopt a rigid sampling programme would have been contrary to the general aim of informality and spontaneity. This turned out to be a wise decision since the time of

year proved to be a busy one for the children and there was no shortage of material for talking about in the home situations.

Parents were also asked to avoid, where possible, double sessions of the same situation type. For example, a sampling sequence mother-child, mother-child, father-child, father-child, and so on, was discouraged. For the child-child situation and other adult-child situation the criterion emphasized was familiarity with the person. While it was stressed that the use of the same "other adult" or "other child" was preferable, it was realized that this might create sampling difficulties because of the unavailability of the same person over the five week period.

The final timing of interaction sessions, the setting, and the choice of topic was left to the discretion of those arranging the sessions. During the briefing of parents, the investigator had suggested that parents should select times for interactions that paralleled the family's life style pattern. For example, in some homes children regularly talked with their parents after school or before going to bed, and so on, and for the purposes of this research study it was suggested the normal pattern for that particular household should be followed. Similarly, the content of the interaction often arose from the normal pattern of family conversation (e.g. discussion about happenings at school, talking about special events such as birthdays, planning trips, and so on).

Recording sessions of five to seven minutes in duration were requested. It was felt that these would be long enough to record on tape the nature of verbal communication but not too long for the sampling period to become an imposition. However, parents were advised that interactions should <u>not</u> be terminated abruptly once the seven minutes had elapsed, but if interest sustained the interaction beyond the prescribed period then recording should continue. The seven minute upper limit was exceeded on many occasions and the longest interaction was 17 minutes 40 seconds. Conversely, parents had been advised not to artificially sustain an interaction just to reach five minutes and some interactions were only three or four minutes in duration. Before and after <u>each</u> session a record sheet was filled in with appropriate

details, noting the setting in which the interaction occurred and additional comments that gave significant information about the interaction (Appendix B-1).

The plan for the home sampling phase of the research design was guided by the principle that data collection in the home setting should attempt to preserve, as far as possible, the more informal nature of the home environment.

3.3.4 School situation sampling procedures. Teachers were asked to record sessions in each of the following three situations: teacher-child, teacher-children, children-only. For the teacher-child sessions the teacher was required to record four sessions for each child in the research sample.

The four research children in each classroom were divided into two groups. One other child was added to each group to make groups of three children of the same sex for the school group situations. Teachers recorded four teacher-children sessions with each of the two groups in their classrooms. Four sessions were also recorded with each of the children-only groups. In these sessions the investigator established the situation, gave the necessary instructions, but took no participant role in the actual interaction sessions.

In the school setting, unlike the home setting, a specific order of interactions was prescribed. The day's activities in these three classrooms was organized to a much greater degree, and could be planned for in a manner which would not be typical of day-to-day living in the home setting. Thus, the content of school sessions was structured to a greater extent than was the case with the home sessions. The requirements of some of the school sessions were stated quite clearly in advance. Of the four teacher-child sessions two were to be of the teacher's choice, one was to follow the pattern of an individual reading conference, and the fourth required the teacher to discuss with the child a piece of the pupil's own written work.

The reading conference called for the teacher to discuss with, to question, and to probe the child's reading of a self-chosen book (Holdaway, 1972, pp.35 - 36). The only guidance given

to the teacher for the two "teacher's choice" sessions was to suggest that the teacher should, in these situations, interact with the child by focussing in the way she would normally do in one-to-one situations.

The four "children-only" sessions were each associated with clearly defined tasks. The degree of structure imposed by the task varied from session to session.

Task 1: "The Zoo Game". The children were brought into a small room where a model zoo was set up on a table. They were then taken for an imaginary trip around the zoo and their comments were tape-recorded.

Task 2: "Million Monsters". This was a more structured task and involved the children making figures from a commercially produced set (similar to an identi-kit) and talking about the figures as they made them.

Task 3: Discussion of a sound-filmstrip. The children were shown a sound-filmstrip, entitled "Nothing is something to do", which showed young children engaged in passing time by sitting on fences, looking at flowers, crouching in holes, and so on. After they had watched and listened to the sound-strip, the children discussed their reactions to what they had seen and heard and related similar experiences of their own.

Task 4: Things I like to do. The children were presented with a visual stimulus showing a range of common leisure-time activities (activities such as swimming, camping, horse-riding, sailing, and so on). On the picture was printed the heading "What's it like going ...." and in front of the children a number of cards containing completions to the stem were spread out (e.g. to the beach, for walks, and to town). The children selected cards from the range presented and these served as focussing points for the subsequent discussion.

A full description of these tasks is given in Appendix D.

For the teacher-children sessions, two were designated "teacher's-choice" and the other two were specified activities.

> Specified activity 1: When the children had finished "playing" the Zoo Game the teacher entered the situation and talked with the children about the zoo in any way she wished to. The zoo model was left in front of the group during this session.
>
> Specified activity 2: For this activity the teacher was required to discuss with the group of children the two activities "Million Monsters" and "Nothing is something to do". Unlike the previous activity where the stimulus was left in the situation, the investigator removed these two activities from sight before the teacher joined the group.

The teacher could decide for herself what she would do with the other two teacher-children sessions. The only proviso stipulated by the investigator was that the activity should be of a nature that the teacher would normally engage in with a small group of children.

Sampling in the school situation was controlled in two other ways. First, the order in which sessions and tasks were undertaken was scheduled in advance (Appendix B-2). The order of sessions was also related to the six week sampling period so that sessions could be spread evenly over the total sampling period. The allocation of tasks was made to specific weeks but no attempt was made to specify the time during the week in which the tasks were to be done, so long as the order of tasks was preserved. Second, to counterbalance for any teacher practice effect over a number of sessions with the same task, the teachers were given lists indicating the order in which children were to be taken for each individual session and the order of the groups for the group sessions.

Recording sessions at the school were of the same length as for home sessions (i.e. five - seven minutes). Teachers, like parents, were advised not to terminate a session simply because

the required time span had elapsed but to look for a suitable pause in the interaction and to phase out the session in as natural a manner as possible. Before and after each session teachers filled in appropriate details in the record booklet (Appendix B-2).

3.4 Transcripts of interactions

3.4.1 Initial preparation. As soon as cassettes were replaced at the end of the first week's recording, the investigator and an assistant worked independently on preparing transcripts from the cassettes. The criterion which guided the preparation of the transcripts was that the written versions of the recorded interactions should represent as closely as possible the character of the spoken mode. Particular attention was paid, therefore, to such features as false starts, hesitations, syntactic structure, repetitions, pauses, and interruptions. Simple symbols were used to indicate pauses and interruptions, and all false starts and repetitions were transcribed. When a change of speaker occurred transcription began on a new line, and an abbreviation at the beginning of the line indicated who the speaker was. All the dyadic interactions were transcribed first to enable the investigator and his assistant to become thoroughly familiar with the verbal characteristics of each subject. This procedure proved to be of great benefit when the school group sessions were transcribed and it was necessary to distinguish between three children's voices. Attached to the front of each completed transcript was an information sheet. This gave details such as subject's name, code description (a number series for use with the computer cards), session description, date, and tape number. Information that would enable data to be retrieved from the cassette library and/or easy reference to be made to the coded interactions was recorded on other specially prepared record sheets. A copy of an information sheet and part of a transcribed interaction can be found in Appendix E.

3.4.2 Transcript accuracy. One of the difficulties in making a written record of children's language is the temptation to regularize children's utterances so that what is transcribed may be what the transcriber "thinks" the child said or should

have said rather than what was actually said. To eliminate this type of inaccuracy as far as possible it was decided to verify all transcripts, rather than randomly check a proportion of the collected data. This proved to be a major task since some 2,500 pages of transcript were compiled from the language behaviour sampled in the survey.

The strategy adopted to check transcripts was a consensus procedure. The investigator and his assistant worked together and replayed all tapes, checking the transcript against the spoken form. Where errors were noted the tape was checked and replayed, several times if necessary, until agreement was reached. During the checking phase, time markers were placed on the transcripts, to indicate the end of each minute of interaction. These were placed as accurately as possible. If a minute elapsed in the middle of a word then the time marker was placed above the word. The noting of time intervals was important for the statistical analysis of the data.

3.4.3 Problems of transcription. Although the interactions on all tapes were able to be transcribed, the technical quality of recordings varied considerably and this influenced the ease with which transcriptions could be made. The school group situation in which children-only were involved caused the greatest transcription problems. The higher incidence of interruptions and simultaneous dialogue in the children-only situation created difficulties in differentiating and identifying individual speakers. The problems in the dyadic situations were not of speaker identification but rather of understanding what was said. Families, like other special interest groups, obviously have a common pool of personal knowledge available to draw on in interactions between family members. Discussion can draw on this pool in an inferential manner which is meaningful to those familiar with the 'code' but which can be puzzling to a stranger. The investigator and his assistant found themselves to be strangers on a number of occasions, and developed some sympathy for an 'elaborated' code user trying to understand a 'restricted' code.

On an average, six hours were required to transcribe one hour of interaction. A similar period of time was spent verifying

the transcripts. In total, 540 hours were evenly divided between the initial preparation of transcripts and the checking procedure. This gives an indication of the care required to ensure that the transcript was as accurate a representation as possible of the recorded interaction.

3.5 The Coding System: Modified SQUAIES

The primary focus in the present study was to investigate situational influences on the child's language production within a broad context of patterns of verbal interaction. It is one thing, however, to record interactions, as described above, but quite another to translate the observations into a form that lends itself to the ready analysis of patterns and sequences. The literature on the systematic observation of children's behaviour indicates that a wide range of techniques and strategies have been employed, whether this has occurred within the formally controlled laboratory situation, the less formal setting of the classroom, or in wider more spontaneous environmental contexts (Yarrow, 1963; Bealing, 1973). A survey of these various techniques used to describe, or measure, or categorise children's behaviours led the investigator to conclude that the prime objectives of the present study might be best met through the use of some type of coding system.

Among researchers working in the field of parent-child interaction, category systems have been widely used to record or code observed behaviour in structured settings (Lytton, 1971). Category systems, however, vary widely in the behaviours categorized for observation, in the degree of specificity of those behaviours included, and in the manner by which the behaviour (when observed) is recorded. Similarly, the attempt to determine the quality of classroom instruction has produced many systems of classroom behaviour analysis. These systems also vary in the ways described above but, in addition, often have a speculative basis that derives from a firmly held belief in some theory of instruction.

Thus, while the student of child language is faced with an abundant source of possible category systems, many tend to be very specific, either in the nature of behaviours sample , or in

the type of setting in which they can be used. There is, perhaps, a certain inevitability about this predicament, since both the individual and the situations in which interactions occur present such complex interplays of behavioural and contextual factors, that any type of general purpose coding system must needs be so superficial as to be of doubtful value. One possible avenue out of this behavioural maze may be to combine systems, or elements of systems, so that they have wider application without losing the specificity with which behaviours and/or situations can be observed. This type of solution seemed to hold promise in meeting the demands of the present study. A coding system was required that had application to verbal behaviour elicited not only in the more formal setting of the classroom but also in situations outside the school where verbal interaction was likely to be much less constrained and more spontaneous.

A major difficulty presented by category systems designed to record parent-child interactions was that many of these systems focussed on a wide range of behaviours, verbal and non-verbal, and where categories did relate to verbal behaviour these often tended to be extremely broad and focussed on only the most general aspects of language. On the other hand, most systems of classroom interaction analysis focus, naturally enough, on the instructional nature of in-class behaviour, as it relates to curriculum or to the affective climate of the classroom. Consequently, the role status of the participants in the interactional patterns of the classroom often assumes considerable significance within the structure of the coding system.

3.5.1 Overview of the Modified SQUAIES Interaction Analysis Coding System. While elements in a number of parent-child or classroom category systems had appeal within the general requirements of the present study, one system in particular seemed to be, with modification, potentially the most useful. This system, SQUAIES (Katterns, 1974) was developed primarily to analyse teacher and pupil behaviours that occur during small group discussion sessions. From this system, the Modified SQUAIES Reciprocal Interaction Analysis Coding System (Hanlon and Katterns, 1975) was developed. Both the SQUAIES system and Modified SQUAIES have been based on the theoretical model and interaction analysis system

constructed by Bellack et al. (1966). The Coding Manual for Modified SQUAIES (Appendix F) details the theoretical underpinnings of the system, and presents the system in full with definition of categories, examples, and appropriate ground rules. Basically, Bellack's model views classroom discourse as a "language game" in which participants make verbal moves. These moves indicate ways in which participants relate to each other to control the nature of the communication and to convey meaning.

In the SQUAIES system, the teacher occupies a focal position which appears to be a logical consequence of the role status accorded to him in the social structure of the classroom group. However, in Modified SQUAIES the major feature that differentiates it from its parent is its capacity for taking reciprocal moves into account. Structurally, the system accords equal status to all participants, and is concerned with the nature of the verbal moves they make within the situation rather than with move functions determined on the basis of a societal role such as teacher, pupil, and the like.

Modified SQUAIES uses two major types of category: speaker identification categories and verbal behaviour categories. While a move, in the parent system, was defined according to its verbal intent, the manner by which moves were grouped, as either teacher or pupil behaviours, meant that in effect the user of the move was also defined by the type of coding accorded a verbal behaviour. Modified SQUAIES does not differentiate verbal behaviour on this dual basis. Verbal behaviours are coded without reference to the status of the person making the move. Thus, in Modified SQUAIES, having coded the verbal behaviour it becomes necessary to identify the speaker, using a supplementary set of speaker identification symbols. These are very simple: M for mother, T for teacher, and so on, but they play an important role in the analysis of data in the present study.

The verbal behaviour categories retain the same five basic communication moves of the SQUAIES system:

i) Structuring moves that initiate an episode (e.g. "Look at that animal in the cage.").

ii) Question moves that initiate an episode (e.g. "How would you consider solving Tom's dilemma?").

iii) Response moves (e.g. "I think he might be going to eat that meat over there.").

iv) Moves which indicate acknowledgement or evaluate responses positively or negatively (e.g. "Good", "No! He rolled over the cliff.").

v) Moves which sustain ideas in previous response moves (e.g. "Why did you say that?" "I want you to think about Tom's answer and consider....").

Within each of the major communication move categories are a range of specific moves (Appendix F). With very few exceptions, these sub-categories are the same as those in the SQUAIES system. For example, it was found in the pilot testing of the system that in home situations participants often "reacted" to verbal moves made by others, and to define this type of behaviour as a "reaction" seemed to capture the spirit of the move more descriptively than would its classification as an "initiation" response move of the parent system. Again, in the SQUAIES system one of the sustaining move categories was the APQ move (teacher answers pupil question). In SQUAIES it was necessary to have such a category because the major question-asking function in an interaction was assigned (through the structure of the system) to the teacher. However, in Modified SQUAIES any person can make any of the verbal moves and it is not necessary to have a special category to cope with responses to pupil-asked questions. The separation of the 'Who said it' from 'What is said' in Modified SQUAIES means the system can be used in a wide range of situations by simply adding to the speaker identification categories. Additions of this nature, however, have no effect whatsoever on the theoretical basis of the system.

3.5.2 Units of analysis. Modified SQUAIES uses two basic units of analysis: the episode and the move. The episode consists of all communication moves which relate to a particular theme within the discussion. The theme represents the substantive focus of the episode, and during an interaction a number of different themes usually arise, some of which may be returned to at different

points. An episode often commences with someone asking a question which is answered. The initiator of the question, or some other person, may then ask a supplementary question to probe the answer given, and so on. The pattern an episode takes can vary in a number of ways and the different types of initiating, responding, acceptance-evaluating, and sustaining moves which can be made give an idea of the number of combinations of move possible in an episode.

Episodes can vary considerably in length. A simple episode may comprise only two moves, question and answer. On the other hand, more complex episodes may involve 20 or 30 moves and the theme may be continued through the use of probing and sustaining moves or by participants reacting to the comments made by other participants in the situation.

The verbal move is the smallest unit of analysis, in that it is defined as a verbal statement with a single identifiable communication function. However, it cannot be equated simply with an utterance or a sentence. It may even be equivalent to a single word. In some situations the verbal move may include several sentences. For example, a person may begin an episode by giving information about a topic. This might involve quite a lengthy introduction containing many sentences. So long as this introduction performs a single function it would be coded in Modified SQUAIES as one verbal move.

3.6 Coding procedures

Coding of the verbal behaviour was done from the prepared transcripts of the audio-taped interactions. A paired-coder procedure was adopted and this involved the researcher and his assistant working together to code the interactions.

Each interaction was divided first into episodes and a heavy line was ruled across the transcript at the end of each episode. Dividing each transcript into episodes gave the coders an overview of the content of the interaction. This was an important initial step because one of the basic ground rule principles of the coding system related to the contextual boundaries of the interaction. In other words, verbal behaviour was not coded as a series of

moves independent of the influence of preceding and consequent moves. For example, if the question "Did you like the film?" received a yes/no response it would be coded as an opine question, but if the answer included reasons to support the opinion given then it would have been coded as an evaluation question.

The general procedure adopted for dealing with each language sample was for one coder to work through the transcript coding the verbal moves, while the support coder sat alongside checking the accuracy of the initial coding. The coders alternated these roles for each transcript. The speaker identification symbol and the verbal move code were written on the right hand side of the transcript, down a column that had been left for that purpose. Where disagreements occurred the verbal move under discussion was re-examined and considered with reference to the appropriate sections and ground rules in the Coding Manual. This procedure proved to be very successful in dealing with any coding problems that arose. A sample coded transcript is given in Appendix G.

On an average it required four hours for a pair of coders to code one hour of verbal interaction. Interactions varied considerably in length from one minute 27 seconds to 17 minutes 40 seconds. Most of the interactions lasted between four and eight minutes.

3.6.1 Coder training. The investigator had already been trained as a coder on the SQUAIES system, and as senior author of Modified SQUAIES had developed the system through all the pilot testing stages. The research assistant was given a training programme which involved discussion of the theoretical basis of the system, so that an understanding was gained of the rationale and basis of Modified SQUAIES.

A series of training transcripts was compiled from audio-tapes used during pilot testing of the system and from a random selection of transcripts from the research sample. The criterion for coding competence was set at .80 agreement on extended categories and .85 on major categories, with minimum levels to be sustained over three consecutive transcripts. In view of the number of major and extended categories involved in Modified SQUAIES and the reciprocal nature of the system, these minimum

levels for coder training seemed comparable with coding reliability measures obtained in a number of studies using coding systems (Smith et al., 1964; Taba et al., 1964; Bellack et al., 1966).

After initial discussion of the basis of the system and the categories involved, the trainee coder was given segments of transcripts to code. These were discussed in the context of the category descriptions and ground rules contained in the Coding Manual, which was constantly used for reference, not only during the early workshop sessions but throughout the coding of the research transcripts. Once basic understanding of the categories had been attained, the investigator and his assistant worked independently to code sample transcripts. Coder agreement was computed, using procedures to be discussed in the following section, and errors were discussed using the guidelines established in the Coding Manual. This basic procedure of code, compare, and discuss was followed until the criterion level of competence was attained. Approximately 15 hours, spread over a three week period, was required to train the research assistant in the use of the system and to reach the criterion level of competence. Coding of the research transcripts then commenced.

3.6.2 Coder agreement. The literature on observer reliability and observer accuracy has provided evidence of the problems that can bedevil this phase of an investigation (Reid, 1970; McGaw et al., 1972; Romanczyk et al., 1973; Mash and McElwee, 1974). While most of this discussion is related to 'live' observations, the difficulties pointed out have relevance for procedures developed to code typed transcripts. Comparisons on coding efficiency have shown marked differences between situations where the coder knows his behaviour is being monitored and those where he does not (Reid, 1970; Romanczyk et al., 1973). For reasons such as these a coder-pair system was adopted in the present study, and the coder agreement procedure was developed.

The transcripts were grouped into sets of 12 and from each set one was drawn randomly for the coder agreement check. This transcript was duplicated and placed in an envelope and appropriately identified. The coders worked together coding the first

eleven transcripts in a set in the manner described in a previous section. When the eleven transcripts had been completed, the investigator and his assistant worked independently to code the agreement check transcript. The independently coded transcripts were then compared, move by move, with reference to the coding of the major category (e.g. answer) and extended category (e.g. short). The coders could be in agreement for both decisions, for one decision, or neither. If a move was not coded at all by one person then it counted as a disagreement for both major and extended categories. A running record was kept of the number of agreements and disagreements for major and for extended categories and the accuracy of the independently coded transcripts was determined using the following formula (Smith and Meux, 1962):

$$\frac{\text{Number of agreements - Number of disagreements}}{\text{Total number of moves}} \times \frac{100}{1}$$

The result was calculated as a decimal fraction. Following each agreement check, errors in coding were discussed and the transcript was corrected on the basis of this discussion before being included with the other transcripts in the set. This procedure was adopted to standardise the consensus approach being used in the coding of all transcripts. This procedure also had the advantage of alerting the coders to areas in the system where coding difficulties might arise and acted, in effect, as an on-going training procedure.

A high level of agreement was achieved using the procedure outlined above. On major categories agreement ranged from .85 to 1.00 with a mean of .94, and on extended categories from .79 to .96 with a mean of .88.

3.7 Computer analysis of coded data

3.7.1 Organisation of data for computer analysis. The quantity of data available (categorisation of nearly 70,000 moves) was such that some form of computer analysis was essential. It was decided that, rather than summarizing information from the coded transcripts and placing this on computer cards, it would be preferable for the total data pool to be held on computer cards.

Special sheets were drawn up for this purpose (Appendix H),

and it was from these sheets that the computer punch cards were prepared. Each representation was drawn so that the five rows represented the major categories in the system[1] and each column on this special sheet was equivalent to four columns on a punch card. Thus, on each punch card 20 items of information could be recorded. It had been decided that four columns on a punch card would be required for each item and that a combination of numerals and letters would be used to record this information. For punching purposes all of the categories in the coding system were reduced to two letter symbols and the subjects and other participants were given a two-digit identification number. Following the procedure outlined in Appendix H, it was possible to record on the punch cards the order of moves in the sequence they occurred during the interactions.

There were also a number of additional features of an interaction that were recorded on the punch cards. The end of each episode was indicated by a special marker (Z). This appeared in the fourth column of the column set and was preceded by a three letter-digit combination which was used to indicate the pattern of the episode.[2] A time marker (OOGG) was used to indicate the end of each minute of interaction. This was placed in the column set nearest to the verbal move at which the minute elapsed.

During the course of conversation there are often occasions when two or more people are speaking at the same time. It was possible to preserve this feature of an interaction. Whenever there was a continuing response the column set immediately following contained the speaker identification code and the continuing symbol (XX). The programme was written so that the substantive or procedural content of continuing moves was counted once only, but the incidence of continuing moves was also recorded. Sometimes in a verbal exchange a person starts to speak but is interrupted before he says sufficient for the statement to be meaningful. Interrupted responses of this kind were indicated on the

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1. The first row was used for initial structuring moves, the second for initial questions, then responses, acceptance-evaluating moves, and probing-sustaining moves.

2. A brief discussion of episode interaction patterns is contained in Appendix I. It is not necessary to read the statement at this point to understand what follows.

transcripts with just the speaker's identification code and no verbal move category. Such a response was recorded with a special code (VV) which was preceded in the first two columns of the column set by the speaker's numeric code.

One other feature of verbal interaction was taken into account in preparing the punch cards. A person may occasionally make a comment, the substantive content of which is different from the theme under discussion. If this change of theme was sustained then a new episode would have started. However, sometimes after a comment or two the episode carries on as though the interruption had not occurred. This type of intrusion was called an aside which was indicated by a special marker (HH). The programme was written in such a way that moves occurring in asides were counted separately. Appendix H contains an example of a record sheet illustrating the special markers described above.

The coded verbal interactions on the transcripts were transferred on to record sheets in the manner described above. From these forms the 4,786 computer cards containing the data were punched and verified.

3.7.2 Computer programming for analysis of the data. A special programme was written to handle the data. It had been thought that the Statistical Package for Social Sciences (SPSS) might provide a readily available programme. However, SPSS is designed to handle individual pieces of data and is not suitable for data in which order is a critical feature. Since the sequence of events and the relationship between them was of great interest in the present study, and since the quantity of data was very substantial, it was more efficient to have a special programme written to do the analysis than to use a lot of computer time on a general package programme.

Although the computer cards had been verified as part of the punching procedure, this process merely checked the accuracy of the card punching. It took no account of errors that may have been made when information from the coded transcripts was transferred to the record sheets from which the punching was done. As a first step, a programme was written to check the internal

consistency of the data. This programme was able to make use of a planned redundancy in the coding on the cards for the data check. For example, the DD specification for beginning each new interaction was redundant in the sense that not only does the DD specify the beginning of the interaction but also in the DD column set is a numeral indicator of the number of cards in that interaction. Using this information it is possible to check that the next DD card occurs in the right sequence. The data checking programme also scanned the data to ensure that asides terminated before the end of an interaction, that episodes ended with the Z designation, and so on.

When the card deck had been checked for internal consistency the information was transferred on to magnetic tape. This was a much more convenient and accurate way to handle the data, because of the large number of cards involved and because it was necessary to process the data through the computer on a number of occasions as part of the phased sequence of analysis.

An additional check was applied at <u>each</u> phase of the analysis. When a new version of the programme was being run, it was tested first on a small sample of 30 cards. The information on the cards was analysed by hand and compared with the print out for that version of the programme. The assumption was made that if the programme accurately analysed the data on 30 cards it would do so for the total data bank.

The computer processing of the data was handled in a number of phases beginning with a general analysis of broad categories and then progressively refining these to look at more specific features. A new version did not require a complete rewriting but rather substituting parts of the programme. However, some of these substitutions required fairly substantial reprogramming.

The following were the phases in the analysis of data:

i) <u>Total frequencies</u>. The printout from this version of the programme provided total frequencies for all the sub-categories of the coding system plus totals for special move categories: repeated moves, time intervals, and end of episodes.

ii) Frequencies by situation. The second version provided a breakdown of the total frequencies to give sub-category and special move frequencies for each of the eight situations.

iii) Subject frequencies A. This version provided a breakdown by situations and subjects. Separate frequencies were shown for each subject and for the other participant/s in each of the eight situations. In addition to showing raw frequencies, the printout also indicated the frequency as a percentage of all moves made by a subject and also by the other participant/s. From this it was possible to determine major category frequencies. For example, 4.8% of Subject 1's moves in the mother-child situation were initial structuring, 0.4% initial questions, 68.7% responses, 18.9% acceptance-evaluating, 0.4% probing, and 6.8% sustaining. A similar pattern of results was printed for each subject in each of the situations and for the other participant/s in each of the situations.

iv) Subject frequencies B. The same basic format for the previous printout was retained. There were two major differences in this version. First, percentage frequencies on this printout were by subject, situation, and sub-category with totals for each major category. For example, in the mother-child situation for Subject 1, 57.1% of the initial structuring moves were made by the mother and 42.9% by Subject 1, 97.8% of initial questions were asked by the mother and 2.2% by Subject 1, and so on. Second, summary totals of moves made in each of the major categories by subject, other participant/s, and situation were included.

v) Subject frequencies C. This was a special run of the programme for those situations that involved more than two participants.[1] In versions A and B of the programme the other participant frequencies and percentages in these three situations were shown as only one total. For example, in the parent-child situation versions A and B did not indicate the performance of mother and

1. These were the parent-child; teacher-children; and children-only situations.

father separately. As the format of the printout was already complex it was more convenient to handle the breakdown of the three group situations in a separate version. The form of analysis for the printout in this run was the same as that described for Subject frequencies B.

In addition to the total sampling of the data, described in the versions above, a time-sampling version of the basic programme was run. This provided frequencies and percentages in the manner described for Subject frequencies B, with the difference being that only the first three minutes of each interaction was sampled, so that some additional comparisons between situations could be made.

A printout of the computer programme described above, in a format suitable for a Burroughs B6700 configuration, is available from the investigator.

3.8 Statistical analysis of data

An integral part of any research design is the plan for analysing statistically the data which will be collected. The more loosely structured the research design the more difficult the problems of statistical analysis can become. In the true experimental situation the researcher can exercise a control over confounding variables, select subjects according to the principles of random selection, and choose appropriate tests from a range of powerful statistical measures. In the present case, however, the intention was to investigate the language of everyday situations; thus behaviour would have to be recorded in appropriate social contexts and under natural conditions, with limited controls. Such an approach creates problems for the statistical analysis of data since many of the basic principles of the scientific experimentation cannot be applied in their usual form. Furthermore, the subject group in the present study was, of necessity, too small to justify either random selection or stratified sampling techniques; thus certain statistical procedures that are commonly used in social science research were not appropriate.

The analysis of data was, therefore, approached in two ways.

First, the broad characteristics were described using graphic and tabular methods and simple indicators of distribution and central tendency. Second, nonparametric statistics were employed to test the research hypotheses.

The nature of the data was such that graphic and tabular methods could be used to very good effect to bring out the major characteristics of the verbal behaviour elicited from the various participants in the different sampling situations. These graphical methods were supplemented by summary information regarding the distribution of scores (range) and the central tendency (median). Because of the small sample size the median was used in preference to the mean which would have been much more influenced by extreme scores. Tables and graphs were relied on heavily to categorize the data in those sections of the report where the verbal behaviour of the participants was described and discussed. Graphs proved to be particularly useful for showing the relationship between the specific verbal behaviours of different participants, and also for indicating the relative importance of various types of verbal move in different interaction situations.

Two statistical measures were used for testing the research hypotheses; the Wilcoxon match-pairs signed-ranks test when two samples were compared, and the Friedman two-way analysis of variance for comparing the results from three samples. Since the focus was on the verbal behaviour of the same group of subjects in a number of different situations, the criterion of independence required by some other non-parametric tests, such as χ^2 could not be met. The data had to be treated as derived from related samples when comparisons were to be made: this applied not only to the verbal behaviour in different situations of the same children but also to that of the other participants who were also considered to be related samples, since in every case the same 12 subjects (children) were involved in the interactions and provided a constant factor through all verbal exchanges. Each subject was, in effect, used as his own control. Furthermore, since participants in all situations were interacting in a normal manner, discussing familiar topics, or engaged for the most part in typical activities for the setting, the problem of practice effect did not seem to be particularly relevant. However, in the school

setting the order and nature of tasks was prescribed in advance, and in the home situations the interaction samples of any one type were not recorded in blocks (i.e. one after the other) but were recorded in sessions dispersed through the whole sampling period.

The rationale and method for using the Wilcoxon matched-pairs signed-ranks test is described in full in Siegel (1956, pp.75 - 83). This test was used in preference to the Sign Test because it considered magnitude of differences between pairs as well as the direction of difference, and was thus more powerful.

Stated simply, the Wilcoxon signed-ranks test examines differences between matched pairs of scores (i.e. the scores of participants in each of two situations, in the present study). The differences between the pairs of scores are ranked without regard to sign, then to each rank is attached the sign (+ or -) of the difference which it represents, and T is determined as the smaller of the sums of the like-signed ranks. If the direction of difference between scores in two situations is consistent, then T will have a low numerical value: if the direction of difference in scores varies among participants for the situations compared, then T will have a relatively high numerical value. The significance of T is determined by reference to a table of critical values (Siegel, 1956, p.254).

Where comparisons were made of three related samples the Friedman two-way analysis of variance was used (Siegel, 1956, pp.166 - 172). For this test scores are cast in a two-way table, the scores in each row (i.e. for each subject or for related participants) are ranked, and the sum of ranks for each column (i.e. for each situation in the present case) is calculated. If there is no consistent relationship between situations, the column totals will be similar; if there is a consistent relationship over all subjects, then the column totals will themselves be clearly ranked. The degree to which any pattern of column totals differs from a chance distribution can be assessed using Friedman's formula:

$$\chi_r^2 = \frac{12}{Nk(k+1)} \sum_{j=1}^{k} (R_j)^2 - 3N(k+1)$$

In the present study N = 12 and the significance of χ_r^2 was determined by reference to a chi-square distribution where df = 2 for a three-situation comparison.

For all statistical testing, $p < .05$ was set as the minimal level of significance at which differences would be accepted as more than chance occurrences. A two-tailed test was used to determine the level of significance of scores obtained from the Wilcoxon or Friedman measures.

CHAPTER 4: LANGUAGE BEHAVIOUR IN HOME SITUATIONS

Overview. Verbal behaviour was sampled in five situations within the home setting; mother-child, father-child, parents-child, other adult-child, and child-child. The general characteristics and patterns of language are discussed in the context of the major categories into which verbal behaviour was divided. Extracts from the recorded interactions are used to illustrate points made in the discussion.

4.1 Introduction

Language behaviour in the present study was sampled under conditions involving the subjects in interaction with several different persons: mother, father, another adult, and another child. Thus, the situational framework for observation was based on the participants rather than on the content of the language activity (e.g. playing a game) or on specific periods of the day (e.g. breakfast interaction, bedtime discussion). The timing of the interactions and the content was left to the participants to decide and, as a consequence, interactions occurred at times when adults or children normally talked to each other (e.g. after school, at bath time) about topics of mutual interest (e.g. model making, the school gala, holiday activities).

The description of language under the various home conditions presented in this chapter does not focus solely on the verbal behaviour of the child subjects but considers the characteristics of the language used by all participants. Describing language behaviour in this way has the advantage, on the one hand of preserving the unity of the communication act, and on the other hand of providing indicators as to why particular kinds of child language behaviour were frequently or infrequently used, as the case may be.

The same basic format is used for describing and discussing the samples of language obtained in the five types of home situation. For each situation, discussion occurs under the following headings:

i) patterns of verbal behaviour,
ii) initial structuring,

iii) initial questioning,
iv) responses,
v) acceptance-evaluation,
vi) probing,
vii) sustaining, and
viii) episodes.

Examples from transcripts are used to illustrate points made in the discussion and in the body of the text the median is used as the indicator of central tendency. The material has been organized to highlight, from a descriptive perspective, what appear to be important characteristics of the verbal behaviour samples. The statistical significance of similarities and differences noted in this chapter will be discussed in Chapter 6, which summarizes the various aspects of verbal behaviour described and discussed in Chapter 5 as well as in this chapter.

4.2 Mother-Child Situation

Patterns of verbal behaviour. In the mother-child situation approximately 20% of verbal moves related to the initiating of episodes, 15% to sustaining episodes, 40% to responding moves, and 5% to probing questions. The remaining 20% of moves was concerned with acknowledging and evaluating other verbal behaviours. However, the participant profiles (Fig. 4.1, p.267) indicate not only the general similarity in patterns of verbal behaviour between dyads, but also the markedly different verbal roles mother and child play. The contrast between the subject and mother profiles tends to minimise the individual differences that occur within the two groups and these should not be lost sight of. Nevertheless, the children were clearly responders and the major proportion of their moves were of that type (Mdn 67%). On the other hand, mothers managed the conversational exchange through their use of questions (initial, probing, and sustaining) and other sustaining moves. For most mothers responding was not an important verbal behaviour (Mdn 17%).

Although initial structuring and initial questions accounted for about one in five verbal moves, most episodes started with either a question (or questions) or a statement, and only 15% of the episodes began with a combination of structuring and questioning

moves. Where statement and question did initiate an episode the question was often an opine which was frequently tagged to the end of the statement. Occasionally an initial statement led to a question requiring a substantive answer.

006-13-3
Preparations for a barbecue.
Mother: I'll have to get some steak in so we can have some steak and corn. What else do we do?
Richard: Eggs.

Initial Structuring (Table 4.3, p.269)[1]. Mothers tended to make more of the initial statements (Mdn 59%) than the children, although this type of move was more evenly shared than was the case with other major categories of verbal behaviour. Substantive statements accounted for at least 80% of all initial structuring moves (Mdn 94%). The procedural move was used less frequently (Mdn 7%) and was more a mother move, used by all mothers but by less than half the children.

The preponderance of substantive statements compared with procedural moves is best explained by considering the nature of the verbal exchanges in the mother-child dyads. In most cases mother and child were either discussing forthcoming events or reminiscing about experiences that had occurred recently.

105-14-7
Joanne's mother introduces photo albums into the conversation after they had been discussing cameras.
Mother: Well what I'm going to do is I'm going to get you a - - - photo album each. Of you. And you can each put in your own - - - - photos of interest you know. 'Cause Mary got one today, of her and Phillipa in the garden at Sarah's house. So I thought I'd buy you each an album. Just a little album. And whatever photos come along, school ones or other ones, you can put in, with

1. Tables 4.1, p.268 and 4.2, p.268 are included as examples of the manner in which data was collated following the initial analysis of computer sheets.

those stickers, you know? Don't you think that's a good idea?
Joanne: Yes.

The need for procedural-type statements seldom arose in the context of most discussions, but where they did occur it was usually as a consequence of an activity that mother and child were engaged in.

105-14-1
Joanne and her mother making a sand saucer.
Mother: Is it s- just make it smooth here - - - - Okay - - - - That's fine. Okay now put them round - - - -
Joanne: I'll - - - need ra rather a lot so I'll put other flowers in between.

Initial Questions (Table 4.4, p.270). Mothers asked nearly all of the initial questions (Mdn 93%), and most of the questions asked by mothers and children were memory questions (Mdn 53%) and opines (Mdn 40%). The heavy use of these two types of question reflected, perhaps, the substantive content of the verbal exchanges. Sharing experiences and recalling pleasant events can be done without recourse to an analysis or evaluation of the situation.

101-14-3
A new bathing suit.
Alison: When are we going to get my two piece?
Mother: Oh-h!! We'll have to have a look around first and see if we can see a nice one.

005-11-3
The birthday party.
Mother: What did you give her last year?
Simon: Um I gave her I think that we a note pad.

The occasional initial question was asked that challenged the child to think.

001-14-2
Consider the time Mark's mother was discussing the suitability of some T.V. programmes.
Mother: And I I don't even think I don't find it even very entertaining to watch people

shooting people. Do you find it entertaining?

Mark: Well there there's only there's only quite a few reasons why I like it - - - - and - - - - I think the main reason is 'cause I like Poncho. He's he's a li he's a funny little guy.

However, as only 3% of all initial questions asked in the mother-child situation called for thinking beyond a recall level, there were not many opportunities for the child to demonstrate his ability to reason.

Responses (Table 4.5, p.271). Not only did children make at least 50% of all responses (Mdn 75%) but the nature of mother and child response moves was quite different. Children answered and mothers reacted. Most of the mother's moves were one idea and short reactions and these accounted for approximately 20% of all response moves. Although children also reacted, no child used a higher proportion of reactions than his or her mother. For three-quarters of the children yes/no and short answers were the two major types of response move (Mdn 43%).

Of the four major response categories, answer-initiations occurred least frequently (Mdn 8%) and although there were opportunities for children to add to their answers they did not usually take this type of initiative. When they did, however, it was sometimes difficult to stem the flow.

105-11-4
Discussing a film Joanne and her sisters had seen.

Mother: What was it about?

Joanne: It was about a man and he looked after animals -

Mother: Yes he -

Joanne: He was good -

Mother: He was a doctor wasn't he?

Joanne: Yes and he could um understand animals. He could even um make the animals' sounds. Just like the animals.

Mother: Yesss.

Joanne: And um he went um and visiting to find ah the enormous snail and guess what? It was enormous it was about up to

the sky.
Mother: Oh goodness.
Joanne: He had to um knock on the shell and one time there um the snail didn't even hear.
Mother: And could he talk to it?
Joanne: Yes.

Certain characteristics of the response pattern obviously derived from the nature of the questioning behaviour. For example, opines were heavily used as initiating and sustaining questions and thus the high proportion of yes/no responses could well be anticipated. Similarly, the very low incidence of mother answers was a direct consequence of the small proportion of questions asked by children.

It was in the occurrence of reactions that a spontaneity of verbal exchange emerged, and since reactions accounted for approximately one-third of all responses (Mdn 35%) interchange beyond a question-answer pattern was quite marked. Through reaction, a listener could take the initiative and become actively involved in the verbal interplay. Reactions were often made to a statement or previous response, but in some cases a 'chain-reaction' developed with participants reacting to each other's comments.

002-13-9
Philip and his mother have problems deciding just how many crackers really are in the packet.
Mother: Look. There's lots of them.
Philip: There's fifty in there.
Mother: There'd be more than fifty.
Philip: No there's fifty in that one and there's fifty here.
Mother: Oh I see, yes, I I think there might even be more in that, might be two hundred - - - - There's an awful lot anyway.

Response moves were also characterized by their brevity and in all but two dyads lengthy and extended responses accounted for less than 10% of all moves (Mdn 7%). Where such moves did occur they were often like monologues recounting an experience in detail.

106-11-1
Barbara is encouraged to keep going by her mother when she asks her about the day at school.
Mother: What did you do?

Barbara:	Well - - - - um we had sports -
Mother:	Mmm.
Barbara:	- and - - - - we had sports and well um you said that I couldn't go to sports because I was being sick and I coughed -
Mother:	Mmm.
Barbara:	- and so I stayed home and did a picture. Stayed in the classroom sorry -
Mother:	Yes.
Barbara:	- and did a picture. And I drawed a rubbish bin about ten inches or so -
Mother:	Mmm.
Barbara:	- and I borrowed the teacher's felt and wrote 'In here' and then I stuck Oh! before that and then I stuck all paper around it and stuck a white thing here and the glue. And you can see the glue now -
Mother:	Mmm.
Barbara:	- and for a stone and then coloured it in and then by the pathway I drawed I put I went out and got some grass, sticked it on, and that's on the piece of paper. Stuck on there and it's just stuck on.
Mother:	Mmm.
Barbara:	(and so on ....)

Acceptance-Evaluation (Table 4.6, p.272). Mothers made approximately two-thirds of these moves (Mdn 68%), and the only move used by all participants was the simple accept which accounted for at least 65% of this type of verbal behaviour (Mdn 77%).

The simple accept seemed to perform a supportive function, indicating to the speaker that the listener was still attending to him. The frequency and positioning of the move, in relation to the substantive content of the message, suggested the listener was attuned to the flow of verbal behaviour and was responding, at the very least, to natural pauses as signified by stress, intonation, and the like.

104-13-2
When Margaret tells about a story she has written in school on "Guy Fawkes" Mother keeps her going.

Margaret: The title is called - - - "A Night Full of Light".
Mother: Mmm.
Margaret: And um I write about what happened last night -
Mother: Yes.
Margaret: - about Daddy coming home from Matamata with some fireworks.
Mother: Yes.
Margaret: And - - - - um - - - - I started with 'Last night was Guy Fawkes'.
Mother: Yes.
Margaret: And - - - Daddy - - - um (Mother cuts her off here to ask a question).

The other major move was the accept repeat (Mdn 11%), used with greater frequency by mothers than children and by all participants except one.

Of all the acceptance-evaluation moves used, those that indicated evaluation of a preceding verbal move comprised a small percentage (Mdn 9%) and they tended to correct rather than praise. However, although praise was sparingly given, harsh criticism was even less frequent, and aversive comments were made in only two of the dyads, where they accounted for less than 1% of all acceptance-evaluation moves. (This may, of course, be an artifact of the recording situation).

Probing (Table 4.7, p.273). In all but one dyad mothers made at least 70% of all probes (Mdn 91%), and for mother and child alike the clarification was the major probing move (Mdn 81%). In most dyads prompting and probing for critical awareness by mothers accounted for few probes (Mdns 3% and 7% respectively). None of the children prompted, and only one-quarter of them probed for critical awareness.

The high proportion of probing questions asked by Richard (64%) was not typical of the probing behaviour of the other children but the interchanges he had with his mother were interesting reversals of the "mother question-child answer" pattern.

006-11-2
Richard and his mother have been discussing the use of chlorine in swimming pools and mother is explaining why there was a shortage of chlorine cylinders at that time.

Mother: (Gas chlorine) comes from Australia on big ships in big cylinders and when you know when the weather got rough remember Dad saying that the chlorine they threw the cylinders overboard. And that's why they can't get them at the moment.
Richard: Can't get what?
Mother: Gas chlorine because uh -
Richard: What?
Mother: - the weather was rough out at sea and the men threw them off the top of the ship.
Richard: Why?
Mother: Because it was too dangerous carrying it.
Richard: Well what would happen?
Mother: Could explode. Because they carry other dangerous cargo underneath in the ship's hold so they throw the -
Richard: Well how did they get -
Mother: - other one over.
Richard: - the cylinders up from the bottom?
Mother: They don't. They carry them on the top of the ship so that if it gets rough they just untie them and throw them over.

For the most part, however, it was the mothers who probed and the children who answered, although the answer was not always what might have been expected nor the seemingly "simple" question so easy to answer.

104-12-4
The new bike.

Margaret: And then I wanted to paint it red.
Mother: Why red?
Margaret: Oh! Because it reminds me of oh yes that's right I went to the shop and then I saw a pretty colour red and I wanted to paint it red.
Mother: Mmm - - - - Like a fire engine?
Margaret: No not like a fire engine. Like some other bikes.

105-11-4
On some occasions it is quite painful to get the answer you want as Joanne's mother finds out.

Mother:	Where did we go - - - to see this film?
Joanne:	Umm.
Mother:	We drove - - - - ?
Joanne:	To town.
Mother:	Yes!

Sustaining (Table 4.8, p.274). Mothers also dominated this type of verbal behaviour (Mdn 80%). Two moves, the substantive statement and opine question, together accounted for at least 60% of all sustaining behaviour (Mdn 81%). When children used sustaining moves they tended to make substantive statements (Mdn 16%) whereas mothers asked a great many sustaining opine questions (Mdn 39%). Three other moves were used by all or most mothers - the comment, rhetorical question, and answer own question - but there was considerable variation in the use of these moves by any one mother (Mdn 15%). However, through sustaining behaviours mothers continued to exert the control they had established by their dominance of initiating and probing moves.

Episodes. A number of other features of the mother-child interactions do not show in an analysis of the type of verbal move used. Generally the verbal exchanges moved along at a fast pace (Table 4.9, p.275) with approximately one move every three seconds. The participants were certainly not gabbling, and indeed in many instances there were a large number of pauses and silent periods. The nature of many of the moves helps explain the rate. Simple accepts, yes/no answers, and one idea and short responses together constituted a substantial proportion of all moves made (52%), and in temporal terms each of these moves was of short duration.

105-12-3
Joanne and her mother talk about a T.V. show Joanne had watched.

Mother:	Is Pollyanna still staying with her Aunt?
Joanne:	Yeah.
Mother:	Is she?
Joanne:	Yes.
Mother:	And did she get into trouble?
Joanne:	Yes. No - yes sometimes.
Mother:	Did she?
Joanne:	Yes.

There were also a number of instances of simultaneous exchange and although these counted as separate verbal moves they occurred concurrently.

103-13-2
Sliding down a slope on a tree branch.

Mother:	That was really quite a lot of fun -
Helen:	Mmm.
Mother:	- You did that for a long time -
Helen:	Yeah you just -
Mother:	- didn't you?
Helen:	- stand on a branch -
Mother:	Yes?
Helen:	- and then you just lean -
Mother:	Forward -
Helen:	- forward -
Mother:	- and just -
Helen:	- like that.
Mother:	- fall.
Helen:	Yeah.

Mothers and children engaged in a great deal of verbal activity and, as well as making a large number of verbal moves, they shifted focus fairly often as indicated by the number of moves per episode (Table 4.9). These shifts did not always indicate changes in a topic which might have been sustained over a number of episodes.

A picture emerged of mother and child reminiscing about pleasurable things they had done together or as a family; discussing forthcoming events, particular trips they were going to make, or holidays they would have. Mothers tended to guide and control the verbal exchange without necessarily dominating and overawing their offspring. While a number of the conversations conveyed the impression of an interview with some quickfire question-answer sequences, there was also a considerable amount of spontaneous reaction to, and encouragement of, what each was saying or had said. While mothers did not praise their children a great deal nor were they critical of what they said and did. However, placed in situations that were more task-oriented, it is likely that verbal exchanges would probably give emphasis to other types of verbal behaviour - direction, instruction, and evaluative-type comments.

4.3 Father-Child Situation

Patterns of verbal interaction[1]. Father and child, like mother and child, played quite different roles (Fig. 4.2, p.276), and for most children the great proportion of verbal behaviour was responding (Mdn 68%), whereas for most fathers responding accounted for less than 25% of all their verbal moves (Mdn 17%).

Fathers clearly questioned, probed, and sustained the verbal exchanges, as their profiles indicate, and thus established control of the interaction. They probably took the initiative through a belief that this was the role they should adopt. For their part, children most likely expected a leading role from their fathers and were quite prepared for this to happen. The leadership role assumed by the father did not necessarily mean the child was incapable of playing other than a respondent role, and there were sufficient indications in the interactions to suggest children were more verbally versatile than their profiles might suggest.

An analysis of the pattern of episode initiations indicated that only 16% of all episodes began with both structuring and questioning moves. As with the mother-child situation, most episodes began with either structuring statements or questions. Whatever the form taken, episode openings provided an interesting array of possibilities, some seeming more effective than others.

C01-23-2
Mark's father doesn't seem to be overly enthusiastic about cubs.

Father: Uh you mightn't find cubs quite as exciting as all the pictures and stories make out. I think you'll find cubs interesting but uh don't don't expect too much. Do you know anybody who goes to cubs?

Mark: Yes.

105-21-6
The gully at the back of Joanne's house is a favoured spot.

Father: You kids seem to love the gully so much. Tell me why?

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1. One of the fathers was unable to complete his father-child interactions hence the blank profiles for Richard. As only the father-child and parents-child situations were affected it was decided to use the boy as a subject for all other situations.

	What what exactly you do like so much down there Joanne?
Joanne:	Because I found this lovely hut down there it's made out of pongas -
Father:	Hmm.
Joanne:	- and everything and it's got steps and it goes higher and higher and when you want to come down there's another path to go down -
Father:	Mm hmm.
Joanne:	(Carries on with her description)

Initial Structuring (Table 4.3, p.269). Although fathers tended to do more initial structuring than the children (Mdns 59% and 41% respectively), there was considerable variation and in three dyads more than 50% of the structuring moves were made by the child. However, irrespective of who used most moves, substantive statements predominated in initial structuring behaviour (Mdn 93%). Procedural statements were made by more fathers than children (10:4) but were infrequently used (Mdn 7%).

Most fathers made more substantive statements than their children, but William and Helen were two children who made many of the initial substantive moves in their respective dyads. In the particular samples taken these two children were deeply involved in the topics they were talking about and became so animated they kept making statements their fathers had to accept, or probe, or react to. In this way they took more of a leading role in the use of initiating statements than was typically the case.

103-22-1
Helen had been to the local Agricultural and Pastoral Winter Show and was excited about the things she saw. She had been talking with her father about the judging of the cows and how they had behaved while being paraded.

Helen:	But the sheep didn't when they were judged.
Father:	The sheep didn't.
Helen:	They didn't.
Father:	What did they do?
Helen:	They kept running all round the place.
Father:	Oh gosh, did they?

003-23-1
William was still excited about Guy Fawkes when he talked to his father about it later the same evening.

William:	I liked it when um the big banger went off.
Father:	You mean that "Mighty Cannon"?
William:	Yeah.
Father:	Well it made a big noise.
William:	I know.

Initial procedural statements accounted for less than 10% of all initial structuring moves in most groups, but for Michael and his father the proportion was much higher (25%). This came about largely as a result of the context in which the interactions took place. On one occasion Michael's father asked him to spell some words, and directions and commands punctuated that interaction. In another exchange Michael was constructing a model during which a considerable number of directions and instructions were also given.

004-22-4

Father:	Ahh - - - - that's going to be - - - you'll just have to be careful because with those matchsticks you might need to bend them too much otherwise they'll go - - - bang - - - they won't stick together.
Michael:	Whhh!!
Father:	No you'll just you'll just have to let them dry a bit I think - - -

Initial Questions (Table 4.4, p.270). With the exception of Simon and Helen, the other children asked few, if any, initial questions and the fathers clearly dominated this form of verbal behaviour (Mdn 93%). Two question types, the memory and opine accounted for most initial questions asked (Mdn 92%) and where children did use questions they were more often than not both or either of these types. Affective, comprehension, and procedural initial questions were asked in more than half the dyads but in most instances each type accounted for less than 6% of all initial questions.

The pattern of questioning behaviour in this situation, particularly the use of memory and opine questions, was very similar

to that noted for the mother-child situation, and most children asked few initial questions in both situations. However, Helen asked 39% of the initial questions in verbal exchanges with her father but only 4% with her mother. This marked difference can be accounted for largely by the interest her father generated, and as a result Helen initiated many episodes, asking questions provoked by her father's comments.

103-24-9
Father had been discussing a film character 'Captain Marvel' he had seen as a boy.

Helen:	- - - Did he have bionic arms and did he have bionic legs? Could he -
Father:	Oh he had -
Helen:	- run fast?
Father:	- oh he had lots of muscles. I don't think he used to bother running because he could always fly you see.

Responses (Table 4.5, p.271). Responding was mainly a child move (Mdn 73%) and the tendency was for children to answer and for fathers to react. Most father moves were of the one idea and short reaction type (Mdn 18%). Children also reacted, but the yes/no, one idea, and short answer were their main response moves (Mdn 52%). Although extended and/or lengthy responses were given in all dyads, in three-quarters of the groups the total for all of these types of move was less than 10% (Mdn 7%).

So far as responding behaviour was concerned, voluntary participation in the verbal exchange was represented by the proportion of responses that were answer-initiations or reactions. While answer-initiations did not comprise a large proportion of all response moves (Mdn 8%), reactions occurred more frequently (Mdn 31%).

105-21-4
Joanne and her father talk about the development that is going on in the gully that their property borders on.

Father:	It means that we can now what? Play down and we are going to put in grass, nice grass-
Joanne:	Yes and also -
Father:	- and you'll be able to play down there.
Joanne:	- and also a swimming pool.

It'll be fun.
Father: That will be lovely.

In general, response moves were short and the majority contained fewer than five ideas (Mdn 92%). However, longer replies gave an indication that brevity was most probably a consequence of the verbal stimulus rather than a response characteristic of the speaker.

005-22-2
Father: What was the pen made of?
Simon: Wood.
Father: Fairly thin wood?
Simon: Yeah.
Father: Uh huh.

005-22-2
Later in the same discussion.
Father: What sort of sideshows did they have? Same sort of thing as at the other Show or different?
Simon: They had an octopus - - - - another kind of thing that you stood on and s uh - - - tried to stand up on because both of them were swinging around -
Father: Mmm.
Simon: - there was um - - - a merry-go-round and just an ordinary ferris wheel -
Father: Mm Hm.
Simon: - and um - - - it and - - - there was Japanese seats with um rabbits things at the top and it was on a slant so it went round. Makes you sea-sick - - - and the Japanese things automatically turn around when you're going around on the other things.

While the child tended to do most of the responding, fathers sometimes found themselves answering a child's question.

005-21-2
Simon: I mean cut it (the tree) into that shape. Would it be hard to do that? Do you think?
Father: I don't know. I've never done it before. I think it might be a nuisance.

Acceptance-Evaluation (Table 4.6, p.272). Although all participants used acceptance-evaluation moves, fathers (Mdn 70%) tended to use twice as many as their sons or daughters (Mdn 30%). The simple accept was the major move used (Mdn 77%) and for children was almost their only type of acceptance-evaluation behaviour. The accept repeat was the other major move, used by all fathers and seven of the subjects (Mdn 12%).

104-21-12

Father:	Who was your teacher down there that taught you?
Margaret:	Miss Hood.
Father:	Miss Hood.

002-22-3

Philip telling his father about a story he has read where the hero returns some stolen money and is given some money in return.

Father:	What would he get the money for?
Philip:	A reward.
Father:	How much is the reward?
Philip:	Um two thousand dollars.
Father:	Two thousand dollars - - - Would you like to get two thousand dollars?

In a third of the dyads there was a much lower proportion of simple accepts than in most of the other groups. This did not indicate, however, a marked increase in evaluative-type behaviours in those groups but rather a higher proportion of accept repeat moves.

Of the evaluative-type moves, more participants corrected than praised but generally more comments of praise than correction occurred. Praise was usually very "low key" and there were very few instances of more "effusive" comments, although Joanne's father was one who showed his pleasure and praised in a very enthusiastic manner.

105-22-11

A sheep study the children had been working on.

Joanne:	I made a picture of -
Father:	Oh well it's just as well -
Joanne:	- sheep right away because the mother um had not being seeing the sheep going with because she was too busy - - - looking after her lambs -

Father: I see.
Joanne: - I've finished that bit I need to. I don't know what else I must do. I've forgotten now but -
Father: Oh well -
Joanne: - if if I'm going to bring it home and then you'll see what it's about.
Father: I'd love to see that. Good. Oh that's lovely.

105-21-6
Joanne and her father talk about string pictures the children had been making to hang on the wall.
Joanne: And then when it's the prettiest you can hang it on the wall.
Father: Oh yes. Oh well that's tremendous. They really looked terrific.

Corrective comments often indicated a simple disagreement with the accuracy or appropriateness of prior verbal statements, and occasionally reasons were given in support. Most corrections, however, were concerned mainly with the substantive content of verbal statements rather than inappropriate or unacceptable behaviour.

002-21-5
Philip takes some convincing about how far away is his birthday.
Father: No we haven't we haven't got a quarter we've got half a month in December.
Philip: Oh.
Father: Because we've got fifteen days haven't we? - - - -
Philip: Yes but it's still - - - oh now I get your point it's really not sixteen.
Father: Yes-s-s-s.

002-24-2
Mark's father doesn't approve of Mark's behaviour in the sandpit and tells him so.
Father: Oh you didn't do that did you?
Mark: Yeah - - - - Only once though. Ha ha.
Father: No it's not funny - - - no I don't want you to do that honestly -
Mark: Okay.
Father: - if that's the sort of game you're going to play in the sandpit I'll take it away.
Mark: Okay.

Father: Mmm.
Mark: But then I'll always be down at Jones's.
Father: Why?
Mark: To play in his sandpit.
Father: Mmm. No we'll find a way around that one don't worry.

Probing (Table 4.7, p.273). At least 75% of these moves were made by fathers (Mdn 93%). Although all but one child used probes, they were generally used infrequently (Mdn 7%). For all fathers and for those children who asked probing questions the probe clarification was the major move (Mdn 80%).

Within the general context of seeking elaboration, probes for clarification often occurred singly and once an answer was elicited the topic frequently changed. Occasionally a series of probes was used to build-up a composite verbal 'picture' of a situation.

002-21-1
Working at home.
Father: What about that hut of yours? Are you going to pull that down do you think? - - - Have you used it at all?
Philip: No I'm going to saw it down.
Father: Why.
Philip: I'm going to cut the branches off so it'll all tumble down and cave in.
Father: Yeah but you won't use any leave any rubbish there will you - - -
Philip: No 'cause you're going to help me.
Father: Why am I going to help you?
Philip: Oooh it's big trees to pull.
Father: Is it?
Philip: And lots of them.

There was considerable variation between fathers in the proportion of probing for critical awareness (Mdn 7%) and of prompting (Mdn 4%). Although probing for critical awareness was a minor behaviour, responses often gave clues as to the type of reasoning children draw on to justify a position they have taken. Sometimes the logic was appealingly simple.

104-23-2
Margaret is telling her father what she is going to buy her mother for Christmas.
Margaret: A garlic crusher.
Father: A garlic crusher?
Margaret: Yes.

Father: Why?
Margaret: Because she wants it most of all.
Father: Does she want that most of all?
Margaret: Yeah.
Father: Oh!

005-21-9
Simon has been talking to his father about landscaping their section and they are discussing the merits of different types of path.
Simon: I mean wouldn't it - - - - be a bit nicer if we - - - um - - - had - - - you know it sort of - - - winding around and concrete on it - - - sort of um a concrete path.
Father: Why?
Simon: Well I think it would look attractive.
Father: Could do.

Other responses to this type of probe were somewhat more circuitous in explicating the reasoning behind the ideas expressed.

104-22-6
Margaret does know what her numbers are even if she has to have a little help from Dad.
Father: How do you know?
Margaret: 'Cause each time you put one greater on it's like tens and ones like we do at school because at school we have an abacus and we put um if we put three te um three little things - - - on a tens column well that will become thirty and if we put another three on the ones column that becomes thirty-one.
Father: Another three on the ones column. Doesn't that become thirty-three?
Margaret: Yep.
Father: You said it becomes thirty-one.
Margaret: Oh no I meant thirty-three.

A probing pattern emerged where children were quite frequently asked to elaborate on a previous response. However, most of the children were not asked very often to justify or to examine answers they had given. Occasionally fathers helped children to respond by prompting them but, for most children this was done very

infrequently, if at all. For their part, children sometimes asked their fathers to clarify a statement made, very occasionally called for justification of a comment, but never helped fathers by prompting them.

Sustaining (Table 4.8, p.274). Sustaining moves were also used much more frequently by fathers than children (Mdns 82% and 18% respectively). Substantive statements and sustaining opines accounted for at least 74% of all sustaining moves in all but one dyad (Mdn 80%). Fathers tended to use more sustaining opines than substantive sustaining moves but substantive sustaining was the major move for children. A number of other moves were used in most dyads (sustaining procedural comment, sustaining procedural question, and the sustaining rhetorical question) but together accounted for less than 25% of sustaining moves in all groups but one (Mdn 17%).

Although three children made 30 - 40% of the sustaining moves in their groups, most of the other children did less than 20% of the sustaining behaviour. Almost all the children's sustaining moves were statements and many were brief, social comments related to the topic opening. Other statements, however, were much longer, perhaps too long, and often inhibited episodes that had just started to develop.

102-22-4

Tracey:	Joanne's birthday is on the second of November.
Father:	The second?
Tracey:	Mmm.
Father:	Mmm. Oh yes - - - - Mmm. Oh well.

103-24-10

Helen seizes on a comment her father has made about films on Superman he saw as a boy.

Helen:	He once hey you see there was this horrible man and he he and he and then he he took this um - - - this boy away and he this boy was only about ten and he and he tied him up on the railways and there was a train coming and Superman looked down and he saw the train coming and the train was um only actually inches away from this boy and

	he and he untied as fast as he could and grabbed him away - - -
Father:	Gee!
Helen:	And he took him away and he flied.
Father:	Good heavens - - - -
Helen:	Gosh it was quick I couldn't understand my eyes - - -
Father:	Mm - - - -

Her last statement leads Helen off on to a new direction and Father gets more involved in the exchange.

Sustaining opines were used frequently by fathers and Margaret's father did little else. However, his use was typical of the way opines occurred in many exchanges. Sometimes the opines appeared in chains and in this pattern the substantive flow of the conversation often seemed to "mark-time".

104-24-7

Father:	Would you like to go to Disneyland one day?
Margaret:	Yes.
Father:	Would you?
Margaret:	Yes.
Father:	And take Kelvin?
Margaret:	Yes.
Father:	And Natalie?
Margaret:	Yes.

104-24-5

The school gala is coming up. Margaret tells her father she will get some money from her mother. They seem to go over the same ground.

Father:	Oh from Mum. Do you think Mum will give it to you?
Margaret:	Yep.
Father:	You think she will?
Margaret:	Yep.
Father:	Oh that's not so bad then is it?
Margaret:	No.

Episodes. The rapid verbal exchange that characterized the mother-child situation also showed here (Table 4.9, p.275). As in the previous situation a move was made approximately every three seconds. The reasons advanced in the discussion of the rate for the mother-child situation seem to hold equally for father-child exchanges, that is, the high proportion of very short moves and the incidence of simultaneous exchanges. If the verbal exchanges

were characterized by a lot of talking in a short time they were also characterized by many shifts in focus and the average episode contained around six verbal moves (Table 4.9). However, as with the mother-child situation, themes were often sustained across a number of episodes. As might be expected, discussion of the same family interests and events occurred in both mother-child and father-child situations. However, fathers and sons did seem to discuss activities such as model making, playing games, and sport to a much greater degree than occurred in either the mother-child situation or in the father-daughter interactions.

4.4 Parents-Child Situation

Patterns of verbal interaction (Fig. 4.3, p.277). Unlike the two previous situations, the parents-child interactions involved three persons yet, as the participant profiles show, the child still played a largely responding role (Mdn 65%) asking very few initial questions, doing little, if any, probing, and using few sustaining moves. Parents did not individually respond more than their child and for most parents their responses were considerably less (Mdn 26%).

Within groups, parents showed similar patterns of verbal behaviour and between them maintained an effective control over the verbal exchanges. In only Simon's triad are the participant profiles sufficiently similar to suggest parental dominance was not occurring in the same way or to the same degree as in the other groups. Therefore, it seemed, in most triads, that the addition of another adult had not altered the basic dynamics of the previous situations but simply divided the control function between the two adults with the child still playing a less active respondent role.

The pattern of initiating behaviour was similar in this situation as in the mother-child and father-child situations. Child and adults tended to share the making of initial statements, but this type of verbal behaviour does not necessarily allow the initiator to maintain control of the exchange unless supporting questions and/or follow-up probing and sustaining moves are also used. The participant profiles show that children did not use

these types of move with any frequency. Thus, although they may have initiated episodes through structuring statements, children did not follow up by using moves to sustain this initiative.

104-33-5
A busy day at school.

Margaret:	And then we did um the 'Cinderella' we had to finish off those.
Mother:	What was Cinderella?
Margaret:	Oh the pictures and models that we had to do about them - - - to enter them in the competition. Then we finished them off but first we um - - - we - - - we had dressed them and then -
Mother:	Where did you have to send them?
Margaret:	Oh, I don't know. Mr Johnston's doing that - - - - and tomorrow's the big day 'cause they're going to be judged.
Mother:	Are they?
Margaret:	Yes.
Mother:	Where are they being judged?
Margaret:	Um I think at Founders Theatre but I don't know.

In the context of the type of verbal moved used, episodes were initiated more frequently by either questions or statements, and only 14% of all episodes began with a combination of statement and question. This percentage was slightly less than the corresponding figures for the mother-child and father-child situations.

Initial Structuring (Table 4.3, p.269). Mothers and children (Mdns 43% and 33% respectively) tended to do more initial structuring than fathers (Mdn 25%), but there was much more variability among children in their use of initial statements than among the parents. Substantive statements were made by all participants and this was the main move, accounting for at least 65% of initial structuring behaviour (Mdn 93%); mothers and children tended to use this type of move more frequently than fathers.

Procedural structuring was more a parent move, used by all fathers, most mothers (8/11), but less than half the children. Mothers (Mdn 5%) and fathers (Mdn 4%) used procedural structuring moves with similar frequency. Where a group's initial structuring

involved a larger than usual proportion of procedural statements, the moves often characterized specific activities, which called for instructions, directions, and the like, rather than indicating a tendency in general verbal behaviour.

005-32
Simon and his parents were playing a game of cards.
"Wait a minute, we'll get those afterwards."
"Your deal."
"Your lead."
"It's your turn."
"Three to Simon."
"Take two points."

002-32
Philip's family on Guy Fawke's Night.
"Put it in there."
"Be careful."
"Do it quick, it won't hurt."
"Look!"
"Hang on to the end of it."
"Twirl your name, go on."
"Don't put it near the sky rockets."
"You do it."

In most interactions, the few initial procedural statements that occurred usually served to focus attention on events of interest within the immediate environment.

004-34-6
Watching buses leave the camping ground.
Father: See look at that Michael. There she goes.
Mother: There it goes. It's going out the gate.
Michael: Yeah.

002-34-2
A Sunday afternoon drive in the car.
Mother: Look they've built a new wall along there - - - that concrete block wall.
Philip: Ha Ha - - - I wonder why they're putting it there?

Initial Questioning (Table 4.4, p.270). Asking initial questions was clearly an adult behaviour and few were asked by children (Mdn 8%). Memory and opine questions were frequently used, and together accounted for more than 75% of all initial questions (Mdn 91%). Although there was no question-type used by all participants, memory and opine questions were asked by all

adults. The trend in most groups was for more memory than opine questions to be asked and for mothers to ask more initial questions than fathers. Procedural questions were asked in all groups, but for the most part with minimal frequency (Mdn 4%). While a number of other types of question were asked, only a few participants were involved, and in none of the groups did these other types together account for more than 10% of all initial questioning.

The pattern of initial questioning behaviour, particularly the use of opines and memory questions was similar to that noted in the previous situations, and was probably quite adequate to meet the immediate information needs of the groups in the particular samples taken.

002-34-6
Discussing bicycles during a Sunday afternoon drive in the car.
Father: What would you do with a Raleigh Twenty?
Philip: Ride it.

001-32-2
Mark and his parents had been talking about the weekend at a Camp. Mark had really enjoyed riding a mini-bike.
Mother: And was that was that the best thing you did over the weekend?
Mark: Yeah.

Very few questions were asked that called for a closer examination, analysis, or interpretation of information and, as suggested above, this was no doubt related to the substantive content of discussions and the purposes they served. Where a triad, in comparison with other triads, showed a disproportionate use of a certain type of question, it would be inappropriate to see any general significance in this difference without first taking cognizance of any special circumstances relating to the context within which the verbal exchange occurred. For example, on a couple of occasions, Simon and his parents were engaged in games activities while they talked and during this asked many procedural questions of one another. These questions complemented the unusual proportion of procedural statements made by this same group.

Some questions, however, did receive replies that went beyond

the immediate recall of information or a simple yes/no answer. Usually this was a direct consequence of the framing of the question, but occasionally subsequent probing elicited additional yet relevant information.

001-34-3

Father:	Have you been playing with them (other children) or have you enjoyed having kids here or doesn't it matter very much? - - - -
Mark:	I enjoy having them here. It's nice to have have somebody to play with uh other than Craig - - - and Karen.

105-33-6

A competition the children at school have entered.

Father:	Do you think you might win?
Margaret:	No.
Father:	Why not?
Margaret:	Because.
Father:	Because what?
Margaret:	Um - - - I didn't put very much into my into my um picture.

Responses (Table 4.5, p.271). Most responding was done by the children (Mdn 61%)[1] and their most frequently used moves were the yes/no, one idea answer, and short answer (Mdn 41%). Although parents reacted rather than answered and used mainly one idea and short reactions, many of the children reacted as frequently as one or both of their parents. Within groups, therefore, most response moves were one of four types; yes/no, one idea reaction, short reaction, and one idea answer. These four types accounted for at least 70% of all response moves (Mdn 80%). Lengthy and extended replies comprised less than 6% of all the responses made in most groups.

The low frequency of adult answers suggested that adult questions were directed mainly at the child and most parent responses were reactions. Of the four major categories of response moves, reactions occurred most frequently (Mdn 44%). With three people involved the verbal exchanges sometimes became quite "entangled" even though comments complemented one another.

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1. Mothers (Mdn 24%) tended to use a higher proportion of responses in their groups than fathers (Mdn 18%).

105-33-4
Joanne and her parents discuss games they play in the gully behind their house.

Father:	Well did you fill it with water then? Make a dam.
Mother:	No well -
Joanne:	Yes.
Mother:	- you see what they -
Joanne:	And then we -
Mother:	- they poured -
Joanne:	- filled it with -
Mother:	- the water -
Joanne:	- water.
Mother:	- from the top of the gully.
Father:	Yeah.
Joanne:	Yeah and it -
Mother:	Down this channel.
Joanne:	- made a stream -
Mother:	Right down -
Joanne:	- down there.
Father:	Oh-h-h-h.
Mother:	- the steep -
Joanne:	And it -
Mother:	- part - - - - and it landed up - - -
Joanne:	In that -
Father:	I see.
Joanne:	- um round part.

Sometimes content that developed through reacting sequences seemed trivial and inconsequential but perhaps this is the essence of a close relationship; the ability to share and enjoy and take pleasure from the "small" moments of life.

001-34-6
Mark had been talking to his parents about a story he had read.

Mother:	Do you know what a gorse bush is like?
Mark:	Yes. I've fallen in one.
Father:	Ha ha.
Mother:	Well you know what a gorse bush is like then.
Mark:	Yes.
Mother:	Yes.
Mark:	It is sore.
Mother:	When - - - Ha ha ha.
Father:	I don't think the gorse bush gets very sore.
Mother:	Ha ha ha, I think you get sore, ha ha .
Mark:	Yes.

004-32-9
Michael had seen a large pig at the local Show.

Michael:	It was a um from there to there.

Mother: Oh gosh that would be a big one. That would go good in my freezer - - - - wouldn't it?
Michael: Be bigger than the freezer.
Father: We'd have lots of bacon then.
Mother: Lots of bacon and pork then.

The very low frequency of answer-initiations (Mdn 5%) suggested that, if it was forthcoming, supplementary information relevant to the specific focus of the topic was elicited through direct probing or sustaining moves rather than from the voluntary additions by members of the group. Where an answer-initiation did occur it was, in most instances, the same person giving additional information after verbal moves by other persons.

102-34-1
Father: What did you do this morning?
Tracey: Oh, we did - - - um some jobs - - - And -
Father: And what else?
Tracey: Oh yeah, that's right we um - - - we took the um Church News around the roads.
Father: Oh-h-h, I see.
Tracey: And we talked to Mrs Jones.
Father: Yes.

The low proportion of longer responses (Mdn 3%) is most likely explained by the content of the exchanges which did not really call for a consistent pattern of extended replies. However, a child's probing sometimes provided parents with opportunities to draw on past experiences in order to reinforce the points they were making.

001-31-6
Some problems arise for Mark as he talks about extending his tree hut.
Father: Well Mark I'm a little bit scared about you going right out to the end of the branch.
Mark: Why?
Father: Because the branch isn't so strong out there - - - - and it's an awful - - - - awful long way to fall. If you should fall out of the tree there because the ground drops away quite steeply. So I'd rather you weren't climbing all the way out there.
Mother: It's a very big drop.

005-31-11
Simon is worried about arriving late for a birthday party and questions his mother about it.

Mother: Mmm. Well remember at your party - - - when -
Simon: Oh yeah Peter was late -
Mother: Mmm and last year when they were to come straight after school or at least by half-past three which gave them time to go home and change, some of them still didn't get there till ten to four. So I wouldn't worry.
Father: You won't miss much party love.

Children's longer responses were often difficult to follow nor was the meaning always as explicit as it might have been. It seemed as though parents may well have "chunked" the essential meaning from what was said, probably because they were familiar with the background experience. Therefore, they did not necessarily indicate to the child an expectation of clarity in the verbal expression of ideas.

103-32-6
Helen knows exactly what a Melodica is like.

Helen: And um they're just the same as a piano accordion has and it's got this little black mouth piece and you put it in your mouth and then you just blow on the mouth piece and it makes a noise and then and then if you press the keys it makes different sound it's just like the piano except it's a Melodica.
Mother: Mmm.

Acceptance-Evaluation (Table 4.6, p.272). It was not so easy to distinguish between parents and children in their use of this type of behaviour as it had been for other verbal categories. Mothers, fathers, and children (Mdns 34%, 30%, and 29% respectively) showed similar patterns overall. In some groups mother did more acceptance-evaluating than father or child, in others it was the father, and in some the child.

The most frequently used move by each group and the only one

used by all participants was the simple accept (Mdn 80%). Children and mothers tended to use the move more than fathers but there were wide variations in use within groups. The other move to be used in all groups, and by all but one participant, was the accept repeat (Mdn 12%). However, this move tended to be used more by parents than children and was often followed by questions, statements, or praise.

002-34-3
Making puppets at school.
Philip: But mine was mine was the best.
Father: Oh-h-h!
Philip: Was so.
Father: What was it of?
Philip: A robber.
Father: A robber. What sort of robber?

004-31-8
Michael talking about how fast his model boat can travel.
Michael: About one.
Father: One what?
Michael: One mile - - - kilometre.
Mother: Kilometre. Mmm. That's fast enough.

002-31-10
What does that transfer say?
Mother: The other way - - - so you're reading it the way it'll go on the shirt.
Philip: Tony. Ha ha.
Father: Tony. That's right.

Of the more evaluative comments, praise was used infrequently by less than half the participants. On the other hand, correction-type moves (Mdn 5%) were made by more than three-quarters of the participants, and group use of these moves was more frequent than praising (Mdn 3%).

As with the two previous situations, the more evaluative-type moves generally comprised less than 10% of all acceptance-evaluative behaviour. Praising comments tended to be very matter-of-fact.

105-34-11
Polar bears.
Mother: And and all their fur keeps them warm - - -
Joanne: Yeah.
Mother: Mmm.
Joanne: So he doesn't feel cold in the

water.
Mother: Yes that's right.

Although in most instances simply correcting a response or drawing attention to an error was sufficient to deal with the problem, an explanation was sometimes given in support.

003-32-3
Swimming in sea water.
William: And in the salt water it drags you down.
Mother: Oh-h not really.
William: If you don't wear Speedos.
Mother: Not really though dear.
Father: No it doesn't. The salt water makes you makes you more buoyant.
William: Yeah I -
Father: It should make you float in the water.
William: Yeah.

104-33-5
Writing words with 'x'.
Margaret: And I thought of 'hox' but I thought -
Mother: Hox?
Margaret: Yes.
Mother: What's that? - - -
Margaret: Cow - - -
Mother: The first I've ever heard of a cow called a hox.
Margaret: Ha ha ha.
Father: H-O-C-K-S.
Margaret: No, H-O-X.

Probing (Table 4.7, p.273). Probing tended to be an adult behaviour and, with the exception of Simon, probing by children accounted for less than 21% in their groups (Mdn 13%). Most probes called only for clarification (Mdn 82%) and this was the main move for both adults and children. It was also the only move used by all parents. While probing for critical awareness was done in most triads (Mdn 6%), in only three of them did all participants use this type of probe, and these same three groups were also the only ones where this type of move accounted for more than 20% of all probes. Prompts were given only by parents, though not all, and were used infrequently (Mdn 6%).

The only clear pattern discernible in probing behaviour was adult dominance of the moves. Beyond that, in some groups the mother used more probes than the father and in other groups the

reverse was the case. In only William's triad did mother and father use the same proportion of probes. Although probing for clarification constituted the major proportion of this type of behaviour, probes for critical awareness, infrequent as they may have been, provided insights into children's reasoning about their actions and about the phenomena of life.

104-33-6
Margaret isn't hopeful about success in a colouring competition the children at school entered.

Father:	Do you think you might win?
Margaret:	No.
Father:	Why not?
Margaret:	Because um - - - I didn't put very much into my into my um picture.

001-32-4
After a weekend at Camp Mark is enthusiastic about mini-bikes.

Mother:	What what was so good about them? Like you've got a two-wheeler bike out in the garage -
Mark:	Yeah, but that -
Mother:	- and that would be just as good.
Mark:	- hasn't got a motor.
Mother:	What difference does a motor make?
Mark:	A motor makes it move faster.

Sustaining (Table 4.8, p.274). Parents dominated the sustaining behaviour (Mdn 40%)[1] and their children made less frequent use of sustaining moves (Mdn 23%). Opine questions and substantive statements accounted for the majority of sustaining behaviour (Mdn 80%) and these two moves, with rhetorical questions, were the only ones to be used in every group. However, rhetorical questions were not used by as many individuals nor with the same frequency (Mdn 6%). A number of the other sustaining moves were used in most of the groups[2] but, with a few exceptions, any one type accounted for less than 5% of all moves.

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1. This represents the range for individual parents and not combined parent totals for each group.

2. Sustaining procedural statement (10/11), answer own question (10/11), comment (9/11), and sustaining procedural question (8/11).

Although sustaining substantive statements (Mdn 38%) and sustaining opines (Mdn 40%) were used with similar frequency overall, the moves tended not to be shared within any one group but either more opines were asked or more substantive statements made. In each group one person tended to use substantive sustainers more frequently than the other two, and this person was either mother or child rather than father. However, the use of sustaining opines alternated between mothers and fathers with few, if any, being asked by children.

Episodes. The fast rate of verbal exchange noted in mother and father situations was also maintained in the parents-child situation (Table 4.9, p.275) with a move approximately every 2.5 seconds. The extremes between groups was much more noticeable in this situation than in the previous situations. In some interactions few moves occurred during a minute because one person dominated with one or two lengthy moves. In other instances there were a number of short pauses and these accumulated to occupy varying proportions of a minute's interaction.

101-33-1

Mother:	Don't you have to do a story for a test soon?
Alison:	Oh-h we've already done it. We did it to-day.
Mother:	And what was the story about?
Alison:	Well in the - - - middle of the term it was "On the way home from school I met a giant" and this - - - this um - - - ti this term it is - - - uh - - - about a witch. It's either - - - a story that you've heard about a witch or a make-up story.
Mother:	And have do you have to give the witch a name? - - -
Alison:	Not it you - - - not if you - - - can't - - - think of a name or you don't have to - - - - - - I -
Father:	Have you -
Alison:	- wrote -
Father:	- finished it?
Alison:	Yes.
(Minute ends -	8 moves have been made).

In other interactions the verbal exchange moved along at a rapid pace and a considerable amount of verbal behaviour occurred within a minute of interaction.

003-34-2

Mother: What songs were they singing?
William: He sang the 'Rhinestone Cowboy', 'Galveston'.
Mother: Did he? And 'I'm a Country Boy'? No, what's that song they've got they've got out -
Father: Yeah, 'I'm a Country Boy'.
William: Yeah.
Father: 'Amazing Grace'. He played his bagpipes.
Mother: Did he?
William: Yes.
Mother: Oh-h that's super.
Father: And um - - - and he played that time with the um it was the best banjo player in the world.
William: Yes.
Mother: That young boy?
Father: Um, Gal - - - Garth Russell isn't it?
William: No Garth - - - Jackson.
Father: Garth Jackson, is it?
William: Yes.
Mother: And what did you think of Bill and Boyd? Did you like them?
William: Yeah.
Father: They were good.
Mother: Did they sing a funny song about um - - -
Father: Yeah.
Mother: What's that song they sang the other night? - - -
Father: Um 'Throw a Log on the Fire'.
Mother: Did they -
William: Yeah.
Mother: - sing that song did they?
Father: And -
William: Yeah.
Father: - and they've got another one -
William: 'The West Virginian' -
Father: - what do they call it?
William: - and they um - - - sing that.
Father: They call it 'The Nu The Nut'.
William: Yeah.
Father: Somebody's a nut - - - and they do all do all these funny -
William: Mmm.
Father: - actions and songs and that - - -
William: Yeah.
Mother: And what did you have for tea at the Woolshed?
William: Um um American Hot Dog.
(Minute ends - 38 moves have been made).

As in previous situations, there were many shifts in focus although a theme could be sustained over a number of episodes.

An episode contained approximately 6.1 moves (Table 4.9). Families displayed a diverse range of interests; ballet, tree huts, model boats, Brownies, and horses; with involvement in major projects (building a bach, Playcentre movement), and support for occasional events (school gala, Guy Fawkes). These activities were exemplified in the discussions they had and the animation with which they reacted to and questioned one another.

4.5 Other Adult-Child Situation

Patterns of verbal interaction (Fig. 4.4, p.278). As noted in other situations, the pattern of adult control, through dominance of questioning and sustaining behaviours, was found in these interactions as well. If anything, this tendency was more pronounced in the other adult-child verbal exchanges. Thus, the dichotomy between child and adult verbal roles, that has been the main general characteristic of all situations discussed thus far, was also a feature in the other adult-child setting. Most of the child's verbal moves were responses (Mdn 74%), and initial structuring was the only verbal behaviour which children and adults used in similar proportions (Mdn 9% in both cases). As far as the child was concerned, the sharing of initial statements with the adult did not appear to be of major consequence for the patterning of verbal behaviour that followed, since the adult did little responding (Mdn 13%). The pattern of opening sequences showed that only 14% of all episodes began with structuring moves, and questions and for the most part episodes began with questions or, to a lesser extent, statements.

While the adults were on the periphery of the family group[1] and, therefore, could not be said to share intimately the interests and hobbies of the family, they were, nevertheless, aware of those interests and this showed in the discussions they had.

Initial Structuring (Table 4.3, p.269). Most initial structuring was substantive in nature (Mdn 88%) and all participants made statements of this type. In most groups adults used a higher

1. Even though some were relatives of the child, none lived with the family. The problems of establishing a homogeneous set of samples for this situation were discussed in Chapter 3 (p.59).

proportion of substantive statements (Mdn 48%) than the children (Mdn 35%). Procedural structuring was an adult move, used by all adults but by only three children. However, except for Mark's dyad, procedural statements accounted for less than 20% of all initial structuring moves and where they did occur tended to be in relation to a specific activity.

006-42-1
Richard was talking to his next door neighbour as he helped clean the swimming pool and comments such as the following punctuated their conversation.

Adult:	Oh you don't pick it up and just drag it back very slowly otherwise it disturbs all the stuff - - - - Try it again.

Within the general context of initial substantive statements, children seemed to frame their remarks in such a way that it was quite simple for the adult to move in and assume the initiative taken by the child.

104-41-3
Learning tables.

Margaret:	I got seven out of ten when I practised with Mummy just now.
Adult:	Well that's quite good but you can still improve on that can't you?
Margaret:	Yep.

For their part, adults often paired a question with the statement they made and thus did not lose the initiative they had taken.

104-44-1
A fire at the local supermarket.

Adult:	You were saying that it came over about the fire. What fire's this?
Margaret:	Well it was at Smith's and um - - - it was before I got to school and it's been on the radio that no-one's allowed to go there.

105-41-1

Adult:	And then we went back to the car and what did Mummy bring out of the boot?
Joanne:	Some apples and cheese.

Initial Questioning (Table 4.4, p.270). Asking initial questions was clearly an adult behaviour (Mdn 98%). With the exception of Simon (22%), few initial questions were asked by children and half the children did not ask any at all. Memory questions (Mdn 61%) and opines (Mdn 35%) together accounted for at least 75% of all initial questions (Mdn 94%) and were the only question-types to be asked by all adults. Memory questions were asked more frequently than opines in all dyads. While a number of other types of question were used by some participants, in most instances the use of any one of these types accounted for less than 6% of all initial questions.

The heavy reliance on memory and opine questions suggested everyday conversation probably flowed along with an effortless exchange of familiar information predominating. There were instances, however, where adult and child tested ideas and sought explanations.

001-41-5
Mark on chicken pox.

Adult:	What do you think's going to happen if you keep scratching?
Mark:	Well the top's going to come off and they're going to get infected.

103-43-4
Helen on the effects of no gravity.

Adult:	What would happen then if I tipped it upside down and then took the cup off the tea?
Helen:	It would still stay there it would be a patch of tea in the air.
Adult:	Be a patch of tea in the air. What shape would that patch of tea be?
Helen:	It would be - - - probably the shape of a cup[1] because it's been in a cup.
Adult:	Mmm.

Affective questions usually resulted in a simple statement of likes, although occasionally an attempt was made to probe a simple response.

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1. An interesting instance of hypothetico-deductive thinking in a child of eight years.

006-41-1

Adult:	Do you like going to bed at eight o'clock.
Richard:	No I wish I could go to bed at ten o'clock.
Adult:	Why?
Richard:	'Cause you can watch exciting programmes that are on.
Adult:	Later on?
Richard:	Yeah.

Responses (Table 4.5, p.271). Most responses were answers (Mdn 35%) or yes/noes (Mdn 29%), and children did most of the responding (Mdn 81%). For their part, adults reacted and most of these moves were of the one idea and short type. Responses were generally brief and five moves (one idea and short answers, one idea and short reactions, and yes/no) accounted for over 70% of all responses (Mdn 88%). On the other hand, extended and lengthy moves occurred infrequently (Mdn 6%).

Because of the low incidence of child questions (initial, probing, and sustaining), it was hardly surprising that most adult responses were reactions. Moreover, adults were not more likely than children to use extended or lengthy responses. Thus, the response pattern of both adult and child tended to be characterized by a large number of short moves.

Of the four major response categories (answer, answer-initiation, reaction, yes/no) , answer-initiations occurred least frequently (Mdn 7%) yet since the additional information seemed to come so naturally, a higher proportion of this type of move might have been expected.

102-41-1

Adult:	What did she (dental nurse) do?
Tracey:	Oh, she had a look and said you've got a hole. She had to drill it. Oooh!
Adult:	Oh!
Tracey:	It hurt and then she put the um filling in.

101-41-4

Another baby in the house?

Adult:	Would you take her for - - - rides in the pram?
Alison:	Yes when I come home from

school I will.
Adult: Yes.
Alison: If she's awake.
Adult: Yes.

However, the spontaneity of verbal exchanges was revealed more by the reactions (Mdn 26%), brief as they often were. Most typically the reaction occurred in relation to an initial or sustaining statement and less frequently did a sequence of reactions develop.

005-42-8
Simon is talking about atoms and molecules.
Simon: Even when - - - the water when the water's frozen into ice they're still moving very slowly.
Adult: Yeah um the the harder something is the less the molecules are moving.
Simon: Yeah.
Adult: Um -
Simon: So if it was terribly hard - - - like um - - - glass harder than glass - - - so that the molecules weren't moving at all and couldn't be pushed apart because of the pressure - - - and you cut one of them in half it would just blow up.
Adult: Yeah.

The high proportion of yes/no responses was to be expected in view of the frequency of initial and sustaining opines. However, answers to this type of question were limited in information potential and a great deal of verbal effort could result in very little substantive "pay-off". Indeed, in some contexts an impression was created that the opine sequence acted as a conversational block, giving the speaker pause to collect his or her thoughts without relinquishing control of the verbal exchange.

004-41-4
Television.
Adult: Do you watch the 'Six Million Dollar Man'?
Michael: Yes.
Adult: Do you like that?
Michael: Yeah.
Adult: Mm and what else do you watch?
Michael: Batman and all that.
Adult: You like Batman and all that?
Michael: Mmm.
Adult: Mmm. Do you watch 'Playschool'?
Michael: No.

106-43-1
Staying with friends.

Adult:	And tell me um you haven't seen our wallpaper - - - when you were here with Maria.
Barbara:	Yes.
Adult:	Remember?
Barbara:	Yeah.
Adult:	You ran madly around the house didn't you?
Barbara:	Mmm.
Adult:	Did you sleep? - - -
Barbara:	Yes - - -
Adult:	Mmm.

Acceptance-Evaluation (Table 4.6, p.272). Adults dominated this type of behaviour (Mdn 80%) and no child made more acceptance-evaluation moves than the adult in the dyad. The simple accept was the major move (Mdn 76%) and the only one to be used by all participants. However, in all dyads the adult used the move more frequently than the child, at least four times so in half the groups. Simple accepts did not appear to occur in a haphazard fashion. Most frequently they followed on the completion of a verbal move by the other person, but sometimes were used during a response or statement, most likely to encourage the speaker to keep going.

105-44-3

Adult:	What's it feel like riding a horse? - - -
Joanne:	Oh-h, when you canter it's horrible.
Adult:	Mmm.

106-42-1

Adult:	Did you see anything interesting on the way?
Barbara:	Yes we um - - - on the way back we saw a load of cattle -
Adult:	Mmm.
Barbara:	- walking on the road.

The accept repeat was used by all adults (Mdn 13%) but by only four children. There was considerable variation between adults in their use of the accept repeat, from almost one-third of all acceptance-evaluation moves by one adult to less than 4% by another. Notwithstanding these marked differences, the accept repeat was used for emphasis, sometimes as a lead in to a question,

and occasionally as a foundation for praise.

004-42-4

Adult: And whereabouts did you go swimming? What beach?

Michael: Oh we didn't go to the beach we went to swimming pools.

Adult: Oh you went to swimming pools. Are there swimming pools down there?

Michael: Yeah.

102-43-9

Adult: What's a baby goat called?

Tracey: Ah - - - kit.

Adult: A -

Tracey: Kid.

Adult: - kid. That's right.

The trend towards few evaluative-type moves, noted in other situations, was also evident in the other adult-child interactions. Only adults, though not all, gave praise (Mdn 5%), whereas correction-type moves (including 'correction with reasons') were used by more than half the children as well as by adults. Most of the comments of praise showed very clearly the listener's pleasure at the performance or ideas expressed by the speaker.

004-43-7

Making models.

Adult: And what sort of other things have you made before?

Michael: Oh - - - Oh we went to the library. I copied off a glider and all that. I put wheels on it and it went - - - it went and landed you know just came down normally - - -

Adult: Oh that's pretty good then. You're pretty clever, aren't you.

Correction moves usually involved a clear indication that the other person was substantively wrong - rather than that they said something grammatically incorrect (cf Brown and Hanlon, 1970) - at least in the opinion of the person correcting the verbal behaviour, and the inclusion of the 'correct' response was generally sufficient to indicate the reasons.

104-43-2

They started off by talking about the school gala.

Margaret: I've already got a lend of

something and it's in there. Hope it's not for eating 'cause we didn't cook it.

Adult: Oh!

Margaret: And if they break it on someone's head it will all slosh down.

Adult: I guess that's a coconut.

Margaret: No - - - It's an egg.

Probing (Table 4.7, p.273). Probing was also predominantly an adult verbal behaviour (Mdn 92%), and although only three children did not use probes, most of the others did so with minimal frequency (Mdn 8%). The probe clarification was the major move (Mdn 85%) and was used by all adults and all those children who probed. On the other hand, prompting (Mdn 10%) was used only by adults and fewer of them probed for critical awareness (Mdn 4%).

The probe move was often successful in gaining considerable additional information but description sometimes relied on non-verbal supports.

002-44-1

Philip: I got three things. I got a car - - - and two jet planes and a whistle for James.

Adult: And what was the wh whistle like?

Philip: Oh it was just like a Peter Pan one except it was much - - - skinnier oh-h-h that skinny and it went down till it got to about that - - - that that wide -

Adult: Mmm.

Philip: - then it went up and also it was - - - the - - - things where the where you blow into were much taller.

Less frequently did the probe call for reasons to justify or explain a previous response.

103-43-6

Helen and the adult had been having a discussion on gravity and the example of a cup of tea had been used as a focus (see p.118 above).

Adult: Are you pleased that things have got weight or would you sooner that it nothing had any weight?

Helen: I'm pleased that things have weight.
Adult: Why?
Helen: Because if they didn't have weight we wouldn't be able to feel how heavy they were and then - - - um - - - we wouldn't - - - um - - - know - - - 'cause the tea would be still burning -
Adult: Mmm.
Helen: - and we wouldn't know where it was going and and then then it would come down on our arms.

More prompts were used in the other adult-child interactions than in previous situations, and this probably indicated less certainty on the part of the adult in anticipating the child's capacity to handle the type of response called for.

102-43-8
Adult: What's a baby frog called?
Tracey: Um - - -
Adult: Forgotten?
Tracey: Yeah.
Adult: Begins with T - - -

001-43-5
Adult: And what was the camp in aid of?
Mark: Well I think it was a man called Bruce who ran it.
Adult: Yes but I mean did uh is it one of the uh things that Mummy and Daddy belong to like Playcentre or some such thing like that?

Sustaining (Table 4.8, p.274). Simon and Mark were the only two children to make a substantial proportion of the sustaining moves in their dyads (69% and 32% respectively). Otherwise, sustaining, like most other major categories of verbal behaviour, was dominated by the adults (Mdn 88%). Only substantive sustaining statements were made by all participants, and together with sustaining opines and sustaining rhetorical questions these were the three main moves (Men 84%). Sustaining opines and sustaining rhetorical questions were used by all adults but none of the children used the rhetorical question form and half of the children asked opines. Substantive sustaining was almost the only child move but adults relied more on the sustaining opine question (Mdn 36%). The sustaining procedural statement and comment were used

by most adults, and although in a few groups they accounted for 10 - 20% of all moves, in the majority they were less than 8%. The 'Answer Own Question' move was used by about one-third of the participants but with minimal frequency. However, it was an interesting verbal behaviour. Sometimes it served to "jog" the memory of the asker and on other occasions no-one was even given a chance to answer.

105-44-1
Adult: Simon says he's - - - um Mrs - - - What's his teacher's name? Mrs Brown.

105-42-1
Adult: And what's in the background here? This is why I took it. That's the gully, how it was before they started.

Episodes. Verbal exchanges moved along quite briskly (Table 4.9, p.275) with a move approximately every 2.9 seconds. The difference between 'faster' and 'slower' exchanges did not seem to be explained by a higher incidence of moves that occupied a longer time span in the groups with a slower rate of exchange. In other words, the proportion of structuring moves, questions, lengthy responses, and other such moves did not appear to be higher in groups where there were fewer moves per minute than in groups where more moves per minute occurred. The most likely explanation would seem to lie in the cumulative effect of pauses during verbal exchanges, and "pausing" seemed to be characteristic of some of the interactions.

103-41-4
Talking about dogs.
Helen: And - - - - some of them had big long fur.
Adult: Mmm - - - - what else which might you tell them about a dog? - - - -
Helen: Some of them might be bumpy.
Adult: Mmm - - -

005-43-7
Fireworks.
Simon: Oh-h and they've even got um parachute ones I think - - - - oh-h no - - - Look there's um - - - clustering bees rocket - - - um - - - there is - - - flying - - - cranes which is

Japanese um - - - starry skies
- - - ah coloured umbrella
fireworks we call them para-
chutes. There's this flying
- - - coloured - - - butterflies
- - - flying coloured butterflies.

Episodes in this situation tended to be very short (Table 4.9), between four and six moves in length. When an interesting event was being discussed, themes were sustained either consecutively over a number of episodes or the theme was returned to during the discussion. The weekend camp that Mark's family stayed at was an obvious highlight (88% of episodes in the session dealt with this theme), and Mark talked animatedly about the heated swimming pool, the flying fox, go-kart rides, and a number of other experiences. Michael had an interesting holiday in Napier-Hastings (100% of episodes in the session recorded) with his family. Fantasyland and the canoe rides impressed him. Barbara went to a wedding (25% of the episodes) in New Plymouth and she delighted in retelling the highlights of the journey to and from New Plymouth as well as of the wedding itself. The Brownie's barbecue and bonfire (all the episodes in the session) gave Alison a lot of enjoyment, and Joanne and her family got pleasure and satisfaction from the developments that were occurring on their property (69% of episodes in a single session). These few examples indicate that most children had memorable experiences during the period that the survey covered. Most of the examples given above relate to special interest topics, but there were also a number of general events (school gala, school flower show, Guy Fawkes, fire at a local supermarket, and so on) that were referred to in the interactions. The bond between these happenings was the impact they had on the children and this was evidenced in the way that some topics were discussed over and over with different people without interest seeming to diminish.

4.6 Child-Child Situation

Patterns of verbal interaction. The most striking feature of the profiles of verbal behaviour (Fig. 4.5, p.279) is the similarity between the subject and other child pattern. One consequence of this similarity is for individual differences in patterning of verbal behaviour to be much more noticeable. Thus,

by comparing subject and other child profile pairs, not only can the active involvement of both children be seen but also areas where one child took more of a leading role. For example, Simon seemed to control his interactions to a much greater extent than did Philip.

In the verbal exchanges in this situation approximately 22% were initiating moves, 40% responding, 18% acceptance-evaluating, 5% probing, and 15% sustaining. Thus, the general patterning of verbal behaviour was remarkably similar to that in situations involving adults. However, children used verbal behaviours in child-child exchanges that they had used minimally, if at all, in other situations. They all asked initial questions, most probed, and they used sustaining moves. The verbal patterns of the child-child situation suggested that, with peers, the child was able to use verbal behaviours modelled by adults but which the child had little opportunity to use in interactions with adults. While responding still dominated the verbal moves of a number of the subjects (Mdn 48%) and other children (Mdn 39%), it did not do so to the exclusion of other verbal behaviour.

Although subjects and other children shared the initiating moves (particularly questioning), this did not result in an increase in the percentage of episodes beginning with both a statement and a question (9%) which was the lowest proportion of all home situations.

Initial Structuring (Table 4.3, p.269). Most initial statements were substantive in nature (Mdn 93%) and although a third of the children did not make any procedural statements, Alison's dyad was the only one in which no procedural moves at all were made. The procedural move accounted for more than 20% of all initial structuring in only two dyads and there was considerable variation between pairs in their use of this type of statement (Mdn 8%).

Initial structuring behaviour tended not to be shared by children within dyads and in only three pairs did this happen. In the remaining groups either subject or other child dominated this type of behaviour and there was a clear tendency for this

person to also control both substantive and procedural moves. Thus, there was a pattern of general, as well as specific, control of initial structuring behaviour.

A sense of urgency characterized some of the initial statements made and it was almost as though an idea had 'flashed' to mind and of necessity needed to be expressed there and then, irrespective of whether the other person wanted to hear about the topic.

001-51-3
Mark's opening comment was interesting since there had been no mention in the conversation to that point of 'coming home'.

Mark: Talking about coming home going home from school, well I can remember a story that I wrote uh about the giant Alexandra a-and I met him when I was coming on my way home from school when you when you were sick at home with chicken pox.

Opening statements in the situations involving adults tended to be brief, but in this situation there was a monologue quality about some initial comments.

104-53-2
Margaret talks about the school gala.

Margaret: I um - - - I went Mum paid for the ferris wheel the first time and then we got a a ride on the horse. Jackie and me but they're going home by that time and I was meaning Jackie to go on the ferris wheel by herself but Nicola was there so she wanted me paid her money and I got a free turn - - - by the ferris wheel -

Other child: Ha!

Margaret: - I didn't have to pay for myself - - -

Other child: Yeah.

001-52-5
Making balloon masks.

Mark: You get miles of paper and you fold them up into the shape. And then stick them on.

Other child: We didn't do that.

Mark: That's what we have. We fold them up. Say if you're going to have a round mouth like that we get a strip of paper and fold it and fold it and fold it and and then probably tape it round here, at the join, and then just uh when you just put it into place and do it. But I don't think I'm going to do that.

Making statements about, and while, an activity was talking place was not uncommon in the child-child interactions, but although the children engaged in many activity-oriented pastimes there was no appreciable increase in procedural moves when compared with other home situations. Procedural statements either directed attention away from the pair to some external event or were related to the activity the pair was engaged in by giving instructions, directions, orders, and even prohibitions on occasions.

Directing attention.

"Listen to that terrible rain."
"Look at that one - - - funny car."
"Hey there's a nest up there."

Activity related statements.

"Come on, it's your turn."
"I said catch not drop."
"No don't touch the line."
"Oooh-h. Then let's hear about it."
"Pass me that train John."
"Hey try clapping your thing very lightly with two hands and I'll clap mine."
"Hey let's don't do that again."
"Speaking about puppets leave that puppet alone."

Initial Questioning (Table 4.4, p.270). All children asked questions but the subjects (Mdn 34%) tended to do less initial questioning than the other children (Mdn 66%), and in only two groups did the subject and other child share the asking of initial questions. The memory question (Mdn 60%) was the main type asked in all groups except Helen's, and the other important question type was the opine (Mdn 29%). Together these two types accounted for at least 70% of all the initial questions asked (Mdn 86%) and, with the exception of Alison, who asked no opines, all children used both these types of question. Procedural

questions (Mdn 8%) were asked in all dyads but not by all children.

A few comprehension and affective questions were asked and some rhetorical questions also occurred. However, in almost half the groups none of these types of question were used, and in only Alison's dyad were all three asked. Together they accounted for a small proportion of all initial questions in most groups (Mdn 7%).

It is probably not surprising that the children relied so heavily on memory and opine questions. If the adult pattern of questioning observed in the situations sampled was typical of all their question-asking behaviour, then the child was being exposed to limited question models in the home situation. But, as mentioned above, the needs of most everday conversation are probably adequately met by those types of question.

002-54-3
Other child: Whereabouts do you find the birds in the orchard? Up in up in the trees or on the ground?
Philip: Oh-h, on the ground for the dead ones and - - - up in the trees for the fantails.

003-52-2
Back from the Doctor's.
Other child: Did you have an injection when you went there?
William: No.

The procedural question was frequently used as an attention getting device, either as a prelude to making a substantive statement (or asking a question) or to indicate to a speaker that the listener hadn't heard (or understood) what had been said. Occasionally the speaker answered his own procedural question.

103-51-1
Helen: Hey Bob?
Other child: Yeah.
Helen: Are you getting new shoes on Friday?
Other child: No.

006-54-3
Other child: You said it could go both ways - - -
Richard: Pardon?

Other child: You said it could both go
it could go both ways.

Responses (Table 4.5, p.271). In most groups subjects (Mdn 48%) and other children (Mdn 52%) shared responding behaviour fairly evenly, but in Philip's and Simon's groups one of the children did at least twice as much as the other. The proportion of answers in the responding patterns of these children reflected the partner's dominance of other verbal behaviours and the controlling influence exerted by that person. For most children the major response category was the reaction (Mdn 55%) and in two-thirds of the dyads over 50% of all responses were of this type. The short reaction had the highest frequency across groups (Mdn 31%), and together with the one idea reaction and the yes/no accounted in most groups for at least 60% of all responses (Mdn 67%). These three moves, together with the short and one idea answers, were the only types of responses given by all children.

Few answer-initiations were given and in three-quarters of the dyads these accounted for less than 6% of all response moves (Mdn 5%). The major proportion of all response moves contained fewer than five ideas (Mdn 94%), and extended and lengthy responses were not much more frequent than answer-initiations (Mdn 6%).

The high proportion of reactions suggested a great deal of spontaneity in the verbal exchanges. The patterning of this behaviour was similar to that in other situations but there was more of it. The children reacted to statements made by others, to answers given to questions, and often from these initial reactions a sequence or 'reaction-chain' developed.

003-54-5
William and his friend had been talking about beds, bunks, and sharing bedrooms.
Other child: The trouble is I've got to sleep with my little brother and I can't have any model planes or anything 'cause they'd just get wrecked.
William: Yeah most people have posters and flags everywhere on their - - - wall.
Other child: I can't do that. Not with Bobby. Ha ha.

William: Mmm.
Other child: He gets up on the bed and he rips them and all.

006-51-5
Richard's friend is telling him about getting stuck in mud on his cousin's farm.
Richard: Was it sinky or quicksand?
Other child: Oh well - - - it was qu it was both I would say.
Richard: Well it must have been deep.
Other child: It was very deep. Lost my -
Richard: Must have come up to your -
Other child: - I lost two gumboots one year but I got up to my waist.

Although longer responses were not typical they did indicate the manner in which ideas seemed to 'tumble-out' when children were talking about things that were of interest to them. The essential meaning was usually quite apparent and no doubt the listener responded to this rather than being diverted by the inadequacies of structure.

002-54-2
Other child: What what are we going to do while I'm here apart from going out to get out cicadas?
Philip: Might have a swim. 'Cause I've got some extra togs - - - - Oh-h watching - - - looking at birds and locking at dead birds in the orchard - - - - There's food in there too - - - They used to live there too and it's - - - used to be an old nest there but I don't know where it is now - - - and once when we went in there there was this flip flip flip flip flip and then just saw um - - - thing pheasant - - - father fly-y-y up.

Acceptance-Evaluation (Table 4.6, p.272). In five of the groups one of the children (usually the other child) made at least two-thirds of the moves. This dominance did not indicate the use of a wider range of acceptance-evaluation moves but rather a much higher proportion of simple accepts. The simple accept was the only move to be used by all children in all groups and accounted for at least 65% of acceptance-evaluation behaviour (Mdn 83%). Two other moves, the accept repeat (Mdn 8%) and correction-type (Mdn 7%), were used in most groups with similar

frequency though more children used accept repeats than correction-type moves. Praise (Mdn 2%) was given by fewer children than used correcting moves and accounted for a very small proportion of moves in the groups where it was used.

The proportion of simple accepts, though high, was similar in frequency to their usage in other home situations. Primarily, the simple accept performed a supportive function and showed the speaker he was being listened to, but it also indicated tacit agreement in some exchanges. In a few instances, the simple accept may have been almost habitual but the timing of the move, in relation to the substantive content of the speaker's utterances, suggested that more often than not the move was performing a positive communicative function.

The use of the accept repeat, though a less frequent move, was interesting. In the home situations involving adults it was they, rather than the children, who used this type of move, and in a number of instances 15 - 30% of all acceptance-evaluation moves were accept repeats. Children used the move, in this situation, to perform the same functions that adults had used it for - as a base from which to react, or to question, or simply to give emphasis. This suggested that, given the opportunity to participate in a discussion on equal terms, the children were able to draw upon a quite extensive repertoire of verbal skills.

004-53-1
Other child: Where's Tom?
Michael: Oh he went to Mystery Creek you know -
Other child: Mystery Creek.

101-53-1
Other child: I you know that uh-h spelling test - - - survey? I got twenty-three right - - - -
Alison: Twenty three. I think I got um four wrong 'cause they were real hard.

004-54-2
Michael: Do you go to Cubs?
Other child: Um not clu cubs, Clubs.
Michael: Clubs. What do you mean clubs?

Only two children did not use evaluative-type moves but even the combined use of this behaviour did not comprise a large

proportion of acceptance-evaluation in most groups (Mdn 8%). Although most corrections simply indicated disagreement, sometimes reasons were implicit in the comment made or even explicitly stated.

001-53-2
Playing in a sandpit.
Other child: That's a booby hole -
Mark: No a parking lot. And we ru and we ran cars down there and parked them in there.

006-52-2
Lizards.
Richard: Well the flies were getting out the top.
Other child: They probably were it was knocked over.
Richard: No, it had a hole in the top of the wire.

Praising, as already indicated, was not a characteristic of these interactions and was usually related to an activity being performed rather than in response to the substantive quality of verbal communication.

003-51-3
Colouring pictures of trucks.
Other child: I got a, see that truck over there?
William: Yeah.
Other child: It's grey and this one I'm doing yellow.
William: Yeah.
Other child: With brown.
William: Yeah. Good.

Probing (Table 4.7, p.273). The asking of probes seemed to follow no clearly discernible pattern. In four groups only one person probed (this was usually the other child), in six groups one child asked approximately two-thirds of the probes, and in only two groups was the asking of probes fairly evenly shared. The probe clarification was used by all children who probed and accounted for at least 70% of this type of behaviour (Mdn 91%). This was the only type of probe used in one-third of the groups. Thus, probing in this situation meant little more than asking for clarification. Sometimes a series of probes could build up information, but in most instances they were used to clarify

specific points in a previous statement or response.

105-52-4
A fantasy about keeping horses in the bedroom.

Other child:	Man where do you sleep?
Margaret:	I sleep in my bed.
Other child:	How can you there's a stable on your bed?
Margaret:	No, the stable is um - - - the stable is in Mum's room.
Other child:	Ha ha. What about Mum and Dad?
Margaret:	Oh they sleep in the visitor's room.
Other child:	What about when visitor's come?
Margaret:	Um the visitors sleep on the floor.
Other child:	That's not very nice.

004-52-3
A trip to the school gala.

Other child:	Oh and my sister threw blocks at the - - - at the um she threw balls at this box and she won a little - - - gidget. That's what she names it. And it -
Michael:	What's a gidget?
Other child:	It's got big eyes and a little funny little nose and a -

The probe critical awareness (Mdn 10%) was used in two-thirds of the groups but by less than half the children, and in most cases the logic of the child's reasoning was readily apparent although occasionally the parental influence showed through.

101-54-1
Politics.

Alison:	I'm voting for the National Party.
Other child:	Are you? Why why don't you have - - - - a different party? - - -
Alison:	Well the La the Labour isn't they have no respect for others so I'm not voting for them, and the National seem alright because they're making Women's Rights and you get your um - - - what's it called when you're sixty sixty get your old age?
Other child:	Pension.
Alison:	Pension. Yeah, you get your old age pension or something like that. And - - - they're giving you more land and - - - and - - - we'll have more things to do and sort of things like that.

Sustaining (Table 4.8, p.274). While the proportion of sustaining moves was fairly evenly distributed between the subject group (Mdn 48%) and the other children (Mdn 52%), it was more common within a dyad for one person to make most of the sustaining moves. In some groups (5/12) this person was the other child, in some groups (4/12) the subject, and in only three groups did both children share this type of behaviour.

All children made sustaining substantive statements (Mdn 50%), and the sustaining opine was used by all except one child (Mdn 18%). A number of other sustaining moves were used in most dyads[1] but in very few instances did any one of these types amount to more than 10% of all moves. However, collectively these five moves accounted for a considerable proportion of sustaining behaviour in some groups (Mdn 20%)[2].

The 'Answer Own Question' was only a minor move in this situation, as it was in other home interactions, but its particular use by children was very well demonstrated in the child-child context. The most obvious use (i.e. question-no response-answer own question) did not occur frequently.

005-53-3
Simon: Guess what these are? - - - -
Other child: I don't know.
Simon: They're water bombs.

More often the move occurred in a manner that suggested the question was intended to 'jog' the memory of the asker rather than elicit a response from another person.

002-54-1
Philip: Oh-h, we're trying to collect capes um what do you call them? Cicadas.

And very rarely the framing of the question was such that only the person who asked it could answer.

001-51-1
Mark: Do you know what I would like -
Other child: No.
Mark: - for Christmas? A playhouse.

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1. Sustaining procedural (11/12), comment (10/12), answer own question (9/12), rhetorical question (9/12), sustaining procedural question (9/12).

2. Not all five moves were used in each group.

Episodes. The rate of verbal exchange (Table 4.9, p.275) was not as rapid in this situation as had been the case in the other home situations. There was a move approximately every 4.3 seconds (i.e. 14 moves per minute). Inspection of the transcripts of exchanges for the three high rate groups (William's, Richard's, and Helen's) and the two low rate groups (Alison's and Margaret's) indicated that in the latter groups children tended to have more moves involving many sentences as compared with the sharper and briefer exchanges in the high rate examples. Quite lengthy statements or responses could have only a one move credit for purposes of analysis and thus a supposedly low rate of interaction could involve a considerable amount of verbal behaviour.

Examples of two one move statements or responses.

101-52-2
Alison: We had to write a whole well I didn't but you had to write a whole - - - you only had about - - - well it took you at least - - - um now how much? About quarter of an hour to do one story and that only left you about um quarter of an hour to write the other two cop the other two copies and it was two this time and I was glad I could just write it. Um I was glad I didn't have to find my you know copy and I just went on with my good copy of being a ma farm manager 'cause I didn't want to be a sheep.

104-51-3
Margaret: Well we um we're doing ah a farm thing and we and I and my puppet was called Jane and I was calling Charley he was he had another puppet and he was Dad and Jackie had another puppet of it and she was um Mum and Terry had another puppet of it and he was Bill and we were all having tea and I started out shouting "Mummy is the Monster, Daddy is the Monster" and all the kids laughed at me. And and Charley kept on smacking his puppet's hand on to my puppet so that first I cried for a little while

then then I started it all
over again without crying.
And so it's really good fun.

Episodes in this situation were also short (Table 4.9) with a median of 5.2 moves per episode, and in most dyads the children shared the verbal exchanges fairly evenly. The diversity of topics discussed, the sustained theme over a number of episodes (either sequentially or interspersed with other themes), and the rapid shift of topic were characteristic of the verbal exchanges between children.

While the general topics and themes discussed in the child-child interactions were similar to the events and family interests highlighted in other situations, the detail of many of the exchanges might well be labelled trivial or inconsequential from an adult viewpoint. The interactions were often characterized by a wide range of topics. William, for example, in 26 minutes of interaction, spread over four different sessions, covered such diverse topics as the weather, his health, going to the dentist, buying shoes and clothes, watching T.V., the merits of beds and bunks, a Hot Rod show, fishing, his sister, toy cars, at the beach, Christmas presents, having posters on bedroom walls, and many more. This 'leaping' from topic to topic, while noted in adult-child interactions, was much more evident in the child-child situation. Verbally the children seemed to roam wherever their fancy took them.

002-51-4

Other child:	Have you ever been in an aeroplane?
Philip:	Yeah and Batman has got a batcatcher and a batjet - - - and a bat boat.
Other child:	What does the bat boat look like?
Philip:	Like a normal bat except it's got wings and a thing up the back.

The children also had an inclination to explore much more deeply topics that, again, to adults may have seemed trivial.

102-54-4
Tracey and her friend suddenly become involved in a discussion on flowers.

Tracey:	It's a nice day to-day isn't

	it? Look at Mrs Brown's nice sweet peas.
Other child:	They're growing high now aren't they?
Tracey:	Mmm Hmm.
Other child:	Sally Jones she brings lots of them to school for Mrs Smithson.
Tracey:	We've got a nice big bunch um in the house and it smells beautiful.
Other child:	I know sweet peas do smell beautiful.
Tracey:	I used to have sweet a little sweet peas - - - all for my own down by the gully and Tim ate them of course.
Other child:	I remember - - - that - - -
Tracey:	It's a shame though when they die eh?
Other child:	Mmm.
Tracey:	'Cause they're so pretty in the summer - - - We haven't got many flowers now because of the alterations - - - - Only got a few we've got a we've got more weeds than flowers really - - -
Other child:	Uh Hmm.

This ability to sustain a topic was noted on a number of occasions. Simon, talking about his model boats, went on, and on, and on, and gave little information, whereas Richard and a friend had a sustained discussion about the friend's lizards and a great deal of information was exchanged.

006-52-1	
Other child:	Here in this cage I keep my ghekos.
Richard:	Are they little lizards?
Other child:	Those are little um velvety ones. And there's a little rock in there's a fairly big rock in there and that and when I pop them outside they'll s-sit on that and they'll sun themselves you know like we like sunbathing -
Richard:	Yeah.
Other child:	- so do they and they'll -
Richard:	Hmm.
Other child:	- they'll just be on it. Keeps them warm.

4.7 Summary

Interactions were characterized by the markedly different

verbal roles played by children and adults. Children mainly responded - in interactions with adults at least 50% of their verbal moves were responses in most cases. For their part, adults were the major question askers (probing and initial) and they did relatively little responding themselves (Fig. 4.1, p.267; Figs. 4.2 - 4.5, pp.276 - 279).

Most initial structuring moves were substantive statements and of the major verbal categories this was the one that adults and children tended to share, though not evenly. Children, however, made few initial procedural moves (Table 4.3, p.269).

Adults asked the initial questions and the great proportion were either memory recall or opines. These were the only two types of question used by all adults in the various situations. Other types of question were used infrequently, if at all, and by few of the participants (Table 4.4, p.270).

Responding was clearly a child's verbal behaviour in the situations recorded, and even in the triadic situation involving two adults, the children (with the exception of Simon) did more responding than both parents. Children tended to answer while adults reacted. Responses were generally brief, containing fewer than five ideas. The yes/no, one idea and short answer, and one idea and short reaction, were the major types of response move (Table 4.5, p.271).

In the dyadic situations adults did most of the accepting and evaluating, but in the triadic situation and the child-child interactions this type of verbal behaviour was more evenly shared. Using acceptance-evaluating behaviour generally meant making a simple accept move. Few evaluative behaviours occurred and these tended to correct rather than praise (Table 4.6, p.272).

Probing behaviour was dominated by the adults, and children used few, if any, probes. Most probes simply sought clarification or elaboration of a previous verbal move and few probes called for more "thoughtful" response. Occasionally children were prompted to help them give an answer (Table 4.7, p.273).

Children used sustaining verbal behaviours, but it was the

adults again who dominated this type of behaviour. Two moves, the sustaining opine question and the sustaining substantive statement, occurred most frequently but the opine was the only move to be used by all adults (Table 4.8, p.274).

In all situations involving adults, interactions proceeded at a brisk rate with a move approximately every three seconds. The child-child verbal exchanges moved at a slower pace and episodes tended to be shorter than in the verbal exchanges with adults (Table 4.9, p.275).

During the interactions sampled participants covered a wide range of topics that reflected both the special interests of those involved (e.g. hobbies, clubs, shared activities) and the general events of moment (e.g. school gala, Guy Fawkes, flower show). Not only did the exchanges sampled provide a wealth of language behaviour, but they also provided some valuable insights into the way children interpret and explain their environment.

CHAPTER 5: LANGUAGE IN THE CLASSROOM

Overview. In the school setting, verbal behaviour was sampled in three situations: teacher-child, teacher-children, and peer group. The general characteristics and patterns of language are discussed in the context of the major categories of verbal move selected for the analysis. Extracts from the recorded interactions are used to illustrate points made in the discussion.

5.1 Introduction

The context within which verbal performance was sampled in the classroom was the same as for the home situations described in the previous chapter. Situations were chosen primarily to vary the participants involved: teacher with child, teacher with a small group of children, and a small group of children. However, unlike the home situation, where the content of interactions and the timing of exchanges were determined by the adults, in the school interactions the content and timing were to a large extent prescribed in advance. In many classrooms there are few opportunities for teachers to talk regularly with individual pupils for other than very short periods of time. Therefore, the situations were specified to represent typical dyadic and small group classroom interactions; discussion of a story, sharing an experience, talking about work the children were doing, and the like. Since each teacher was working with a group of subjects, the order of the interactions with each subject and group was also prescribed to counterbalance any practice effect.

The description of verbal behaviour in classroom situations also considered the language of all participants and did not focus solely on the subjects. The same format that was used in Chapter 4 to describe the characteristics of verbal performance in home situations is used in this chapter, namely:

i) patterns of verbal behaviour,
ii) initial structuring,
iii) initial questioning,
iv) responses,
v) acceptance-evaluation,
vi) probing,
vii) sustaining, and

viii) episodes.

Thus, in general structure and intent this chapter continues on from Chapter 4; while the recurring verbal behaviour patterns will be summarized and discussed within the context of the specific research hypotheses in the next chapter.

5.2 Teacher-Child Situation.

Patterns of verbal behaviour. The subject and teacher profile clusters (Fig. 5.1, p.280) indicate quite clearly the verbal roles that participants played. The children responded (Mdn 91%) and did very little else, while the teachers did everything else but responded little (Mdn 4%). Teachers structured the episodes and controlled the exchanges through their almost exclusive use of initial statements and questions, evaluative moves, and sustainers. Only three teachers were involved in the interactions, each working with four children; Teacher X with Mark, Philip, Alison and Tracey, Teacher Y with William, Michael, Simon and Richard, and Teacher Z with Helen, Margaret, Joanne, and Barbara. The profiles seem to indicate some variations in the teacher's verbal behaviour with each of her four children.

The pattern of initiating episodes showed that 22% of all episodes began with both structuring and questioning moves. This was a higher proportion than that noted in any of the home situations and probably reflected a teaching technique as much as anything else. Also, interactions in the school environment were more structured than those at home, in that teachers had a general notion of the direction they wished the verbal exchange to take and often used a statement to set the context for an initial question.

002-61-4
Teacher: In the old days the Maoris did a lot of chanting. Do you know what their chanting sounded like? - - -
Philip: Like singing.

104-04-2
Teacher: Let's - - - Say that they're going to build a car park in this big space here rather than a pool - - - I wonder why they've

had to dig so deep into the ground?

Margaret: Well they'd need enough floors to - - - um - - - for all the cars of - - - the public.

Initial Structuring (Table 5.1, p.281). Initial structuring was clearly a teacher move (Mdn 89%), and a third of the subjects did not use this type of verbal behaviour in any of the observations. Of the two types of initial structuring behaviour, substantive statements accounted for at least 75% of the moves (Mdn 85%), most of which were made by teachers (Mdn 76%). Procedural statements were made only by teachers (Mdn 15%), and they used both types of initial structuring move with all children.

For their part, children tended to take the advantage of either a pause in the conversation or their answering of a question to change the topic using a substantive statement. This shift in focus usually took up some idea or comment made in the previous episode. When this happened it was natural for the teacher to regain the direction of the verbal exchange as soon as possible.

006-62-4
Richard had been talking to the teacher about his younger brother aged four years and how he spoilt the games he played. The teacher makes a comment and Richard takes the initiative but not for long.

Teacher: Oh well you've got to make allowances for little people don't you?

Richard: Yeah. I wish he was uh nine -

Teacher: Why's that?

Richard: - and I was ten. Because nine-year-olds know how to play soccer properly.

Teacher: Well perhaps the next time you write me a story you'll have to put all that down in your story.

Very occasionally, the teacher's attempt to regain communicative control was not successful and the child continued maintenance of the verbal exchange through a number of episodes.

Where initial structuring statements were used by teachers they were often accompanied by an initial question.

003-63-2
Teacher: Now if I went out and cut some sheep's some wool off the sheep's back could I just go and spin that? - - -
William: No.

105-62-6
Teacher: You said before when your lamb was tired - - - it kept running away. How else could it show that it was tired? - - -
Joanne: It could just - - - try and follow try and make her follow home.
Teacher: Mmm.

The substantive statement on its own had very little impact since reactions tended not to occur. About all that children did when faced with a statement was to accept it and a shift in focus was required to keep the interaction going.

104-63-3
Teacher: He must have enjoyed it if he ate so much.
Margaret: Mmm - - - -
Teacher: How did the house become free of all the vines? - - -
Margaret: Well it was the same as the clouds um - - - they just went away.

While teachers varied in their use of initial procedural statements, it was only the teacher who directed behaviour in this manner, and procedural statements accounted for no more than one in five initial structuring moves. However, the initial procedural statement on its own had greater potential than the substantive statement to generate verbal behaviour since it was more often than not a direction to talk.

001-63-1
Teacher: Right you are Mark, tell me how you spent your hour with the College teachers this morning.
Mark: Well they they were read us a story but not the whole story they they read ah about three-quarters of the story and we had to write off the ending - - - and and then and we're going to get all the stories

together and make another another story and th and we're going to make uh not really a story but we're going to make a script and once we've made the script we're going to make the puppets and then we'll hav we're going to do a play.

Sometimes the procedural statement was associated with an initial question and served to focus attention, although in some cases the procedural statement seemed to be superfluous.

002-62-1
Teacher: Now Philip I'd like you to tell me something about this play you wrote - - - Why did you decide to write a play?

004-61-1
Teacher: Now Michael I'd like you to tell me about the story you read this morning. Um, what was it the name of it? Can you remember? - - -

Initial Questions (Table 5.2, p.282).[1] Memory questions were asked more frequently than any other type of question (Mdn 52%) and in more than half the groups they represented at least 50% of all questions asked. For all but one teacher, the opine was the other major question (Mdn 25%), but in a third of the groups the comprehension question (Mdn 15%) was used almost as frequently. These three were the only questions used by all teachers and together accounted for at least 85% of all questions asked (Mdn 93%). Of the other types of question, only procedural and affective questions were used by teachers in more than half the dyads (ten and seven dyads respectively), however, in all but two groups each of these types accounted for less than 6% of initial questions.

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1. For the purposes of presentation of results in this section only teachers' questioning behaviour will be referred to, since only one child asked any initial questions and these accounted for less than 1% of questions in his dyad. Also, although only three teachers participated in the study and each one worked with four children, reference is made to a teacher's individual interaction with a subject. Where appropriate, teacher patterns over a group of children will be referred to.

Memory and opine questions dominated the teachers' question pattern in much the same way that they dominated the question asking behaviour in the home. However, unlike the home setting, there was a much higher proportion of questions, particularly of the comprehension-type, that explored the substantive content of verbal exchanges. Probing was often used to complement the initial question.

002-64-1
A picture of a fire showing a fire engine with a turntable ladder.

Teacher: What is this tall thing up here?
Philip: An extension ladder.
Teacher: What do they use that for?
Philip: They use it to um if there's a high building and um an ordinary fire engine couldn't reach it but a fire engine with an - - - an extension ladder would be able to reach it.

Although a few application, synthesis, evaluation, and affective questions were asked, these accounted for only 2% of all initial questions used in this situation. This was, from the teaching point of view, somewhat disappointing since the opportunity for going beyond the immediate confines of the material was often lost. Where these types of questions were asked, the potential could be seen in the answers given.

105-61-3

Teacher: What other ways could the writer have finished this story to make it more exciting?
Joanne: That Harriet never ran away and she she um had these chickens and and every one hatched and so - - - but they were thin so no no-one could no-one um - - - wanted to eat them.
Teacher: So they all lived then?
Joanne: Yeah.

104-64-4
Building sites. Discussing a picture.

Teacher: But remember the roadway the path footpath would be along here or down in under that building - - - This is the

road here - - - What could happen if they just left that and they wanted to build there? What could happen to the soil there?

Margaret: Well the soil would all fall down and also - - - um when it fell down and somebody was right on the edge of it - - - well they'd fall down and break their legs.

Teacher: They could too.

Although the three teachers showed some variations in the types of questions they asked, these did not seem to represent major differences in questioning technique since at least 85% of all initial questions were opines, memory, or comprehension.

Responses (Table 5.3, p.283). Responding was overwhelmingly the child's usual verbal behaviour (Mdn 94%), and the few responses made by teachers were mainly reactions (Mdn 6%). The short answer (Mdn 33%) and yes/no (Mdn 29%) were used most frequently, together accounting for more than 50% of all responses (Mdn 59%), and all types of answer (including the yes/no) accounted for over 85% of responses (Mdn 91%). Extended and lengthy responses occurred quite frequently, although the proportion of extended responses (Mdn 10%) was greater than that of lengthy responses (Mdn 1%).

A number of characteristics established a response pattern different from that observed in the adult-involved home situation. The incidence of extended responses is notable, in view of the infrequent occurrence of such moves in home situations where interest was such that one might have expected more than actually occurred. On the other hand, the nature of the topics in the school setting was such that longer explanations could easily be given. The lengthier examples of children's responding behaviour indicated not only their ability to sustain a response but also the manner in which they organised and generated ideas.

005-64-1

On the wharf. Handling goods in sacks.

Teacher: And how do they load those sort of things?

Simon: Well they load stack them up on top of one another - - - -

Teacher: Yes and how do they get them up from there on to the ship?

Simon: Well they - - - well - - - if it's a few - - - uh - - - if they're stacked up a few yards - - - um - - - oh if they're stacked up in a building - - - by machines well then - - - they - - - are stacked into - - - ah special sort of crates - - - which are - - - which are like under your house and - - - then - - - a fork lift comes and puts - - - its - - - forks into the two holes on either side -

Teacher: Oh yes.

Simon: - and brings it along to the ship, holds it up and while until the - - - until some ropes are fixed to the corner or whatever's in it and then they just haul it up by a by a crane in the ship.

The low proportion of reactions in each group (Mdn 10%) was in marked contrast to the home situations where reacting generally accounted for 20 - 30% of all responses. The low incidence of reactions showed, more than any other verbal behaviour, the communicative control exercised by the teacher. Sometimes teacher statements appeared to be framed to provoke a reaction, a deliberate teaching strategy, whereas in home situations substantive statements did not seem to have this element of premeditation.

002-64-4
Fire-fighting.

Teacher: Now supposing the people in that trapped room can't open the window - - -

Philip: Um the fireman might use his axe and probably break the window down but first he'd tell them to stand clear.

Teacher: Mmm.

When the teacher reacted to a child response or statement the reactions tended to be supportive and encouraging.

002-61-5

Teacher: In New Zealand we have some schools where there hav there are so few uh pupils. What do we call those schools? - - - Where are those schools"

Philip: In the country.

Teacher: Way, way out in the country. Yes.

The spontaneity of the "reaction-chain" was not observed very frequently in this situation, and where reactions in a complementary relationship did occur they tended to be limited in scope.

005-62-8
Living on a farm.

Simon:	I'm always hungry even if I aren't weren't - - - aren't on a farm.
Teacher:	Are you? Oh!
Simon:	I even ate one pie - - - once for breakfast.
Teacher:	Good gracious me - - - You must you must be going to be a farmer when you grow up I think.
Simon:	More like a pie competition eater!
Teacher:	Oh good gracious me!

Interactions generally proceeded with such effective management that few opportunities arose for a child to voluntarily offer additional information and, thus, answer-initiations comprised a small proportion of responding behaviour (Mdn 6%). When they did occur the teacher had usually created a context by not immediately following up with another structuring or soliciting move, and it was then possible for children to add information if they so desired.

102-62-3

Teacher:	What do you do about words that you're not sure of spelling?
Tracey:	Oh - - - well I look in my dictionary and if it's not there I try and spell it.
Teacher:	Mmm.

(At this point the child has answered the question but the opportunity is there to add further ideas and she does).

Tracey:	And if I think it's right I I have I ask someone else in a higher group than me -
Teacher:	Mmm.
Tracey:	- if it's - - - the right word.
Teacher:	Mmm.

Acceptance-Evaluation (Table 5.4, p.284). Teachers also dominated this type of verbal behaviour (Mdn 90%) and the major move for teachers and children was the simple accept (Mdn 81%). For most of the children this was the only type of move used.

The only two moves to be used by all teachers were the simple accept and praise (Mdn 11%). Teachers also corrected, but not all of them and very infrequently (Mdn 0%). Some teachers paraphrased responses but they used the accept repeat more often (Mdn 6%).

While the simple accept was really the only move used by the children, what is surprising is that it was used at all in view of the generally passive role they played. However, even a relatively passive participant probably feels a need to indicate that attention is being paid to what the speaker has to say. Children were no exception to this. The difficulty was that the teachers made few verbal moves where acceptance was appropriate and the child's accept move usually came at the end of a teacher statement.

101-63-6
Discussing characters in a story.

Teacher:	Do you think he was a very popular person after that? - - - - What do I mean when I say - - - he was popular?
Alison:	That he was known by everybody.
Teacher:	Mmm hmm liked by everybody.
Alison:	Mmm.

004-64-2
Discussing a cargo net in a harbour scene.

Teacher:	They'll use that to to take the um - - - sometimes they put put it down on the wharf and then put goods into it and take it up into it like a big net like a fishing net.
Michael:	Yeah.

The teacher used simple accepts in much the same way as the children, to keep the child's response going, either using the move when the child paused or interposing the accept at a point appropriate to the phrasing of ideas. The teacher also frequently followed an accept with a question or statement, and occasionally a reaction.

003-63-3
Preparing wool for knitting.

Teacher:	And what, how would you strengthen it? - - -.
William:	Um just get my two hands then hold it at each end and then pull it -
Teacher:	Yes but -
William:	- and see if it breaks.
Teacher:	Yes.

104-64-2
Construction sites.
Teacher: And um how would they make the hole so deep? What would they use do you think? - - -
Margaret: A bulldozer.
Teacher: Mmm. And where you know how would they get rid of all the dirt from that big hole?

In the teacher-child interactions very few correction-type moves were used. The teachers praised to a greater extent than had been the case in the home situations where correction-type moves often occurred more frequently. Having given praise the teacher usually initiated a new episode, but sometimes she followed through with a probing question or a sustaining statement.

103-61-2
Stories: 'The Three Billy Goats Gruff'.
Teacher: Why do you think some words are printed in big capital letters?
Helen: Because um - - - the troll has a very loud voice and he's r-roaring - - - shouting.
Teacher: Good girl. Would you like to read that sentence for me and show me how you would read those words?

001-62-2
Writing a story.
Teacher: What did you do then? - - -
Mark: Um I waited until I finished saying everything I wanted to about the pony and then I went on about the dog.
Teacher: Good boy. Now why did you do that? - - -
Mark: Because if I put it in the middle now it wouldn't have made sense - - - -

Probing (Table 5.5, p.285). The probe clarification was the major move used by teachers in all the groups in which the teacher was involved. In all dyads, except one, this type of probe accounted for at least 50% of moves. The probe critical awareness was the other major probe (Mdn 23%), and together these two moves accounted for the large majority of this type of verbal behaviour (Mdn 87%). Together with the probe prompt (Mdn 13%), these three moves were used by all teachers. The only child to use probes

was Richard.

Even though probing for clarification was the major move, teachers called on children to justify their answers to a much greater extent than adults had in the home situations. The children showed through their answers that they were quite capable of responding to the challenge.

004-64-1
Teacher: Why would they need to sweep the water out of the boat?
Michael: If there gets too much water the the boat gets too heavy and sometimes it sinks.

102-61-9
The cat in a story wanders onto the road, a number of cars crash.
Teacher: Why do you think the cat was to blame for all that, all this crashing?
Tracey: Oh I don't I don't really think it was to blame for all of it -
Teacher: No.
Tracey: - because um - - - the drivers weren't really they were too busy looking at the cat than looking at the road.

Teachers also resorted to prompting through encouragement or giving clues to a greater extent than adults had in home situations. The teachers prompted by giving encouragement to remember just as frequently as they gave clues.

003-64-6
The differences between ambulances and other vehicles of a similar colour.
Teacher: I can think of something else - - - that that other white one hasn't got that the ambulance has got.
William: Um - - - - a red light.

006-61-1
Teacher: What was it called? Can you remember? - - -
Richard: "A boat for S-s" - - - - "The New Boat for Springfield".
Teacher: Yes.

Sustaining (Table 5.6, p.286). This also tended to be a teacher move (Mdn 91%) and nearly half the subjects used no

sustainers at all. With the exception of Tracey, the only sustainer used by the children was the substantive statement (Mdn 4%). For teachers, however, the main sustaining move was the opine (Mdn 40%). Substantive statements and comments were the only other moves to be used in all dyads, and together these three moves accounted for at least 60% of all sustainers (Mdn 75%). Most teachers used rhetorical questions (Mdn 11%), and the 'Answer Own Question'(Mdn 3%) was used by three-quarters of the teachers. The low frequency of procedural statements and questions in those groups where they occurred (Mdn 6%) suggested that once an episode commenced means other than instruction, direction, or command were used to keep the exchange going. In five groups there were no sustaining procedural statements or questions.

The incidence of sustaining rhetorical questions seemed somewhat high and in more than half of the groups accounted for between 10 - 20% of all sustainers. The three teachers used rhetorical questions with at least three of the four children with whom they interacted. Since they all displayed a low incidence of rhetorical questions in some of the interactions, this type of behaviour did not seem to be simply a matter of habit. To a large extent, the nature of the interactions was prescribed for all teachers, thus substantive content was similar. In other words, the teachers talked about similar things. There is a strong possibility that questions coded as rhetorical were getting non-verbal answers (e.g. a nod of the head), and had visual information been available these same questions may well have been coded as opines. This seems the most likely explanation for much of the rhetorical behaviour. However, rhetorical questions did occur reasonably frequently at different phases in an episode.

101-61-1
Discussing a story about a Japanese girl.
Teacher: Now she's Japanese. What are you?
Alison: I'm English - - -
Teacher: Are you?
(Without waiting for a response the teacher goes on to frame another question)
Aren't you a New Zealander?
- - -
Alison: Yes.

Episodes. There was generally a much slower rate of verbal

exchange than in the home situations (Table 5.7, p.287). A move occurred approximately every 4.0 seconds (14.8 moves per minute), from a fast rate of one every 2.7 seconds (22.4 mpm) to a slow rate of one every 5.0 seconds (11.9 mpm). One of the difficulties in giving an accurate indication of rate of exchange was that a move did not equate to a single word or even a single utterance. In other words, a move was a unit of variable length; equivalent to a word in some instances but in others perhaps several sentences in length.

003-64-6
In this example one minute of interaction involved 24 moves.

Teacher:	What what does the red light do?	(Question)
William:	It goes round - - - -	(Answer
Teacher:	It flashes, doesn't it?	(Reaction Question)
William:	Yes.	(Answer)
Teacher:	And what does that tell us?	(Question)
William:	It tells us that they're in a hurry - - - -	(Answer)
Teacher:	Mmm Right.	(Praise)
	Is there anything else you'd like to tell me about that now?	(Question)
William:	I don't know - - - -	(Answer)
Teacher:	Have you seen an ambul have you seen the ambulances in Hamilton?	(Question)
William:	Yes.	(Answer)
Teacher:	What colour are they, do you know?	(Question)
William:	Um - - - White.	(Answer)
Teacher:	Do you know where the St John's Ambulance Station is?	(Question)
William:	No.	(Answer)
Teacher:	Haven't you ever been there?	(Question)
William:	Oh I have - - - I think - - -	(Answer)
Teacher:	They have quite a few ambulances here - - - and ah they have special ones for a wheelchair too. Did	(Structuring)
	you know that?	(Question)
William:	No.	(Answer)
Teacher:	That they can put the wheelchair in.	(Structuring)
	Did you ever see the T.V. series of Ironside?	(Question)
William:	Um - - - No - - -	(Answer)

102-62-3
In this minute of interaction 11 moves were made.

Teacher:	What do you do about words that you're not sure of spelling?	(Question)
Tracey:	Oh - - - well I look in my dictionary and if it's not there I try and spell it.	(Answer)
Teacher:	Mmm.	(Accept)
Tracey:	And if I think it's right I I have I ask someone else in a higher group than me -	
Teacher:	Mmm	(Accept)
Tracey:	- if it's - - - the right word.	(Answer-Initiation)
Teacher:	Mmm.	(Accept)
	And do you think do you find it a nuisance sometimes to have to stop to find a word?	(Question)
Tracey:	Sometimes when we've only got - - - you know not much time to write it.	(Answer)
Teacher:	Mmm.	(Accept)
	Does it um - - - make you lose your train of thought when you're looking for words?	(Question)
Tracey:	Yes sometimes when I'm turning the pages I forget which word I um beg I'm looking for -	(Answer)

Episodes were generally short with a group median of 4.8 moves (Table 5.7, p.287). Since the substantive focus of interactions in the school setting was prescribed in advance, episodes ranged over the same central topic, unlike home interactions where a number of quite different themes could occur during the same interaction. Many teacher-child interactions resembled interviews with the communicative control and direction of exchanges very much in the hands of the teacher. This was not a consequence of the prescription referred to above, since at no stage were instructions given as to the method by which the interaction would take place.

Teachers did, however, display different strategies with the four children they worked with. With one child a teacher might develop and probe ideas and, consequently, longer episodes resulted.

105-63-2
Joanne had written a story in which she was a lamb.

Teacher:	How were they (the children) being nice to you?
Joanne:	Giving food - - - playing with me - - - and all that.
Teacher:	Mmm. How did they give you food?
Joanne:	By just putting it in a dish and um going away because - - - lambs and all other animals don't like people looking while they're eating. While they're eating.
Teacher:	Mmm.

With other children that same teacher might develop a pattern of shorter episodes with little recourse to probing responses.

103-63-1
Discussing a library book "A Lion in the Meadow".

Teacher:	How did he feed the dragon? - - -
Helen:	He didn't feed it. He ran inside. - - -
Teacher:	Did mother see the dragon at all? - - -
Helen:	No. She - - - she said - - - um - - - that it was only a story.
Teacher:	- - - Was the little boy really telling the truth about the lion or was he just imagining there was a lion there?
Helen:	He was telling the truth 'cause afterwards um - - - they went and played in the meadow.
Teacher:	With the lion?
Helen:	Mmm.
Teacher:	Where do you think the lion came from? - - -
Helen:	It might have come from the jungle - - -
Teacher:	Mmm.

5.3 Teacher-Children Situation

Patterns in verbal interaction (Fig. 5.2, p.288). The groups in this situation (three children and a teacher) were the largest for the study, but increasing the size of the group did not appear to have had much effect on the pattern of interaction. The

teachers still controlled the exchanges through their virtually exclusive use of questions (both initial and probing) and their dominance of sustaining moves. While only four of the children did not ask questions (that is either initial or probing, and some did both), questioning did not account for a large proportion of their verbal behaviour. Of the six children who asked both initial questions and probes, five of them came from the two groups taught by Teacher Y.

Although children's responses were not as high a proportion of their verbal behaviour as was the case in the teacher-child situation, they still accounted for at least 65% of child moves (Mdn 74%). Responding was much less important for teachers (Mdn 8%) and in only two groups did responses account for more than 10% of the teacher's verbal behaviour. All participants used acceptance-evaluation moves but they represented a much higher proportion of teacher moves (Mdn 30%) than of children's moves (15%).

When a teacher's verbal behaviour with each of her two groups was compared[1] some marked variations were noted. For example, Teacher Z did twice as much initial structuring with group E (7%) as with group F (3%), and more than twice as much sustaining with group F (25%) as she did with group E (11%). She also gave responses twice as frequently with group E (14%) as she had with group F (7%). Since for all three teachers the topics and activities were the same, the variations suggested that either the teacher was influenced by her perception of the cognitive ability of individual pupils, or that group dynamics may be more influential than individual idiosyncracies of language competence in determining broad patterns of verbal behaviour in specific situations.

The pattern of initiating showed that only 14% of all episodes began with both structuring and questioning moves. However, in some groups (for example, groups B and E) the pairing of statement with question occurred more frequently than in others.

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1. Teacher X: Groups A and D.
   Teacher Y: Groups B and C.
   Teacher Z: Groups E and F.

Some of these factual statements could very well have stood on their own, but the teacher used them as the substantive focus for a question.

104-71-5

Teacher: The goblins in the sky were building a bridge. Where do you think the bridge would lead them? - - - - Margaret?

Margaret: They they might have been building a bridge so that um people the other goblins and fairy folk would go there and over to and follow the road and that and it might be straight might lead to a giant who eats fairy folk.

Occasionally, the initial statement was more propositional and the structure of the statement oriented attention towards the question that followed.

003-71-6

Teacher: Now then - - - think very carefully - - - - Old Rocky said - - - he saw the robber running out the back door - - - Now if a spider web was across the back doorawy - - - What would happen to it if somebody ran through it?

William: Oh it would get all over his face and - - - and it would be all sticky.

Initial Structuring (Table 5.1, p.281). All participants made initial substantive statements and this was the major move in each group (Mdn 80%). Teachers tended to use a higher proportion of the substantive moves (Mdn 40%) than individual children (Mdn 13%). Procedural statements were made by all teachers (Mdn 17%) but by less than one-third of the children, and even these children used the move infrequently (Mdn 5%).

The teacher made more initial structuring moves than any child, and in three of the groups (A, B, and E) made at least 50% of the initial statements. However, in two other groups (C and D) one of the children made more substantive statements than the teacher and three other children (From Groups D and F) made a similar proportion to the teacher. What seemed to happen most

commonly was for the general discussion to "trigger" an association with an earlier experience, and at the earliest opportunity the child gained communicative control of the interaction, usually only momentarily; but occasionally a lengthy exchange developed from the child's initiative.

006-71-7
Discussing a picture showing a family group having a picnic at the beach. The children are playing with a large ball. The teacher has been discussing safe places to play with a ball.

Richard:	They got a - - - at Whangamata they've got this big thing and when the tide comes in it doesn't come up on the things because it could flood the houses a bit close to the things and they've got this big round thing and it's deep -
Teacher:	Mmm.
Richard:	- and it goes and the fish go in there lots of times and it's good for fishing. We're going to liv live down the end right by it right beside it instead of going to the wharf.
Teacher:	Mmm. (Changes topic).

That some children were able to use similar or greater proportions of structuring statements than the teacher did not seem to relate to any characteristic of the teacher's general pattern of communicative control, since each of the teachers worked with another group where their proportion of substantive statements was much higher than that of any child. However, as children asked very few, if any, initial questions they were not able to sustain any initiative they had taken and teachers usually regained effective communicative control of the exchange by either shifting the focus or using sustaining moves to "take-over" the child's episode. For their part, teachers seldom lost the initiative as they used the question or statement-question as their most frequent strategies for opening episodes.

Although procedural statements were made in all groups, there was considerable variation in the incidence of this type of move, not only between groups but also in a teacher's use of procedural statements with each of her two groups. As mentioned above, the general focus of the interactions was similar for each

group so this would not seem to explain the differences noted. It was more likely that the substantive focus was interpreted by different groups in a number of equally valid ways. In some instances the teacher used procedural moves to initiate the exchange, by directing a child to speak, or to get the children's attention.

002-71-3
Discussion of a story.

Teacher:	Tell me about his wife.
Philip:	She -
Tom:	His wife -
Mark:	I think she was very clever - - - She was she was wise.

001-74-2

Teacher:	Would you like to explain what happens - - - to that wool - - -
Mark:	Well well first she gets it out and and gets a brush out and combs all the dirt - - - dirt mos all the dirty wool - - -
Teacher:	Mmm.
Mark:	All of it.

Initial Questioning (Table 5.2, p.282). Asking initial questions was really a teacher behaviour (Mdn 96%) and half the children did not ask any at all. Of those who did ask questions, only one asked more than 5% of the initial questions in her group (8%). Memory questions were asked most frequently (Mdn 48%), and opines (Mdn 22%) and comprehension questions (Mdn 14%) were the other main types used. A few children asked memory and/or opine questions but none asked comprehension questions. Teachers asked all three types and also all used procedural and affective questions, although not with great frequency (Mdns 7% and 3% respectively).

While memory and opine questions dominated the pattern of initial questioning behaviour, there was a much higher proportion of comprehension questions asked than had occurred in the home setting. All teachers relied heavily on memory questions (Mdn 47%), but Teacher Z, who asked the lowest proportion of memory questions, asked the highest proportion of comprehension questions. Conversely, Teacher X, who asked the highest proportion of memory

questions (Group A), asked the lowest proportion of comprehension questions. When the teacher's use of memory and comprehension questions in each group was ranked and compared, using rho, a negative correlation of -0.94 ($p < .01$) was obtained.

While procedural questions did not occur frequently, they did account for more than 10% of the initial questions asked in two of the groups (B and C) and both of these groups worked with the same teacher (Y). However, most of these procedural questions arose from one activity. The children had been discussing a model zoo and when the teacher asked to be taken for an imaginary trip around the zoo a number of procedural-type questions arose as a consequence of this role-play. For example, "Where are we going ...?", "Who's going to ...?", and "Who can tell me...?" were three common forms of procedural questions asked.

Although only a small number of 'higher-order' questions were asked by the teachers, the few affective questions used were quite successful in tapping children's feelings and likes.

106-72-1
The model zoo.

Teacher:	And Barbara what did you like?
Barbara:	I liked the kangaroos - - - and the um the lions.
Teacher:	And the lions did you? You haven't mentioned them. Why do you like the lions?
Barbara:	Because they're always fighting each other and - - - they always come in different colours sometimes.

005-71-4

Teacher:	Simon do you like going to to the beach for picnics?
Simon:	Oh - - - sometimes if the sand's not too hot - - -
Teacher:	Well -
Simon:	And if there aren't those little slaters that you find somewhere - - - down - - - a bit further down north.
Teacher:	Oh yes.
Simon:	Because they they bite you and it's very ah sore.

Evaluation questions were asked much less frequently than affective questions but responses showed that, given appropriate support and probing, children were capable of evaluating ideas they had

been exposed to even if some difficulty in verbalizing the reasons was experienced.

004-73-9
A filmstrip titled "Nothing is Something to Do".

Teacher:	And d do you think you could you could uh if you had nothing you'd have something to do?
Robert:	No.
William:	No.
Robert:	I I I would have -
Michael:	If there was nothing - - -
Robert:	- done nothing.
Teacher:	Why?
Robert:	'Cause um nothing is just um -
Michael:	Nothing -
Robert:	- nothing.
Michael:	- you don't do anything.
William:	You're doing -
Robert:	You don't - - - you don't ever do anything and that film was um -
Michael:	Called -
Robert:	- do that um the children on that um film was - - - were doing something and it was called nothing was something to do - - -
Teacher:	So you you couldn't see that that nothing was something to do.
Robert:	Yeah.

Responses (Table 5.3, p.283). Responding was a child verbal behaviour and over 80% of all responses were made by the children (Mdn 92%). Where teachers did respond most moves were reactions (Mdn 8%), but even then many of the children reacted more frequently than the teacher in their group (Mdn 9%). The yes/no was the most frequently occurring response for children in each group (Mdn 21%) and together with the short answer and short reaction the three moves accounted for at least 45% of all responses (Mdn 50%). Of the four major categories of response move, answer-initiations (Mdn 16%) occurred least frequently - reactions (Mdn 35%), answers (Mdn 29%), and yes/no (Mdn 21%). Most responses contained less than five ideas, and within groups there were few extended responses (Mdn 8%) and only the occasional lengthy one (Mdn 1%).

The proportion of answers and yes/no responses was to be expected in view of the ratio of initial, probing, and sustaining

questions. However, the incidence of reactions was interesting since at least 28% of all responses fell into this category (Mdn 35%). Although teachers reacted with only slightly greater frequency in this situation than they had in the teacher-child interactions, reacting by the children was tolerated by the teacher in a manner quite different from the dyadic teacher-child setting where few child reactions occurred. The children tended to react to each other's comments, although occasionally a child reacted to the substantive content of a teacher statement, ignoring the supporting question. Nevertheless, the teacher maintained the overall communicative control and direction of the verbal exchange.

001-74-3
A demonstration of spinning wool.

Teacher:	What did you think of the way she got - - - the wool clean?
Tom:	Quite fascinating.
Teacher:	Mmm.
Tom:	Because I never knew you could just brush it and all this prickles and dirt would come out because -
Mark:	No well that's that's what happens on your hair -
Tom:	I know but -
Mark:	It's exactly the same thing.
Tom:	Yeah you have to wash it - - -
Philip:	Yeah but you don't have prickles in your hair - - - you -
Mark:	Oh you might be you you might do after you've fallen head first into a prickle bush.
Tom:	No you could -
Philip:	Or you or you could do a head-stand on some prickles in ordinary grass.
Teacher:	Well you wouldn't be standing on your head for long though would you?
Chorus:	No.

Even answer-initiations occurred with greater frequency in this situation than in the teacher-child or home situations, and this suggested a larger group made it easier for additional information to be added to that already elicited through direct questioning. Perhaps the enlarged pool of experience was a factor, since it tended to be other people offering additional ideas rather than the original respondent giving further information.

105-71-7
Picnic at the beach. Mother and father lying on the sand.

Teacher:	What's the important thing that they must be doing wh while they're relaxing - - - Jenny?
Jenny:	Watching their children.
Teacher:	Why?
Jenny:	Because one of them might drift out - - -
Joanne:	All -
Jenny:	And -
Joanne:	- all of them will because um some might go in a different place place but they must all keep together.

Even with the greater frequency of reactions and answer-initiations in this situation, compared to similar moves in the teacher-child interactions, approximately 50% of all responses were still directly elicited as either yes/noes or answers (Mdn 49%).

004-74-3

Teacher:	Well how would they move their cows along?
Robert:	Um -
William:	On a horse.
Robert:	- and a whip.

101-72-1

Teacher:	What kind of animals would like up there?
Tracey:	Polar Bears.

004-74-3

Teacher:	Would the man use the dogs like they do at mustering?
Chrous:	No.

Acceptance-Evaluation (Table 5.4, p.284). Teachers tended to dominate this category of verbal behaviour (Mdn 53%). No individual child made more moves than the teacher, and in half the groups the teacher made at least 55% of all acceptance-evaluation moves. The simple accept was the major move for teachers and children alike and accounted for at least 70% of all moves (Mdn 79%). This was also the only move to be used by all participants. The accept repeat (Mdn 12%) was used by all teachers and by all children except those in Group F.

As has been indicated above, most acceptance-evaluative behaviour was in fact accepting rather than evaluating, and in only one group (D) did the teacher not clearly dominate the accepting type moves. Typically, the simple accept occurred without any follow up and either acknowledged the contribution or encouraged the speaker to keep going.

105-72-3

Joanne:	And also - - -
Teacher:	Mmm - - -
Joanne:	She took this - - - um - - - little girl on a wire she holded the wire -
Teacher:	Yes yes.
Joanne:	And um made it hop around - - - everywhere - - -

Occasionally, the simple accept was followed by a probe to gather further information or to clarify the previous response.

003-71-6

Teacher:	Now if a spider web was across the back doorway - - - what would happen to it if somebody ran through it?
William:	Oh it would get all over his face and - - - and it would be all sticky.
Teacher:	Yes - - - What would you think Michael?
Michael:	Get all sticky sort of.

Of the more evaluative-type moves, all teachers praised although they did not do this frequently (Mdn 5%). If teachers gave little praise they were even less likely to correct children and only Teacher Y used the move with her two groups. Children were more likely to correct each other and they did in all groups (Mdn 3%).

103-72-3

Teacher:	What are these things in this pond?
Tania:	Alligators aren't they?
Teacher:	Look as if they could be.
Helen:	No they're crocodiles I think 'cause I thought alligators had long beaks - - - long mouths.

Thus, evaluative moves (i.e. praise and correction) could not be said to characterise the accepting-evaluating behaviour in this situation. In three groups these moves accounted for more than

10% of all moves but two of these groups had the same teacher. Comments of praise tended not to be effusive.

104-74-4

Tania:	Well um when when you're sailing on rough sh seas and sometimes you get a shipwreck and all the parts are all over the place.
Teacher:	That's right.

001-72-3

Mark:	Andrew and Tom thought that they (the polar bears) could easily get out.
Tom:	Yeah down here.
Teacher:	Why?
Philip:	Because there's no fence around the side.
Tom:	The same with the seals.
Philip:	Same with the seals.
Teacher:	That's right. There's no fence there.

Probing (Table 5.5, p.285). Teachers probed with all groups and asked at least 85% of all probing questions (Mdn 95%). Less than half the children used probes and in two groups (both taught by Teacher X) no probes were used. The clarification was the major probe for teachers and children (Mdn 48%) and in half the groups this move accounted for over 50% of all moves. The probe critical awareness (Mdn 30%) and redirect (Mdn 10%) were used by all teachers, and their use of these three moves accounted for at least 80% of all probes (Mdn 84%).

While probing for clarification remained the most used type of follow-up question, probing for critical awareness occurred more frequently in this situation than it had in the home setting. The children showed in their answers to this type of probe the significance that specific experiences had for them and the relative importance they attributed to everyday events. They were very much concerned with the consequences of an action.

005-74-5

Picture shows the tower at major fire stations for training men to fight fires at a height.

Teacher:	Why would they (firemen) need to have a practice?
George:	Oh -
Simon:	Because otherwise they would

lose their talent and probably ah lose or get caught in the building - - - and I also think that uh - - - there - - - they aren't - - - really going to ah - - - you know um - - - just ah - - - go up there - - - and put up out a smoke bomb. I think from the people who would be acting inside the building.

Teacher: Yes.

006-72-4
Feeding animals at the zoo.

Teacher: Why - - - shouldn't the peanuts be all over the place?

George: People slip on them - - - break their leg.

In response to some probes the child produced what was, in effect, evidence to support an earlier response.

101-71-2

Teacher: Do you think at some time the sea might be where he's sitting now?

Tracey: Yes.

Alison: Yes.

Kim: Yes because the rocks are all wet.

Teacher: Mmm. Why can he sit there now?

Tracey: Because the tide's out.

This situation was one of the few where the redirect and probe redirect were appropriate moves to use. Again, one teacher (Z) made more use than the other two teachers of these moves, particularly the redirect.

Sustaining (Table 5.6, p.286). Teachers made at least 65% of all sustaining behaviour (Mdn 82%) and the sustaining opine was their major move (Mdn 41%). All teachers used four of the sustaining-type moves; opine, comment (Mdn 12%), substantive statement (Mdn 10%), and rhetorical question (Mdn 8%). Although only two of the children used no sustaining moves, there were also only two children whose sustaining behaviour accounted for more than 10% of all moves. Substantive statements were the major move for individual children (Mdn 7%).

The use of sustaining opines was consistent from group to group with between 35 - 45% of moves being of this type. The size

of the groups in this situation seemed to make it easier for teachers to draw ideas together, and making a statement from the ideas of other people to support an opinion question was used, on occasions, to good effect.

104-71-3

Teacher:	What was the trick the badger played on the children? - - -
Margaret:	He -
Tania:	Um he turned himself into a girl - - -
Teacher:	Yes.
Tania:	And gave them buns - - -
Teacher:	Alright. What were you going to say Helen?
Helen?	Um the same as Tania except he put four buns on the plate.
Teacher:	Yes. So the fact that he turned himself into a girl and the fact that there were four buns on the plate - - - were both tricks really weren't they?
Tania:	Yes.

Episodes. The rate of verbal exchange seemed fairly rapid in this situation (Table 5.7, p.287). There was, approximately, a move every 3.1 seconds (19.0 moves per minute), from a fast rate of a move every 2.1 seconds (28 mpm) to a slow rate of one every 3.4 seconds (17.6 mpm). The rate of verbal exchange in this situation was very similar to that in the home situations involving adults but faster than the rate of exchange in the teacher-child situation. With the exception of Group B, there was considerable uniformity in rate of verbal exchange between the other groups.

The episodes in the teacher-children situation (Table 5.7) were longer than those in the other situations (7.8 moves per episode). Again, with the exception of one group (C), there was a great degree of uniformity among the groups in median length of episode. These teacher-children situations, like the teacher-child situation, had a specific focus but teacher and children obviously explored these topics in different ways. The higher incidence of reactions in this situation probably contributed to the tendency for longer episodes, and the children seemed quite willing to participate and to volunteer ideas whenever the

opportunity arose. Teachers did not curb the spontaneous verbal behaviour of the children in any threatening manner but, as the figures show, they nevertheless maintained an effective control over the direction and nature of the exchanges.

5.4 Children Situation

Patterns of verbal interaction (Fig. 5.3, p.289). The participant profiles show a much greater similarity than occurred in any interactions involving adults. The general pattern for the groups was that approximately 20% of the verbalizing initiated interactions (15% structuring and 5% initial questioning), 42% was responding behaviour, 22% acceptance-evaluation, and 16% probing-sustaining (2% probing, and 14% sustaining). In other words, roughly two-fifths of the verbal behaviour was responding to the three-fifths which initiated, sustained, and evaluated those responses.

For most children responding was their major verbal category (Mdn 45%), even for those children who had the highest proportion of initiating-sustaining behaviour. Unlike situations involving adults, it was not possible to delineate roles on the basis of type of verbal participation. Where a child assumed a major initiating, sustaining, or evaluating role this was not done to the mutual exclusion of others using those same behaviours, nor did it preclude that child from also adopting a responding role.

The most marked differences between groups, as shown in the situation profiles, was in the asking of initial questions and sustaining moves. While participant profiles indicate a similarity in the broad patterning of verbal behaviour, two of the children in each group used a higher proportion of initiating moves (statement and question) than the other child. These same two children also tended to use a higher proportion of probing-sustaining moves and to use fewer responses than the third child in the group. The participant profiles also indicate that with the exception of Barbara, who used no probes, all children made moves in all the major verbal categories.

The pattern of initiating showed that 8% of all episodes began with both structuring and questioning moves. This was about

half the proportion of structuring-questioning initiations noted in situations involving adults. The most common combination was the substantive statement and opine question, although occasionally other types of question were paired with initial structuring.

003-83-2
William: When the boy was rolling in the sand it was funny, eh?[1]
Robert: Yeah.

005-82-2
George: I - - - can't really tell what this is Simon. What do you think?
Simon: Oh that looks like it's been under a microscope.

Initial Structuring (Table 5.1, p.281). All children used both types of move, but substantive statements accounted for at least 55% of initial structuring behaviour (Mdn 71%). However, individual children's use of the move varied considerably (Mdn 23%), as did their use of procedural structuring (Mdn 10%).

If initial structuring behaviour had been shared by the participants then each child would have made approximately one-third of the statements but this happened in only one group. The tendency was for one child to dominate and make 40 - 50% of the initial statements.

The procedural-type moves tended to direct attention towards some item of interest or indicate that it was another child's turn to participate, but more typically the initial statement was substantive in nature and the other children either accepted or reacted to it. In a few instances, all or part of a substantive statement was probed for clarification.

105-83-1
Joanne: Well one little girl she was just throwing - - - some seeds out of a kind of a flower and they fly all over the place and then they go on the ground and - - - she called that - - - doing nothing.

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1. This example shows a form of opine that appeared frequently in the children interactions. 'Eh?' was used as an equivalent to 'wasn't it?', 'isn't it?', and so on.

Jenny: There was this other little girl who threw a stone and she called that nothing and I think it was something to do.

003-83-2
William: I'd like to be on that swing you know that -
Michael: Which swing?
William: - swing. That the girl was on.

Initial Questions (Table 5.2, p.282). All children asked initial questions but there was no question-type used by all of them. However, three questions, the memory (Mdn 41%), opine (Mdn 26%), and procedural (Mdn 25%) were used in all groups and in groups B and C by all children. The memory question tended to be used with higher frequency overall and by more children than procedural and opine questions. In all groups except one, these three types together accounted for over 90% of all initial questions (Mdn 98%). Four children asked affective questions, but Simon was the only child to ask any comprehension questions (2%), and these were the only other types of initial question to be used.

In four of the groups one child asked almost, or more than, 50% of all initial questions, however, domination by one child did not exclude the other two children from asking questions. The framing of most memory questions was such that a brief answer was sufficient to provide the required information.

103-81-2
Helen: How much is one drink?
Margaret: Oh! Five cents.

003-84-1
William: What colour is your own one (caravan)?
Michael: Brown browny white and then it's got white - - - stripes on the back.

The only types of question asked, other than memory, opine, and procedural, were comprehension and affective questions. While not frequently used, affective questions usually received responses that gave a clear indication of the reasons behind the child's likes.

004-84-1

William: Do you like do do you like swimming in the se in the salt water or in the fresh water?

Michael: Fresh. I don't like salt I get rashes because of my big surf-board.

001-84-1

Mark: Do you like going camping Philip?

Philip: Yeah -

Mark: So do I.

Philip: - the best things about it we can camp in the forest and -

Mark: Yeah.

Philip: - in places that -

Mark: Yeah.

Philip: - you haven't been to and can explore -

Mark: Mmm.

Philip: - and you might even go hunting.

Responses (Table 5.3, p.283). In this situation children tended to react to what others said rather than respond to direct questions, and reactions accounted for at least 60% of all response moves (Mdn 72%). Most of these reactions were of the one idea or short type (short reaction, Mdn 41%; one idea reaction, Mdn 29%). These two reaction moves and the one idea and short answers were the only types of response move to be made by all children. Extended and lengthy responses were something of a rarity in this situation, and in no group did they account for even 10% of all response moves (Mdn 5%).

Although used by most children, answer-initiations were even less frequent (Mdn 2%). The responding pattern was either to answer questions directly or react to what other people had said, rather than give additional information to a question that had already been answered. Where an answer-initiation did occur, the additional information was usually given by a child other than the child who had originally answered the question.

106-84-6

Barbara: I wonder what's in that cave there?

Jenny: Might be a spooky monster - - -

Barbara: Mmm.

Joanne: Might be a bear.

103-84-1

Helen: Do you like going to the beach?
Tania: Yeah - - - 'cause we've got a top storey house over there - - - A frame.
Margaret: I like going to the beach because each time a wave comes up I can run away.

Responding was shared by the three children in each group in a more equitable manner than was the case with other major categories of verbal behaviour, and in five of the groups the difference between the children doing most and least responding was approximately 10% (in the other group it was 23%). Since such a high proportion of responses were reactions this tended to minimise the effect of any child trying to control and dominate verbal exchanges as had the adults, most particularly the teachers.

The response patterns in this situation often had a whimsical quality, an unpredictability seen only fleetingly in most interactions involving adults. The reactions occurred generally in sequences, most of which developed from substantive statements.

006-83-6

The boys were discussing a T.V. programme and how they would get someone out of the house.

Richard: I'd I'd get the arrow and make it go and let it go so it'll go 'klok' -
Simon: Hey.
Richard: - so the suction'll get stuck on his mouth and he can't talk.
Simon: Hey, why don't - - - why can't you just send off a sky rocket it'll make a noise like an arrow as long as it wasn't a screaming one remember -
George: Whee!! Just going.

These sequences were also interesting for the manner in which content was developed. Ideas were infectious and the children's enthusiasm carried them along.

001-81-6

Mark: I really want to have a look another look at the elephants - - -
Tom: Yeah they're quite - - - -

big. They're quite huge.
Mark: Big and ugly - - -
Philip: Imagine imagine sitting on one of those tusks.
Chorus: Ha ha ha.
Philip: Imagine even being sucked up by his trunk.
Tom: Oooh I wouldn't like to.

The response sequences also revealed facets of the young child's perception of situations and happenings even though their explanations were sometimes quite tortuous.

006-83-1
What is doing nothing?
Richard: If they were doing nothing and it was something to do they'd they'd be doing something but the other person would be be doing nothing.
Simon: And you can't do nothing - - - 'cause if you're doing nothing - - - then you've got - - - then you're doing nothing and you're doing something because you're doing nothing.

102-84-5
Dressing up can be revealing.
Tracey: Do you like playing with friends? I liked it when I went up to Alison's the other day - - - -
Alison: We dressed up and I got into my togs and some - - - sort of um - - - yeh.
Tracey: It was neat fun eh? - - -
Alison: And I went and I - - - I walked sexy right past the man at the door.
Tracey: Who?
Alison: You know that man at the door who came - - -
Tracey: Pity 'cause you were wiggling your bottom or something like that - - -
Alison: Oh I was just tipsy.

Although most responding was reacting and questions tended to get yes/no or short answers, some of those answers were quite thoughtful, and probing occasionally allowed a response to be developed.

005-84-5
Discussing water boards for skimming in shallow water at the beach and probing for additional information. Non-verbal information is an important factor in this answer.

George: Were they round like that?
Simon: Yeah. Yeah sort of but much bigger -
George: Yeah pretty big.
Simon: - say if this was round and I hopped on it and - - - -

002-84-5
Fantasy merges with reality when three of the boys talk about their fishing experiences. Philip describes how he went game fishing with his father and gets into trouble. He finishes:

Philip: ...he couldn't move it and then he at last pulled himself out - - - at least he did too he sk he saved me - - -
Mark: Why?
Philip: 'Cause I had the boat hadn't picked me up - - - and the swordfish had got out.
Tom: Was the swordfish dragging you along?
Philip: Yeah.

Acceptance Evaluation (Table 5.4, p.284). Although subjects (Mdn 35%) tended to do more accepting-evaluating than the other children (Mdn 30%), there did not appear to be any single pattern of using these moves that applied to all groups. In half the groups (C, D, and E) moves were shared fairly evenly by the three children, in two groups (A and B) one child made 50% of acceptance-evaluation moves, and in the other group (F) two children shared over 80% of the moves. The simple accept accounted for at least 75% of all acceptance-evaluation behaviour (Mdn 82%) and was used by all children, as was the correction which, however, was used infrequently (Mdn 8%). Some children also gave reasons for their corrections, and this was used in five of the groups but not by all children (Mdn 2%). One other move, the accept repeat, occurred in all groups with most children but with limited frequency (Mdn 5%). Only three children praised and in each case the move accounted for 1% or less of all moves.

While there were plenty of opportunities to praise this did

not happen frequently, although when it did occur the praise tended to be enthusiastic.

003-82-3
Robert: That's a body - - -
William: Right!

106-81-2
Jenny: It's a hippopotamus.
Barbara: You're right!

001-82-7
Tom: This here - - - -
Mark: Yeah good boy.

If the children were sparing in their praise of one another they also did not make many hurtful comments, and it was the manner of speaking rather than the words spoken which conveyed the criticism. Most correction moves simply indicated that the response was wrong, some included what was considered to be the right answer, but very few provided reasons.

002-83-4
The boys are discussing what an octopus would do if it grabbed someone.
Tom: Squeeze him.
Philip: No no just pull him by the arm because he 'cause he c- 'cause he - - - - because the octopus couldn't be that big. And that strong. He could only just grab him.

104-83-1
Margaret: No, it must have been a girl - - - - I saw her skirt.

Sometimes the correction took different forms and did not include the negative element, but the error was clearly implied through substitution of the correct response or the drawing of attention to the incorrectness of the move.

105-81-5
Joanne: Look there's three babies - - - -
Barbara: Two.

Probing (Table 5.5, p.285). Probing behaviour can be described very simply. In this situation probing really meant using the clarification move (Mdn 89%), and in four of the groups it was the only type of probe. One child asked no probes at all, two

probed for critical awareness (11% and 25% respectively), and two used the redirect (9% and 14% respectively).

In this situation the other children tended to do more of the probing (Mdn 44%) than the subjects (Mdn 29%), but again there was no clear pattern of probing behaviour that applied to all groups. However, in four groups two of the children shared all or most of the probing and in the other two groups one child asked more than 50% of all the probes.

The children tended to use the clarification move to clear up minor points rather than to probe responses in order to gain an in-depth understanding of what was going on.

102-83-4

Tracey: Um the boy next door to us you see he really likes mowing grass and every time the his father's um mowing the lawns he gets his he gets his horse Toddles and he pushes it round the garden with his Dad. He thinks that his uh his -

Kim: His horse Toddles?

Tracey: Yeah his Todd he thinks his Toddles horse is um a lawn-mower.

(N.B. Toddles was a wooden hobby horse)

002-84-3

Talking about boats and sails. Mark doesn't really know what a spinnaker is.

Philip: That's 'cause his spinnaker - - - It goes into the air and - - - flows along.

Mark: Oh yeah is is it a swamp boat buggy?

Philip: No it's a spinnaker and it's big, round and it goes like that -

Mark: Oh yeah.

Philip: - and the wind blows and it pushes the boat along.

Sustaining (Table 5.6, p.286). The major sustaining move for all but one child and in most groups was the substantive statement (Mdn 48%). The other major sustaining move (and the main move for the other group) was the procedural statement (Mdn 29%). Together these two moves accounted for at least 60% of all sustaining behaviour (Mdn 74%) and were the only two moves to be used by all

children. Three other moves, sustaining opine (Mdn 11%), sustaining procedural question (Mdn 8%), and 'Answer Own Question' (Mdn 5%) were used in five of the six groups - but not the same five groups for each type.

There was a tendency for one child in each group to use a higher proportion of sustainers than the other two children, and in three of the groups this child made at least 48% of all sustaining moves. This dominance by one child was in overall sustaining behaviour and did not necessarily occur for all of the subcategories.

Where sustaining substantive statements did occur in an episode, there was a tendency for the child who initiated the episode to use the sustaining statement to keep it going. In one or two instances episodes almost became monologues delivered by a very determined child.

005-84-2

Simon:	When I was in a cave and um I didn't know that the tide was coming in Dad said that it wasn't but - - - uh that it was just about to come in and we didn't know and I was caught in the cave and it was and it was up to my knees in water - - - -
George:	In a cave?
Simon:	Yeah and I was stuck there with two other kids which were um throwing whatever they could find at the walls until I came through and one of them I think threw an oyster - - - you know those -
George:	Yeah.
Simon:	- pearl oysters.
Richard:	Well what did it do?
Simon:	And then um I I found out that there were crabs in the tunnel and then I found out that the tide was coming in so uh - - - - and then I found that I didn't know the way out - - - so ah - - - eventually I landed out um where - - - something looked like a volcano and it's sort of an island in the sea you know - - - sort of volcano -
Richard:	Yeah yeah.
Simon:	- sort of like an island and the - - - then I had to go

back in and come out the other side but I couldn't go right in because there was a - - - sort of wall of rock - - - there and uh it was pretty high - - - by that wall of rocks so I - - - I started thinking uh of finding my way out the other way - - - -

George: Yeah at Te Akau there are um a couple of beaches. Waves are up about - - - there sometimes they go really high.

(George found that the only way to stop Simon in full flight was to change the subject.)

A considerable amount of activity was associated with the interactions in this situation, and this was reflected in the relatively high proportion of procedural moves when compared with other situations. Children frequently gave each other directions and instructions, and this was due partly to the nature of the focus provided for the interactions.

Although not a high frequency move, the 'Answer Own Question' was an interesting one. When adults answered their own questions there was usually an expectation of a response, as indicated by a time lapse. However, with children the move often seemed to be thinking aloud, and question and answer followed immediately on from one another as if there was no intention of another person responding.

002-84-5
Philip: Do you know what happened? I fell out of the rig and and the well the fish pulled me two yards.

001-81-6
Mark: Yeah yeah you know what happened? A frost came over night and the mud and the mud turned as hard as cement.

Episodes. Verbal exchanges in this situation tended to move along at a fairly rapid rate (Table 5.7, p.287) with a median of 19.6 moves per minute (i.e. a move every 3.1 seconds), from a slow rate of 16 moves per minute to a fast rate of 22.3 moves per minute. Episodes were fairly short with a median of 5.6 moves

(Table 5.7). While episodes were generally short, some sequences were quite lengthy, both in number of moves made and time taken.

C02-81-7
One activity involved a "trip" around a model zoo which included a wide range of animals but also a number of structural defects. For example, some fences were missing and exhibits could move freely from area to area. The role play became quite realistic, as this sequence indicates.

Philip: Hey let's look at the seals again.
Tom: Yeah.
Mark: Mmm.
Philip: Hey look look one's they're they're both -
Tom: They could get it out of there couldn't they?
Mark: No.
Tom: Couldn't they -
Philip: Probably that -
Tom: - they'd walk -
Philip: - probably that -
Tom: - down like this.
Philip: - they could slip. They could probably slip.
Tom: They could get up there and -
Mark: No that's that's -
Tom: - get out there.
Mark: - quite a few feet though - - - - That's uh quite a few feet deep.
Tom: They could do this - - - -
Philip: Well they could take -
Mark: They couldn't.
Philip: - a short cut down the rocks and jump off - - - -
Tom: They could jump down. Hey! Could they go down here? - - - -
Philip: Yeah - - - but what -
Mark: No but they -
Philip: - if they what if they made perhaps they made a wrong wrong turning - - - jumped off the rock and landed in with the tigers?
Mark: That that -
Tom: I wouldn't know I wouldn't know what to do then.

(Focus then shifts.)

5.5 Summary

In the two situations involving the teacher, the child's very clear verbal role was to respond, and in the dyadic interactions at least 83% of the child's verbal moves were responses (Mdn 91%). Teachers did very little responding (Mdn 4%), but dominated all other forms of verbal behaviour (Figs. 5.1, p.281 and 5.2, p.288). In the situation with no teacher present,

children showed they were able to use questions to initiate episodes, to ask probing questions, and to use sustaining moves (Fig. 5.3, p.289).

Most initial structuring moves were substantive statements, although in the children interactions these comprised a lesser proportion than in the two teacher situations. Children tended to use more procedural moves when the teacher was not present (Table 5.1, p.281).

The teacher dominated the asking of initial questions and even in the small group situation the children asked few initial questions. Memory recall questions and opines were the two major types of questions asked, although teachers also asked comprehension questions quite frequently. In the children situation, the children relied on the memory and opine questions but asked many procedural questions as well (Table 5.2, p.282).

Responding was clearly a child verbal behaviour, understandably so with the high proportion of questions asked by teachers; and the few responses which were made by teachers were mainly reactions. Most responses contained fewer than five ideas and the yes/no and short answer were the main types of response in those situations involving the teacher. On their own, however, children's responses were mainly reactions (Table 5.3, p.283).

Accepting and evaluating was done mainly by the teacher but most of this type of behaviour consisted of simple accepts. Teachers were more ready to praise than correct and used virtually no criticism. In their situation, however, children were much more likely to correct each other than give praise, but they still relied on the simple accept to acknowledge the verbal behaviour of other participants (Table 5.4, p.284).

When the teacher was present, she did the probing and few, if any, probes were used by the child. Probing generally asked for a response to be clarified or for more information to be given, but teachers frequently called on children to justify an answer they had given. Sometimes they helped the child respond by using prompts. They were more likely to use prompts in the dyadic situation than in the small group exchanges where they tended to

redirect questions to other children. On their own, children, when they did probe, asked only for clarification of responses given (Table 5.5, p.285).

In her interactions with children, the teacher did most of the sustaining and this she did through the use of statements (substantive and comment) and by asking sustaining opine questions. For their part, children did little else but make substantive statements, although in the children situation procedural moves occurred frequently (Table 5.6, p.286).

In the teacher-child situation, there were fewer moves per minute and per episode than in the other two school situations. Episodes were longest in the teacher-children situation and most moves per minute occurred in the children interactions (Table 5.7, p.287).

Although the content of interactions was prescribed in the school situations, there was, nevertheless, a diversity of topics discussed that reflected the interests and, more specifically, the reading habits of the children. Some of the discussions in the school setting re-travelled ground the children covered in verbal exchanges in the home, but more often than not the children revealed facets of their interests that had not shown up in earlier discussions.

CHAPTER 6: PATTERNS OF VERBAL INTERACTION

Overview. In this chapter, the general characteristics and patterns of verbal behaviour in both home and school settings are compared and discussed. The results of the statistical testing of the research hypotheses are presented, and the chapter concludes with a discussion of sequences in verbal interaction.

6.1 Introduction

The emphasis in the previous two chapters has been largely on describing the language behaviour of participants in various situations within two major settings: home and school. While the present project was concerned primarily with the language behaviour of children, the verbal exchanges they engaged in have been analysed with regard to all participants and with reference to the circumstances which initiated and sustained these conversations. This reflects the need to describe verbal performance as a social activity involving at least two persons within a specific context, if its primary communicative function is to be fully acknowledged (Bell, 1968; Broen, 1972; Fraser and Roberts, 1975). The young child learns not only the rules of language but also a range of situational cues and role-taking skills that help him decide what it is appropriate to say, when to say it, and in what manner (Kellner, 1970; Giles et al., 1973; Harris, 1975; Wells, 1975).

Past research has provided detailed accounts of the structure of an individual's language, but there are, as yet, few studies which have provided a chronicle of language behaviour in context, and this would seem to be the most pressing need at present (Cazden et al., 1972; Harris, 1975). Thus, viewing the verbal interaction samples within a general framework of language as a social, communicative act, this chapter has three main objectives:

i) to discuss the verbal behaviour described in previous chapters, by identifying recurring patterns of language usage and commenting on the function of specific verbal moves, with reference to other research findings where appropriate;

ii) to discuss the results of the statistical testing of the research hypotheses stated in Chapter 2; and

iii) to discuss patterns of verbal behaviour described in this study in the context of sequences of interaction, again with reference to related research findings.

6.2 Patterns in verbal behaviour

The underlying thesis of the present study is that within any verbal interactive context there exists a range of factors, related particularly to those individuals taking part and their perception of the purpose for which they meet, which will influence the nature of the verbal exchange that results. One consequence of adopting such a position is that it should be possible to observe and describe differences in verbal behaviour in a manner which will distinguish between different language settings.

Subsequent observations demonstrated that this was indeed the case. Behind the individual differences that characterized interactions in each of the situations sampled were broad and general patterns of verbal behaviour that could be usefully described, not only by the specific pattern of the moves used, but also in relation to the category of participant.

If the total pattern of verbal behaviour is considered, irrespective of individual participants or situations, the following picture emerges (Fig. 6.1, p.290). Approximately 40% of all verbal moves were responses, initiated by statements (10%) and/or questions (12%), sometimes probed (5%), sustained by a variety of moves (13%), and often evaluated (20%). Within this broad patterning of verbal behaviour, the differences begin to emerge (Fig. 6.2, p.291). Initial statements occurred most frequently in those situations involving only children (12 - 15%), least frequently in the teacher situations (6%), and the adult home situations fell between those extremes (8 - 9%). However, the highest proportion of initial questions was asked in the teacher-child situation (19%), nearly four times the proportion occurring in the children situations (5%) and still almost twice as high as in the other situations (10 - 11%). The proportion of responding behaviour was very even across all situations (37 - 42%), apart from the teacher-children

interactions (48%). There was also a very similar proportion of accepting-evaluating behaviour in each situation (18 - 21%), whereas probing was used most frequently in the teacher situations (7 - 8%) and least frequently in those situations involving only children (1 - 4%). Sustaining behaviour constituted a higher proportion of moves in verbal exchanges in the home settings and in the school situation involving only children (13 - 15%), but in the teacher situations fewer sustaining moves occurred (9 - 11%).

The study focussed only on the verbal language component of interactions and non-verbal behaviours were not recorded. However, as mentioned above, the technical problems of getting satisfactory audio-visual records far outweighed any advantages. Lytton (1973) had found such difficulty in 'sensitizing' mothers to the presence of video cameras in the home that he reverted to audio tapes only. Non-verbal behaviour is obviously of great importance since a whole range of cues, gestures, and supra-segmental features complement the language of the spoken message (Bramwell, 1972; Galloway, 1968, 1971; Duncan, 1974). There is also evidence to suggest that where verbal and non-verbal messages conflict, children may be influenced more by the non-verbal indicators (Keith et al., 1974). These points have been made earlier but deserve repeating as a reminder of the very significant part non-verbal behaviour plays in the full understanding of spoken communications. The various types of language moves will now be discussed in more detail across situations.

6.2.1 Initial Structuring Behaviour (Fig. 6.3, p.292). Most moves of this type consisted of substantive statements, and in no situation did these account for less than 60% of the initial structuring moves. In all but one situation they were at least 80%. There was a tendency for a slightly higher proportion of substantive statements in all home situations (85 - 90%) than in the teacher-involved interactions (80 - 85%), while the children-only situation had the lowest proportion (68.5%). Initial substantive statements functioned in a number of ways in relation to subsequent moves. Sometimes the statement was made and accepted and this was followed either by a new episode or by subsequent sustaining statements.

103-44-1
Talking about going to school by bus.

Adult:	Oh-h I'm sure it's pretty good to be able to go on the bus for a change.
Helen:	Mmm.

At other times the initial statement was preceded or followed by a question which was answered.

104-44-1
A fire at the local supermarket.

Adult:	You were saying that it came over about the fire. What fire's this?
Margaret:	Well it was at Smith's and um - - - It was before I got to school and it's been on the radio that no-one's allowed to go there.

Sometimes the initial statement was made and reacted to.

005-44-2
Model Boats.

Simon:	And the other two I just made up. And if you uh like to make this into an ordinary - - - boat not a speed boat you just need to take the back off - - - - and hey presto.
Adult:	That's a pretty mean looking speed boat really.

Occasionally, the initial statement was questioned immediately by another person using either a probe or an opine question.

004-43-4
Discussing the plot of a story.

Michael:	I know how he got out.
Adult:	How did he get out?
Michael:	Oh he got these sort of ice-cubes they looked like -
Adult:	Mmm.
Michael:	- and he put them up for some steps ov over the wall, then there was a hill going down.

The much higher proportion of initial procedural statements in the children situation can be explained in two ways. On the one hand, children had a far greater tendency to direct and give instructions to each other than occurred in those exchanges involving adults. This was partly due to the focus of one of the interaction sessions where the children were involved in constructing faces. Each child seemed to have a clear idea of what the other children should be doing and didn't hesitate to tell them so.

001-82-7
Mark: Hey why why don't you use this one?
Tom: I'm doing this one.

002-81-7
Philip: Hey let's look at the seals again.
Tom: Yeah.

105-82-3
Joanne: Let's start making them now.
Barbara: Alright. You can start.

On the other hand, adults did not engage in managerial comments to the same degree because they tended to manipulate and influence the exchanges through their dominant use of substantive verbal behaviour.

In all dyadic situations involving adults there was a clear tendency for the adult to dominate initial structuring moves. The two particularly interesting situations were those involving parent-child and teacher-children. In the former, the children tended to use a higher proportion of initial structuring moves. than their fathers. Similarly, the teachers did not dominate the initial structuring moves in the teacher-children situation to the same extent as they had in their interactions with the child alone. Enlarging the group seemed to create a new dynamic that allowed the children to take the initiative more easily than was the case in the dyadic situations. Unfortunately for the child, when adults were involved, the initiative was short lived and, apart from possible cognitive explanations, this appeared to result as much from the child's inability to use verbal strategies to maintain communicative control as from the adult's 'superior' language skills. Therefore, the critical moves in manipulating and controlling the verbal exchanges were not so much the initial structuring moves on their own but initial questioning, probing, and sustaining that allowed a momentum to be maintained. All too frequently the child's initiating statements stood isolated and needed the intervention of another to keep the theme moving. If this intervention took the form of a probing question or reaction then the initiative immediately shifted to the other person, who was most often an adult.

101-14-3
Buying a new swim suit.
Alison: I like the ones that are sort of a nylon thing.
Mother: What's the pattern? What do they look like?
Alison: Oh they got - - -
(Mother takes over the episode)

001-24-4
Mark: And then I went in and just happened happened to be thinking of Winnie the Pooh and then I remembered my -
Father: Winnie the Pooh?
Mark: Yeah Winnie the Pooh and Winnie the Pooh always reminds me of Owl - - -
Father: Why does Winnie the Pooh remind you of Owl?
(Mark never gets back to what he started off to say as Father takes over the episode)

6.2.2 Initial Questioning Patterns. Questioning was very much an adult behaviour and in those situations involving adults they asked at least 60% of all initial questions, as much as 100% and often about 85%. In every situation, questions asking for recall of information were the dominant type used and accounted for 50 - 60% of all initial questions (Fig. 6.4, p.293). The other major type of initial question was the opine and 30 - 40% of questions asked in home situations involving adults were of this type. The proportion was slightly less in the two teacher-involved situations (20 - 25%), and this is accounted for, in part, by the higher proportion of comprehension questions teachers asked (14 - 15%) compared with adults in the other situations (1 - 3%). While the proportion of initial questions asked in those situations involving only children was not as high as in those with adults, the general pattern was similar: more memory questions (40 - 60%) than opines (26 - 28%).

Initial procedural questions were asked in all situations but in most accounted for only 2 - 5%. Children asked more in their two situations (7% and 28% respectively) and a slightly higher proportion occurred in the teacher-children situation (8%). The reasons for the children resorting to more procedural questions seem to be the same as those advanced for the incidence of initial

procedural statements. Rhetorical questions were used in every group, except the children situation, but had little substantive relevance and constituted a very small proportion of all initial questions asked (1 - 2%).

The higher-order questions were conspicuous by their absence: at the most they tended to be used infrequently. Only the affective question was asked in every situation but it accounted for only 1 - 8% of all initial questions asked. Evaluation questions were not asked in either of the child-only situations or the father-child situation, and application and synthesis questions were asked only in some teacher-child interactions.

The initiating pattern which emerged was one where episodes tended to open in a simple manner with little cognitive pressure placed on the participants. They were either asked to recall information that was presumed to be readily available to them, or to express an opinion which invariably could be answered with a yes/no response. The challenge to think, where it did occur, tended to emerge as episodes developed, and this will be discussed in a later section.

Of all the facets of verbal behaviour discussed in the literature, few have received such attention as the interrogative form, particularly in its application to classroom interaction. The interest in question-asking behaviour of teachers is not of recent origin, and Riegle (1975) reports on studies as far back as 1912 that show questioning as the predominant teaching strategy at different class levels and in different curriculum areas. Even though more recent curriculum trends have emphasized the pupil's role in inquiry and discovery approaches to learning, teachers still seem to rely heavily on questioning to achieve their learning objectives. It may well be, of course, that the substantive nature of this questioning behaviour has changed over the years. However, the evidence does not seem to support any such differences (Hunkins, 1966; Gall, 1970). The findings seem to be consistent in different subjects (Pate, 1966; Moon, 1971), with pupils of all ages (Guszak, 1967; Arnold et al., 1974), and even in 'informal' classrooms (Resnick, 1972). Commonly, about 60% of questions require simply the recall of information, 20% call for more critical thinking, and

20% are procedural in nature. And as Gall (1970) reports, this general characteristic persists in spite of evidence stretching back 30 or more years to indicate that programmes are available for, and successful in, improving the quality of teachers' questioning techniques. Guszak (1967) found in his study of teachers in Grades 2, 4, and 6 that, of the questions they asked related to reading assignments, approximately 70% were concerned with either locating information or recalling facts. While a further 15% were evaluation questions, analysis of answers given to these indicated that nearly all were of the yes/no type. And although the proportion of 'higher-order' questions increased by grade level, this remained minor compared to the incidence of recall-recognition questions.

Trying to ask questions of a higher-order may not be a simple task. Primary teachers, in a study by Arnold et al. (1974) attempted to ask questions at each of the levels identified in Bloom's Taxonomy, yet a considerable proportion were still of the recall (26.7%) and comprehension (38.9%) type. More surprising, perhaps, is the high proportion of recall questions asked in inquiry-based programmes. As a result of a workshop programme designed to complement the aims of modern science curriculum, a group of teachers reduced the proportion of recall questions they asked from 75 - 80% to approximately 40% (Moon, 1971). However, this still seems excessive when higher-order questions could have tested both the basic grasp of content and the ability to use the knowledge. Part of the problem may lie in teachers' perceptions of the purposes for which questions are asked. Pate & Bremer (1967) explored this issue with a number of primary school teachers in Grades 1 - 6. They gave their sample the opportunity of stating "three important purposes of teachers' questions of pupils", and 69% of the 129 teachers gave as one important aim, "checking on the effectiveness of pupil learning". What constituted learning was not clear from responses given by the teachers, but for 47% an important reason for questioning was to test children's ability to recall specific facts. Other teachers (10%) said that an important purpose of questioning was to get children to use facts in generalizing and making inferences, but Pate & Bremer report that few teachers listed both purposes (i.e. recall of specific facts and

generalizing-inferring). Perhaps as teachers become more experienced they give greater thought to the quality of their questioning, and there is some indication of this in a study by Wright and Nuthall (1970).

The predominant questioning pattern for teachers in the present study would seem to follow the same general trend discussed above, but the same pattern is accentuated more so in the home situation where few questions other than memory-recall and opines were asked. In the home settings, however, this pattern is probably more understandable when the basic purpose which communication appeared to be serving is considered. The verbal exchanges between adult and child, and between children in the home, were primarily social in orientation; a sharing, telling, finding out experience using family interests and events of moment as the basic substantive content. Under these conditions, when questions were needed, those asked were quite appropriate. Less understandable, however, was the teachers' questioning pattern. They created for themselves opportunities which had great potential for extending the children, making it possible for them to apply, analyse, and evaluate ideas, but these eventuated as very brief and spasmodic interludes in verbal sequences characterized by numerous memory and opine questions.

Children, as well as teachers or other adults, also question, and much of what has been discussed above relates to the general characteristics of child questioning, particularly in the classroom situation. This area of verbal behaviour has been commented on in terms of the nature of children's questions and the infrequency with which they are asked (Yamamoto, 1962; Loban, 1963; Sadker & Cooper, 1974; Cornbleth, 1975), the need to teach children to question (Olmo, 1975), and the means by which this might be achieved (Yamamoto, 1962; Torrance, 1970; Denney and Connors, 1974; Sadker and Cooper, 1974; Ross and Balzer, 1975).

Cornbleth (1975), for example, notes findings from a number of studies which indicate pupils ask few questions in the classroom, and those they do tend to be of the memory recall-recognition type. This is hardly surprising since teachers seem to model this type of question with great frequency, nor is it surprising that

children ask so few questions, since researchers have consistently referred to the preponderance of teacher talk in classroom interactions. It appears that encouraging children to ask questions is not accorded a high priority in many classrooms. One of the difficulties teachers face, of course, is the number of children with whom they need to relate, and there are indications from a study by Torrance (1970) that group size may be related to the incidence of questions asked by children. He found the mean number of questions asked increased as group size decreased. In addition to asking proportionately more questions, children in smaller groups were more likely to ask divergent-type questions and less likely to repeat questions already asked. Sadker and Cooper (1974) believe questioning to be a lost skill for many children, and they used a microteaching approach to develop the question-asking behaviour of a group of Grade 5 pupils. Their procedure was successful in lifting both the incidence and quality of question-asking in the short-term, and, if nothing else, the finding indicates question-asking habits can be changed.

The results of the present study are consistent with those cited above but indicate a tendency for children to do more questioning in home interactions than with their teachers. The trends noted in other research findings were found in the present study, even when conditions prevailed which many would consider ideal, that is, one to one or teacher and three children. If the character of these interactions is typical of the general mode of teacher 'discussions' with larger groups of pupils, then the children are being given very few opportunities to develop their own questioning skills, let alone to participate in an interaction on reasonably equal terms. The burgeoning interest in microteaching programmes attests to the widespread concern of educators to improve the effectiveness, not only of teacher questioning skills but of teaching techniques in general. However, if changing teachers' questioning patterns is seen by educators as a desirable trend, then the process may involve not only building competence in asking different types of questions but also in developing a much more critical attitude towards the purposes for which questions are asked.

6.2.3 Responding behaviour. The incidence of responding behaviour proved to be a fairly reliable indicator of the type of role participants played, and, since adults dominated all questioning behaviour (probing and sustaining questions will be discussed below), it was somewhat inevitable that the children would do most of the responding; and they did. In the home adult situations 70 - 80% of the responding was done by the children, and in the teacher settings this proportion was higher still (90%). Even in the parents-child situation, the child's proportion of responding behaviour was much higher (50 - 60%) than would be expected if all three had been participating on a reasonably equal basis. However, in the two situations involving no adults, responding tended to be shared equally by those participating.

Of course, not all responding behaviour was directly elicited by such previous moves as a question or a direction to speak which is complied with. A general indicator of the amount of spontaneous or self-initiated responding occurring in the verbal exchanges was given by the proportion of reactions (Fig. 6.5, p.294). In the home-adult dyads, reactions comprised 25 - 34% of responses, and a further 5 - 8% were answer-initiations. In the parents-child situation there was a higher proportion of reacting (45%), but this did not seem to be simply the influence of a larger group since in the teacher-children situation the proportion of reactions was less (35%). In the child-child and the children-only situations the corresponding figures were 50% and 76% respectively. On the other hand, in the teacher-child situation, the teachers had such a tight reign over the way in which the discussions proceeded that only 9% of responses were reactions. In the situations involving children-only the lower proportion of questioning would be a factor, but asking fewer questions in itself does not mean more reacting; it could simply result in less conversation. However, once group size went beyond two, interactions seemed to flow more "naturally".

If a strictly question-answer dialogue had been maintained, then it would have been very difficult for individuals to deviate from the formality of such sequences (Wolfson, 1976), but in the types of interaction that occurred in the present study there were many opportunities for conversations to develop spontaneously, and the ways in which reactions occurred reflected this naturalness.

Sometimes an initial or sustaining statement was made without a follow-up question and the substantive content of the statement was reacted to.

104-72-4

Teacher:	Look at this elephant - - - Over here - - - With the big tusks.
Tania:	I think he might be charging.

In other circumstances a question was asked and there was often a reaction to the answer that was given.

001-33-3
Mark and his parents are talking about the merits of chopper guards and other accessories for bikes.

Father:	They mi they look good though, don't they?
Mark:	Yeah.
Mother:	They look jazzy but you know they they come with the banana seats and high rise handle bars and I think you've already agreed that banana-
Mark:	Mmm.
Mother:	-seats and high rise handle bars aren't the safest things.
Mark:	I know - - - The high rise handle bars I hate.
Mother:	Alright. Well I put chopper guards in the same - - - in the same category as high rise handle bars.
Father:	Mmm. Tell you what else is more important.
Mark:	What are the dangers of banana seats?
Father:	Mm. I don't think they're dangerous -
Mother:	It's not just that -
Father:	- so much, just very expensive.
Mother:	Yeah. And ver very gimmicky.
Father:	Mmm.

Occasionally, the reaction interrupted a move and completed the comment being made.

105-71-7

Teacher:	What do you think mother and father will be doing while the children are swimming?
Joanne:	They'd just be um - - -
Barbara:	Relaxing.
Joanne:	They'd have had a swim later and and they'd just be lying

on the - - - the - - -
towels -
Teacher: Yes.
Joanne: - with a book.
Teacher: Yes.

The reaction sequence, more than any other combination of moves, showed participants interacting spontaneously with each other.

004-31-11
Michael wants to know where his father goes to play indoor bowls.
Mother: Mmm. Up St Francis Church. That's where he goes you know that don't -
Michael: Just there by -
Mother: Yes by the Church paddock.
Michael: I thought he went way over there somewhere.
Father: Oh no.
Mother: Oh no. He just goes there by that there.
Michael: I never knew he went up there. I thought he went far far away. One time he went um you know Mrs Jones came up - - - I thought I thought you were going in the car and I didn't know you were going to walk a whole lot about two miles.

Responding behaviour was also considered from the viewpoint of the complexity of responses. In the present study, complexity was defined by the number of ideas contained in a response, and this allowed at least a crude categorization on a dimension other than the four categories. Of all responses 90% were either yes/no or contained fewer than five ideas (Fig. 6.6, p.295). Of these, 44% had two - four ideas, 26% only one idea, and 21% were yes/noes. There were few responses containing five - 11 ideas (9%), and hardly any containing 12 or more (1%). The situations produced remarkably similar proportions of responses that fell within the various 'ideas' categories, and teachers appeared to be no more successful than other adults in eliciting longer responses. The more extended replies that did occur showed the child was quite capable of talking at length when the event or incident was of interest.

102-63-2
Discussing an article on magpies from a School Journal.
Teacher: And what did you think of the magpies' territory? - - - -

Tracey: Well I found out in the book that they usually have a um - - - a big place to um for one group of magpies -
Teacher: Mmm.
Tracey: - and in each group they have a - - - they have a king and um when when other magpies - - - come into their territory they um have a fight and sometimes the king dies so the other - - - so another ah magpie from the group is - - - called up to be king.
Teacher: Mmm.

001-13-9
Mark is complaining about the weeds in the paddock he crosses on the way to school.
Mother: Don't remember those. Were those were those little like thistles?
Mark: Yeah yeah they they rub against here and if they get in when they get inside your gumboots in the morning -
Mother: Yik!
Mark: - and they're wet -
Mother: Mmm.
Mark: - and when yo and when this part it touches on the wool and dries up that and then it and then it it makes a sticky sort of stuff and -
Mother: Oh-h yoik!!
Mark: - it's miserable. I hate it.
Mother: Well, sounds miserable.

A responding pattern emerged which was characterized by brief answers or simple expressions of opinion. There were, in all situations, spontaneous exchanges, but these were much more common when no adults were involved and least frequent in the teacher-child interactions. Longer responses did occur, but participants were more likely to make protracted statements than to give extended replies.

6.2.4 Acceptance-evaluation patterns. This was generally an adult behaviour, and in the adult dyads they made 60 - 70% of all these moves and as high as 90% in the teacher-child situation. In the parents-child and the situations involving no adults, acceptance-evaluation moves tended to be shared more by all participants. This general trend is consistent when considered within the

context of the overall patterning of verbal behaviour. This type of move seems to be more appropriate to use following or during a response (directly solicited or volunteered), and since children made most of the responses it is more likely that the other person (an adult in most cases) would make most of the acceptance-evaluation moves. There was much more accepting behaviour than evaluative and the simple accept accounted for 76 - 83% of the moves (Fig. 6.7, p.296). Although most simple accepts were very ordinary verbal behaviours (e.g. Uh-huh, Mmm), they appeared to perform a very positive feedback function, and their relationship to the substantive content of the comments being made suggested they were not occurring in any haphazard fashion. Most commonly, the listener used them at the end of a statement or response by another person, or to encourage a person to continue a comment being made.

022-23-2
Father: What's mustering?
Philip: Rounding up sheep.
Father: Oh yeah.

104-13-2
The children wrote a story at school.
Mother: What was it about?
Margaret: Um - - - the - - - I just forget the title is called - - - "Night Full of Light".
Mother: Mmm.
Margaret: And um I write about what happened last night -
Mother: Yes.
Margaret: - about Daddy coming home from Matamata with some fireworks.
Mother: Yes.
Margaret: And - - - um - - - I started with "Last night was Guy Fawkes" - - -
Mother: Yes.

On occasions, the simple accept was followed by a question that either probed the content of the previous comment or shifted the focus. And sometimes the simple accept preceded a reaction by the listener. In all of these instances the listener used the simple accept to precede the change to a more active speaking role.

101-62-4
Teacher accepts an answer and shifts focus.
Teacher: Mmm - - What about the nonsense words? Were they hard to find?
Alison: No I just thought of the words

- - - You know a nonsense word it doesn't make sense but most - - - words in that one were - - - oh-h well you know like Kung-fu is a word.

003-12-2

William: I bet those people are cold in the water.

Mother: Oh-h yes. I don't know. It's not actually cold in the water.

The accept-repeat was the other major move in this category, accounting for 11 - 15% of acceptance-evaluation behaviour in home situations involving adults and in the teacher-children situation. In the interactions where no adults were involved and in the teacher-child situation accept-repeats occured less frequently (6 - 8%). Like the simple accept, the repeat move also performed a number of functions. Sometimes, part or all of a previous move was repeated. This was not done with such frequency as to suggest some type of verbal idiosyncracy, but rather seemed to be used for emphasis; to heighten an idea or ideas that had been offered by the previous speaker.

004-33-6

Mother: What's it alongside?

Michael: A stream.

Mother: A stream.

On occasions the repeated part of the move served to orient attention and provide a focus for a follow-up question.

103-34-4

Talking about shifting to another town to live.

Mother: Could we stay with Sherry and Doug? Mmm?

Helen: We could find another house -

Mother: Yes.

Helen: - near someone near the beach or something.

Mother: Near beaches. You'd like to go near beaches would you.

Helen: No.

In some instances the repeat part of the move served the same type of orienting function referred to above, but in this instance was used as the basis for an explanatory statement or a comment.

002-31-9
Discussing iron on transfers.
Father: What's that?
Philip: 'Terrific'.
Mother: 'Terrific'. You stick it on a on a plain T-shirt -
Philip: Yeah, it's a T-sh -
Mother: - an iron on transfer.
Father: Yeah.

Sometimes, the repetition was accompanied by some form of evaluative comment, usually praise.

102-43-9
Adult: What's a baby goat called? - - -
Tracey: Ah - - - kit.
Adult: A -
Tracey: Kid.
Adult: Kid. That's right.

Evaluative type moves accounted for 7 - 11% of all acceptance-evaluation behaviour, and a little less evaluation occurred in home situations (7 - 8%) than in the school settings (9 - 11%). In most of the situations as much praising as correcting occurred, but in the teacher-child interactions much more praising (10%) than correcting (1%) took place, whereas in the two children situations they tended to correct (6 - 10%) rather than praise (1%). However, correction was directed at the substantive content of what had been said, and reference to an individual's behaviour was very limited. Usually the correction simply indicated that the statement was wrong. Sometimes, what was believed to be the correct response was given, but only occasionally was this supported with reasons.

105-13-6
Discussing climate at different times of the year.
Mother: Christmas is warm.
Joanne: But not in England and those snow -
Mother: Why? Why isn't it warm in England?
Joanne: Because England is a cold country and -
Mother: No. No.

001-72-8
Teacher: Have you noticed anything about the fence here?
Mark: Yeah it's -
Tom: Oh the lions could get out there.

Philip: No they couldn't they'd have to have a right squeeze or they'd have to jump over through that skinny little top.

Praising, in most cases, was matter-of-fact, genuinely given rather than being overly-effusive. Most commonly, praise was given, and then the focus was shifted, and a new episode began. Sometimes, however, the person who gave the praise probed further with a follow-up question or made a statement related to the content of the episode.

103-21-3
Winning some money.

Father: And what else would you do with the with the rest of the money? - - -
Helen: Um I'd have $80 left and - - - I might save it till I'm a big lady or person.
Father: Oh-h, I see. Oh-h that's quite a good thing to do.

106-61-3

Teacher: So where do you think they may have gone after breakfast? - - - - They -
Barbara: To find blackberries.
Teacher: Right. They'd already collected mushrooms, hadn't they?
Barbara: Yes.

004-62-5
Discussing a story Michael had written.

Teacher: Where would he go to get a buy his sheep? - - -
Michael: Oh to the vet - - - I mean I can't remember their name now.
Teacher: What's it look like? - - -
Michael: Oh they've just got - - - little sort of fences and there's about five sheep in every one.
Teacher: Yes it's -
Michael: And they can walk across these little ramps.
Teacher: That's right! The Saleyards.
Michael: Yeah.
Teacher: That's right. And he'd buy his sheep. Yes. Well that that wou would be another job.

Although participants did make these more evaluative type comments, most of the 'feedback' behaviour, as indicated above, offered the speaker encouragement to continue or mild acceptance

of his ideas rather than a vocal critical comment on the substantive worth of what had been uttered.

6.2.5 Probing behaviour. Where adults were involved in the situation they dominated the use of probes, asking 80 - 90% of them and, with the exception of the teacher situations, most probes (80 - 90%) simply asked for more information or for a response to be clarified (Fig. 6.8, p.297). This type of probe was still the major one used by teachers, though not to the same extent (50 - 60%).

106-61-1

Teacher:	Have you ever made a surprise for your mother and father?
Barbara:	Yes.
Teacher:	Can you tell me about it?
Barbara:	Oh-h um - - - I got dressed very early and made the breakfast and made a cup of tea for them.
Teacher:	Did you? And what did you make for breakfast?
Barbara:	Toast.

001-51-1

Mark:	I think you'd probably like it too but we have got any but Mummy and Dad say we haven't got enough money for it.
Other child:	What?
Mark:	A swimming pool.

Because, in the situations other than those involving the teachers, probing for clarification was so dominant, very little probing for critical awareness occurred (4 - 12%). Teachers, however, challenged children to look at their answers critically to a greater extent (22 - 27%). This was probably as much a reflection of the type of focus for interactions in the classroom setting as it was a specific teaching skill.

105-64-4

Discussing a book Joanne had read. This part related to the way a group of children behaved towards the young girl in the story.

Teacher:	Why do you think they were so nasty?
Joanne:	Because they didn't like girls playing in their games and everything but she wasn't. They didn't like um - - - her brother staying playing with them without them because they were jealous - - - about her.

104-64-6

Teacher:	Do you think um they would have to have very strong foundations for this building to sit on?
Margaret:	Yes.
Teacher:	Why do you think that?
Margaret:	Well if - - - it's because a lot of cars -
Teacher:	Mmm.
Margaret:	- could go on one floor and there wasn't um anything strong on that floor the cars would fall through.
Teacher:	That's right.

With the exception of the teacher-child situation, where approximately 14% of all probes were prompts, and the children situation, where no prompts at all were used, prompting in other situations accounted for 5 - 9% of probing behaviour. Thus, while individuals used prompts on occasions to help get a response, the move did not occur with such frequency as to suggest that the questions asked were far too difficult for the other person to answer. And since most prompted questions were answered, the relevant information was obviously available. Prompting generally took the form of encouraging the other person to answer or giving definite clues to the desired response.

101-61-2

Teacher:	Do you know about the National costume of any other country? Um Holland for instance? - - -
Alison:	They have a full skirt and sort of a jacket.

006-61-3

Teacher:	What did what did the children do? - - -
Richard:	Helped to put out the fire.

Redirecting either an initial question or a probe was a verbal technique appropriate only in groups of three or more persons. In the parents-child situation redirection was not used at all, a few redirects were used in the children situation, but in the teacher-children situation 18% of probes were of this type. The move was clearly a teaching technique used to good effect. However, larger-sized groups in both home and school

settings may have given a much clearer indication of the circumstances in which people not only redirect but also prompt.

Probing, therefore, was used mainly to obtain clarification of previous remarks or to ask for further information. When children were challenged to give reasons to support their answers this was much more likely to be done by a teacher than another adult. And it was the teacher in the dyadic situation who gave most prompts. Other types of probing moves were used in only a few situations.

6.2.6 Sustaining. In dyadic situations and the teacher-children interactions it was, again, the adult who used moves to sustain episodes, and they made 80 - 95% of these moves in most cases. Even in the parents-child situation, the child's proportion of sustaining moves was similar to that in other exchanges involving adults, and mother and father tended to share the larger proportion of these moves. The highest proportion of sustaining moves by adults occurred in the teacher-child situation where, with the exception of two dyads, 90 - 100% of moves were made by the teacher.

Substantive statements and opines were the main types of sustaining moves (Fig. 6.9, p.298), with each move accounting for 30 - 40% of this type of behaviour. Children tended to rely more on substantive statements, and in the child-child situation 50% of all sustainers were of this type (46% in the children situation).

102-24-4
There is plenty of long grass in the paddock below and Tracey can't understand why their goat doesn't go down there.

Tracey: I wonder why he doesn't go the other way sometimes 'cause there's a big paddock down there and there's only one little goat and he he doesn't have far enough to stretch to eat the grass around him. He's only a little goat.

Father: Is he? Mmm. Oh well perhaps little goats don't need so much as big goats.

Tracey: You can only see his little horns peep and ears peeing up

out of the grass.
Father: Mmm. And he must likt it up there 'cause the other goat goes up there you see -
Tracey: It's so long.
Father: Mmm.
Tracey: It's just about that long.

On the other hand, adults tended to use more opines.

104-13-3
Margaret was telling about the story she had written.
Mother: Do you usually write that much?
Margaret: No.
Mother: Did you hurry up today?
Margaret: No. I was writing slowly all the way because it was on a 9G. That's the best pad.
Mother: Is it?
Margaret: Yes.
Mother: Is that the new one you got?
Margaret: Mmm.

A number of other sustaining moves were notable, not for their widespread use but, because in certain situations they occurred more frequently than in others. For example, a very high proportion of sustaining procedural statements occurred in the children situation (29%), and although the proportion was much lower in the child-child situation (10%) this still tended to be about twice the frequency of sustaining procedural moves used in any of the adult situations. As commented on above, children seemed to engage in much more activity while they talked, and they were also rather forthcoming in directing other children and telling them what to do and how to do it.

Two other moves deserve reference. One, the rhetorical question, occurred most frequently in the adult-child (13%) and teacher-child (10%) situations and least frequently in the child-child (3%) and children (2%) interactions. The difficulty posed by the rhetorical question was that it could so easily have been receiving a non-verbal response by way of a nod, frown, or some such indicator of agreement or disagreement. Thus, many of these could well have functioned as opine questions. However, since rhetorical questions accounted for about 1% of <u>all</u> verbal moves, those that may have been opines are not likely to have

had any major effect on the results above.

The other move worthy of note was the answer own question, and, although only 2 - 4% of all sustaining moves were of this type, it was used by all subjects, except Margaret, in one or more of the different situations. When the move occurred in adult utterances it was more likely to be answering a question that had failed to get a response, whereas children seemed to use it as a verbalized memory cue.

6.2.7 Episodes. Most situations were characterized by a rapid rate of verbal exchange, with approximately a move every three seconds (20 moves per minute). The notable exceptions to this pattern were the child-child and teacher-child situations, where fewer moves per minute occurred (14 and 14.8 moves respectively). However, figures such as these can give only a rough indication of the rate of interaction, since there are not only marked differences in length between various types of move but also within a category of verbal behaviour. Thus, one word, one sentence, even one paragraph might all be categorized as one move despite the obvious differences in number of words uttered.

006-63-2

Teacher:	But uh would it be very strong? - - -
Richard:	No.
Teacher:	What would happen to it?
Richard:	It'll uh snap.
Teacher:	Yes.
(Five moves:	Question; Answer; Question; Answer: Accept)

006-63-2

Teacher:	And how could she, how could she um fix that?
Richard:	She would put it in a jar with - - - soap and water mixed together and she just leaves it in there when she shakes it. She leaves it for a moment and then she pulls it out when she when she's going to get when she goes home she's going to uh do it again then rint rinse it out and dry it.
Teacher:	Yes, and what will hap what will have happened to it?
Richard:	It'd be white.
(Five moves:	Question; Answer; Accept; Question; Answer)

Another problem in determining rate of verbal exchange was the incidence of simultaneous talk. If two people talked over the top of each other they each made at least one move but the moves occupied the same time span.

101-73-6
The children get really tied up discussing the topic "Nothing is Something to Do".

Teacher:	Now look I don't understand that -
Alison:	When you are -
Tracey:	Like when you're lying -
Teacher:	You said -
Kim:	When your mother -
Tracey:	- down -
Kim:	- asks you what -
Tracey:	- people think you're -
Kim:	- you're doing -
Tracey:	- doing nothing but you are doing something you're lying down - - -
Alison:	You don't tell them -
Tracey:	When -
Alison:	- say I'm doing nothing - - -
Tracey:	When you um -
Alison:	- you're doing something you're -
Tracey:	- you see -
Alison:	- doing nothing.
Tracey:	- if your Mum asks you what you're doing and you don't want to tell her you say - - - nothing.

The third difficulty arises from periods of silence. Thus, if 10 moves occurred in a minute of interaction this might indicate 10 long moves, 10 short moves with lengthy periods of silence, or a combination of both.

103-64-3
In this extract only <u>eight</u> moves occurred in a minute of interaction and this was due partly to the <u>length</u> of the moves and partly to the frequent pauses.

Helen:	And - - - the farmer - - - made another big cheese next year and um - - - he didn't let the mouse or the cat or the dog or bear smell the cheese or bits of the cheese um - - - he let the King have it all for himself.
Teacher:	Why do you think it was so important that the farmer wanted that cheese for the King? - - -
Helen:	Because it was his birthday - - - -
Teacher:	Why do you think - - - the farmer

didn't realize that the animals were tricking him when they asked him if they could smell it?

Helen: Um - - - - 'cause they they didn't have a smiling face or they weren't going red - - - -

Teacher: Mmm - - - I wonder why he let the other animals have a smell when he knew that the first two had tricked him and had eaten some and when the third one asked him for a smell you would have thought he would have said 'No' then. I wonder why he still said 'Yes'?

The nature of episodes, moreover, is probably of greater relevance to an understanding of child language and communication than attempting to determine rates of verbal exchange. Nevertheless, rates of verbal move-change do give an indication of the amount of verbal activity that may be occurring in an interaction. There was a considerable similarity in the length of episodes from situation to situation, and the average number of moves per episode by situations ranged from 5.0 to 7.7. The teacher-children episodes tended to be the longest and the teacher-child the shortest. This is not surprising, since the teachers often conducted their interactions with individual children very much like interviews and shifted focus in a systematic and sequential progression. However, in the teacher-children exchanges there was much more interplay and, for this reason, the episodes tended to go on a little longer.

The sequencing of verbal moves will be discussed in some detail in a later section. Suffice it to say, at this point, that episodes were most likely to begin with a question, sometimes with a statement, but infrequently with both statement and question. Having started, episodes tended to be short with five-six moves, with the question answered (or statement reacted to), the answer accepted, and perhaps probed. As indicated above, teacher-children episodes were often longer than those in other situations.

102-71-2

Teacher: Do you think at some time the sea might be where he's

	sitting now?
Tracey:	Yes.
Alison:	Yes.
Kim:	Yes, because the rocks are all wet.
Teacher:	Mmm. Why can he sit there now?
Tracey:	Because the tide's out.
Teacher:	Mmm. What will happen later?
Alison:	The tide will come in and um he might not notice the tide coming in and he could, that's dangerous doing that too.

6.3 Situational influences on individual language performance

The description of verbal behaviour in previous sections of this report has indicated the characteristics of language performance in different situations. While individual variations occurred, they did not appear to do so in any haphazard manner. Quite to the contrary, as the various profile clusters have shown. General verbal behaviour could be described within fairly specific limits that applied to all individuals in a named group (for example, the group of subjects, the mother's group, and so on).

The specific research hypotheses were formulated to test the general proposition that there are significant variations in an individual's verbal performance in different types of interaction situation. Since the study was primarily descriptive in orientation and was intended to provide a detailed profile of an individual's language performance, the statistical analysis was applied only to selected areas of the total data available. Each hypothesis was tested in a number of ways.

First, the major categories of verbal moves were compared, both within specific groups and between different types of situations. For example, the children's pattern of verbal moves in the mother-child situation was compared with their verbal behaviour in the teacher-child situation. In other words, the children's initial structuring, initial questioning, responding, acceptance-evaluating, probing, and sustaining verbal behaviour in the mother-child situation was compared with that in the teacher-child situation. Similarly, the adults' verbal behaviour in those same situations would be compared in the same way. As

well as comparing the verbal behaviour of the same group in different situations (e.g. child in mother-child with child in teacher-child), the verbal behaviour of participants within a situation was also compared (e.g. mother with child).

Second, verbal behaviour at different phases of an interaction was compared. This was done to test whether, at certain phases in an interaction, people behave verbally in similar ways but at other times behave differently. Thus, interactions were divided into two phases; an opening sequence of three minutes and a second phase containing the rest of the interaction. Since the mean length of interactions was 7 minutes 24 seconds the two phases were approximately equal. Thus, situations were also compared (in the same manner described above):

i) on the first three minutes of interaction, and
ii) on the rest of the interaction.

The analysis described immediately above, however, would reveal only differences or similarities that occurred when the same phases of an interaction were compared - for example, when the first three minutes of verbal behaviour by the child in the mother-child situation was compared with the first three minutes in the teacher-child situation. Such an analysis would not necessarily reveal whether verbal behaviour <u>within</u> a situation changed as an interaction developed - for example, whether more questions were asked during the early part of an interaction than during the latter part of the same exchange. Thus, thirdly, for each group of individuals, verbal performance in the first three minutes of an interaction was compared with that in the rest of the interaction.

The results of these various types of analysis provided a profile which could be used to discuss verbal characteristics in the context of each of the three hypotheses.

6.3.1 <u>Language performance in Home and School Situations</u>. The mother-child and teacher-child situations were compared to test Hypothesis 1. Since the teachers were females this controlled the possibility that a sex factor might operate to influence

the type of verbal behaviour used by adults of different sexes.

Unless stated otherwise, the figures in the initial columns of the various tables represent the median percentage for each group. Thus, in Table 6.1, p.299, for example, 59% of initial structuring was done by the mother and 41% by the child, 93% of initial questioning was done by the mother and 7% by the child, and so on. Where comparisons are made across situations, the same median percentage is shown. For example, figures in Table 6.3, p.300, indicate that the child made 41% of the initial structuring moves which occurred in the mother-child situation, compared with 11% in the teacher-child situation. Median percentages are given for illustrative purposes only and T (or χ_r^2 where the Friedman two-way analysis of variance was used) was calculated from observed frequencies for each individual in the group.

When the verbal behaviour of mother and child was compared (Table 6.1) the differences for all major categories were significant at the $p. < .05$ level or better. Mothers made significantly more of every type of major verbal move except responding, where the children dominated. Exactly the same pattern occurred when teacher and child verbal behaviour was compared (Table 6.2, p.299) but significance was at the $p. < .01$ level for all categories.

Comparison of the child's behaviour in verbal exchanges with mother and teacher (Table 6.3) showed the child to do more responding with the teacher but to use more moves from the other major verbal categories when interacting with the mother. These differences were all significant at the $p. < .01$ level.

The variations between adult and child patterns of behaviour give some indications of the verbal roles which individuals play and the nature of the interactions in which they participate. For example, if in one situation proportionately fewer questions are asked than in the other, then this will quite clearly influence the proportion of responses that occur. However, explanations do not lie only in matching this behaviour with that. Responding, for example, is not simply a matter of answering questions, as some responses are self-initiated reactions

which an individual chooses to make. The explanation for other differences may go beyond the relationship between antecedent and consequent behaviours. For example, the asking of questions in verbal exchanges would seem to relate as much to a managerial control factor as it does to any verbal competence in this area. In all adult-child exchanges, adults exercised an effective managerial control and apparently did not encourage children to ask questions. Data from the peer group situations showed quite clearly that children did not lack the ability to frame questions.

The mother-child and teacher-child situations were also compared for variations in the different phases of an exchange. When the comparison was restricted to the first three minutes of interaction, the same general pattern of results was obtained between mother and child (Table 6.4, p.301) and between teacher and child (Table 6.5, p.301), as previously for the whole interaction. The one exception was that no significant difference was found between initial structuring behaviour for mother and child in the first three minutes, whereas a significant difference was found over the longer period. Comparisons of the child's patterns of verbal behaviour in the two situations and of the adults in those same settings (Table 6.6, p.302) again produced significant differences for all major verbal categories, as for the longer sample. Adults used a higher proportion than children of all types of verbal move except responding, and, with the exception of responding, children used more of all types of verbal behaviour with their mothers than with their teachers. Thus, the pattern of results for the analysis of the first three minutes of interaction and the previous analysis (i.e. the total interaction) was very similar. This seems to indicate that differences between situations in the overall pattern of verbal behaviour can be reliably identified in the opening phase of an interaction.

It is possible, however, that a change occurs in the latter part of an interaction, and that differences noted at the beginning of an exchange disappear as the exchange develops. This proposition was not supported by the further analysis of that part of the interaction other than the first three minutes (the duration of which varied from sample to sample). Comparisons of

mother and child's behaviour (Table 6.7, p.303), teacher and child's (Table 6.8, p.303), and child and adults' behaviour in both situations (Table 6.9, p.304) did not produce results any different from those already identified.

It seems, therefore, that the significant differences found in the comparison of verbal behaviour in the two situations cannot be attributed to any beginning phase or end phase, but occur throughout the interaction. However, the division of an interaction into approximately two halves is a very 'coarse' partitioning of a sequence and may have served to blur similarities that could have shown through if a 'finer' division had been made. Of course, unless the length of an interaction is rigidly controlled (thus making it more artificial) there are difficulties in making any type of division for comparative purposes since, for example, contrasting the third minute of a five-minute interaction with the third minute of a fifteen-minute interaction may be no more valid than the division adopted in the analysis above. Dividing interactions into the same number of phases (e.g. quarters) might prove a useful strategy, but this introduces other complications (e.g. comparing samples of unequal length), and thus it was not attempted on this occasion.

Although the between-situation analyses described above had produced very significant differences for all categories of verbal behaviour, for both the first three minutes and the total language samples, a further analysis was made to investigate the presence or absence of any sequencing effect within a situation. To this end, verbal behaviour in the first three minutes of interaction was compared with that in the remainder of the same exchange. With the exception of initial questioning and responding, the child's verbal patterning in the mother-child situation was consistent throughout the interaction (Table 6.10, p.305). However, children did more questioning in the latter part of an interaction than at the beginning ($T = 4.5$ $p < .05$) and more responding during the opening phase ($T = 0$ $p < .01$). Conversely, mothers (Table 6.11, p.305) did more initial questioning during the opening phase of an interaction ($T = 4.5$ $p < .05$) and more responding in the latter phase of an exchange ($T = 0$ $p < .01$).

In discussing the results a 'chicken or egg' situation could easily arise because the verbal behaviour of each participant was described as a proportion of the combined moves. That is, did more child questioning allow less mother questioning, or was it less mother questioning that allowed more child questions. However, when the two sets of results are compared (i.e. mothers' and children's), the complementary relationship between certain behaviours becomes apparent. With a higher proportion of mother questions (initial, probing, and possibly sustaining) occurring in the first phase of the interaction, the higher proportion of child responses during this same phase was probably predictable, although not all responses are necessarily answers.

In the teacher-child situation, initial structuring was the only verbal category where the child's pattern (Table 6.12, p.306) and the teacher's (Table 6.13, p.306) varied between the two phases of an interaction. Children did more initial structuring during the concluding phase of an interaction than at the beginning ($T = 1$ $p < .05$), and teachers did more initial structuring at the beginning of an interaction ($T = 1$ $p < .05$).

In the teacher-child situation the variations in initial structuring behaviour appear to have had no effect on the responding behaviour of the participants. Unlike the mother-child situation, where approximately 42% of all responses were answer-initiations and reactions, few responses in the teacher-child situation fell into these categories (14%). Various explanations could be advanced to account for the differences between phases in initial structuring behaviour in the absence of a changing response pattern. In the opening phase more of the teacher's initial structuring moves may have been paired with questions and thus received responses indirectly, without any corresponding increase in the proportion of responses made. Alternatively, the incidence of more reactions to the increase in structuring moves could have been compensated for by fewer sustaining questions. Variations in the proportion of sub-categories of responding would not show in an analysis at a general level. Thirdly, as the children did more initial structuring in the latter half of an interaction than they did in the first phase, the teacher may not have been reacting to the statement (since children asked no

initial or probing questions), or alternatively she may have been taking the initiative by accepting the statement and either changing the topic or probing the content of the statement. This last explanation seems to be the most consistent with the overall pattern of behaviour occurring in the interactions and described in previous chapters.

On the type of division adopted for this analysis (i.e. first three minutes and the rest of the interaction), the teacher seems to have carried on an interaction in the manner in which she started, whereas in the mother-child situation the child appears to have become more active in the interaction as it progressed, albeit in a minor way.

The results of the analyses described in this section can be summarized as follows:

Hypothesis 1. The patterning of verbal behaviour elicited in home settings will differ significantly from that produced in school situations.

i) Significant differences beyond the $p < .01$ level in most cases were found between the verbal behaviour of mother and child and also between the verbal behaviour of teacher and child in all major verbal categories.

ii) Significant differences beyond the $p < .01$ level were found between the child's verbal behaviour in the mother-child and teacher-child situations, and between the adults' verbal behaviour in the same situations. These differences were found in all major verbal categories.

iii) Supplementary analyses showed that these same differences between situations were observed when different phases of an interaction were compared. With the exception of the initial structuring behaviour of mother and child in the first three minutes of interaction, as compared with the same type of behaviour in the latter phase of the same interactions, the observed differences were consistent in duration for all major verbal categories, in most instances at the $p < .01$ level of significance.

iv) When the verbal behaviour of groups within situations was analysed for differences in phases of the exchange, variations in only a few major verbal categories were obtained. The initial questioning ($p < .05$) and responding behaviour ($p < .01$) of the group of mothers and the group of children varied between the first and latter phases of the interaction. Variation was noted in the initial structuring behaviour of teachers ($p < .05$) and of children ($p < .05$) in that situation.

6.3.2 Group size and language performance. The mother-child, parents-child, and teacher-children situations were selected to examine the group size effect on verbal performance (Hypothesis 2). Because the number of participants per group varied for each of the situations, it was decided to focus only on the child's verbal behaviour. Also, as the number of participants was no longer constant from situation to situation, the treatment of raw frequencies was altered. In comparisons described above there were always two participants interacting, and there was some point in considering verbal behaviour category by category. The proportional distribution of moves within each category was an appropriate measure. However, there are problems in using this type of distribution where group sizes vary, as changes in proportion will almost necessarily reflect the varying number of participants. Thus, in a dyadic situation a child may make 50% of the initial structuring moves but only 25% in a tetrad or 33% in a triad. While such a comparison would show the effect of varying group size on the patterning of verbal behaviour, an alternative, and perhaps more valid comparison to make when group size varies, is to express the child's performance within a major category as a proportion of the verbal moves the child makes in all categories. For example, in the mother-child situation 10% of the child's verbal moves might have been initial structuring, compared with 8% in the parents-child situation, and 7% in the teacher-children situation. Treating verbal moves in this manner means that the 100% is distributed over all major categories for each individual, thus the subject's verbal performance becomes the unit where group size varies from situation to situation.

When the verbal behaviour of the child was compared across the three situations (Table 6.14, p.307) significant differences were found in only four of the six major categories. Initial structuring and acceptance-evaluation behaviour comprised a similar porportion of all verbal moves made by the child, irrespective of changes in the size of the group. For the other major verbal categories there were significant differences between the situations. The child asked the highest proportion of initial questions in the parents-child situation and the lowest proportion in the teacher-children situation (χ^2_r= 7.82, df 2, $p < .02$). The differences in responding behaviour were also significant (χ^2_r= 7.95, df 2, $p < .02$), as were those for probing (χ^2_r= 8.91, df 2, $p < .02$), and sustaining behaviour (χ^2_r = 7.77, df 2, $p < .05$). In the teacher-children exchanges a higher proportion of the child's moves were responses than was the case in either the dyadic or the triadic situations. However, the child did proportionately less probing and sustaining in the teacher-children interactions than in the other two situations.

If mother-child and parents-child situations are considered apart from the teacher-children situation, then there are suggestions of trends that might be related to influences of group size on verbal behaviour. For example, in the parents-child situation, children did more questioning (initial and probing) than in the mother-child interactions. The differences are not large but they may indicate a greater opportunity for self-initiated involvement as group size increases. Responding accounted for a higher proportion of all verbal moves in the teacher-children interactions than in either of the other two situations (Fig. 6.2, p.291). There did not appear to be any greater incidence of questioning (initial, probing and sustaining) in the teacher-children exchanges, thus the greater proportion of responding may indicate more reacting and answer-initiating response moves - that is, a greater self-sustaining potential than developed in either of the other two situations. However, the age factor in the present comparisons may be a major confounding variable that over-rides the increases in group size. Scott (1962) has made reference to the support the two highest ranking persons in a triad give to each other, and

in the parents-child situation there would be ample evidence to confirm that observation as applying, through age and social status, to the mother and father. In the tetradic teacher-children situation the division could well have been into what Lindsay (1972) described as the 'triad plus one', and although in the present study there appeared to be a higher proportion of self-initiated responding by children (the triad) the teacher (plus one) still had firm control over the questions that were asked.

The same 'phase' comparisons were made as had been done for the Home-School analysis. When the first three minutes of interaction were the basis of comparison (Table 6.15, p.308), significant differences were found in only two areas of verbal behaviour, responding (χ^2_r= 6.05, df 2, $p<.05$) and probing (χ^2_r= 9.6, df 2, $p<.02$), compared with four significant differences found over the total time samples. Again, the child did a higher proportion of responding in the teacher-children situation than in the other two situations.

Comparisons of the child's verbal behaviour for the period of interaction other than the first three minutes showed significant differences in most verbal categories (Table 6.16, p.309), and only initial structuring and acceptance-evaluation behaviour was similar from situation to situation. The differences in sustaining behaviour were highly significant (χ^2_r= 9.45, df 2,$p<.01$), and to a lesser degree in responding (χ^2_r= 9.04, df 2,$p<.02$), probing (χ^2_r= 6.05, df 2,$p<.05$), and initial questioning behaviour (χ^2_r = 4.95, df 2,$p<.05$). When the results of the previous two comparisons are considered they suggest that interactions start in similar ways irrespective of group size but, as the interaction develops, the influence of differences in group size becomes more noticeable. The greatest variation seemed to be occurring in responding behaviour, particularly in the teacher-children situation. Perhaps as the interaction develops the participants become more actively involved, and changes in the nature of the responding behaviour referred to above may be occurring mainly in the latter phase of an interaction.

The third level of analysis considered verbal behaviour

within a situation in contrast to the between situation comparisons above. The first three minutes of verbal interaction were compared with the rest of the exchange for each situation. The findings related to the mother-child situation (Table 6.10, p.305) have already been discussed. In that comparison, differences between the first and latter phase of an interaction in initial questioning behaviour ($T = 4.5$, $p < .05$) and responding behaviour ($T = 0$, $p < .01$) were found. The same comparison for the child in the parents-child situation (Table 6.17, p.310) showed significant difference only in responding behaviour ($T = 6.0$, $p < .02$), and like the mother-child situation the child did the higher proportion of responding in the opening phase of the interaction. In the teacher-children situation (Table 6.18, p.310) probing moves were the only ones where the child's verbal behaviour varied between the two phases ($T = 0$, $p < .01$) and, although the data in the table suggest no difference between the two phases, there was a tendency for more probing to be done in the latter half of an interaction. Thus, there does not appear to be any change in the general patterning of verbal behaviour as an interaction develops, but changes that seem to be specific to certain situations. The reasons for this are not readily apparent at the level of analysis employed here.

The results of the key analyses described in this section can be summarized as follows:

Hypothesis 2. The patterning of verbal behaviour will differ significantly among groups with two, three, or four participants.

i) Significant differences at the $p < .05$ level or better were found among the situations in initial questioning, responding, probing, and sustaining behaviours. Significant differences were not found for initial structuring or acceptance-evaluation behaviour.

ii) Supplementary analyses indicated that, with the exception of responding and probing moves, patterning of verbal behaviour was similar from situation to situation during the first three minutes of interaction. However, over the latter

portion of the interaction, verbal behaviours did vary more, and significant differences at or beyond the $p < .05$ level were found for initial questioning, responding, probing, and sustaining verbal moves. The overall differences from situation to situation, thus, seem to reflect the latter portion of each observation, rather than the earlier portion.

iii) Nevertheless, when the verbal behaviour of the child within a situation was analyzed for differences between the initial and latter phases, only a few variations were found. In other words, interactions generally continued in the manner they started. There was no major verbal category where significant differences occurred in all three situations. In the mother-child situation more initial questioning was done by the child in the latter half of the exchange ($p < .05$), as was probing in the teacher-children interactions ($p < .01$).

6.3.3 Degree of social relationship and language performance. Three situations were used to test Hypothesis 3; father-child, other adult-child, and teacher-child. In a sense, this hypothesis was also tested by the two situations for Hypothesis 1, since the familiarity of the mother-child situation was being compared with familiarity in the teacher-child situation. All the children in the present study had been with the same teacher for nearly a full school year and, thus, the teacher-child relationship had time to become as established as it is ever likely to be under most school conditions. For presentation and discussion purposes, the three dyads have been arranged in the order father, other-adult, teacher. The assumption has been made that fathers establish a relationship that is reasonably informal with their children and that the teacher is more formal because of the instructional function she performs. The other adult is not likely to establish as informal a relationship with the child as the father nor as formal as that by the teacher. Even if this assumption is misplaced, it in no way affects the statistical outcomes of the analysis.

When the verbal behaviour of father and child was compared (Table 6.19, p.311) the differences for all major categories were significant, mainly at the $p < .01$ level. The same pattern occurred when other adult and child's behaviour was compared (Table 6.20, p.311), and previous analysis had shown the same pattern for teacher and child (Table 6.2, p.299).

Analysis of the verbal performance of the children in each of the three situations and of the adults in the same three situations (Table 6.21; p.312) produced significant differences for all major verbal categories. Although father, other adults, and teachers all exerted an effective control over their verbal exchanges with the children, this seemed to increase as the social relationship between participants became more formal. While many of the other adults were relatives of the children concerned, some were only close friends of the family. However, even the latter had a more informal social relationship to the children than would be possible for the teacher to establish. The degree of formality in a situation is probably closely allied to type of social relationship that exists between people. The data in Table 6.21 lends support to the type of proposition advanced above. Even though fathers maintained a fairly dominant role in their verbal exchanges, children and fathers shared verbal behaviours to a greater extent than happened in the other adult-child or teacher-child situations. In the teacher-child interactions children did little else but respond, and there was a tendency for the child to do more responding as the formality of the situation increased. The median percentages for categories other than responding also indicate the increasing control adults exert over various types of verbal behaviour as their social relationship with the child becomes more formal. For example, the teacher did a higher proportion of initial structuring in her interactions with the child than did the other adult with the same child. In turn, the other adult did more initial structuring than the father. Since it was the same child interacting with each of the different adults, perhaps the varying involvement of the child in these interactions was as much a consequence of their perception of the type of relationship permissible with each adult, as it was the adults' perception of the roles they should play when

talking with young children. The descriptive analysis of verbal behaviour in earlier chapters indicated that children used a greater variety of verbal behaviours with fathers than with other adults or teachers. In particular, a higher proportion of reacting was done with fathers. There was little evidence in the transcripts that children attempted to show the same active involvement in the teacher-child interactions that they had taken with their fathers. Thus, it seems more likely that the trends referred to above developed as a result of the conjoint perceptions of adult and child as to what was the appropriate verbal role to adopt in any specific verbal interaction.

The situations were again analysed for variations in the different phases of an interaction. Verbal behaviour in the first three minutes compared with that in the remainder of each interaction produced, with one exception, similar results for each phase for father and child (Table 6.22, p.313), other adult and child (Table 6.23, p.313), and the teacher-child (Table 6.5, p.301) situations. The teacher-child comparison had been carried out for the analysis related to hypothesis 1. The one exception was for initial structuring behaviour in the father-child situation, where the difference was not significant for the three minute comparison but had been when behaviour over the whole interaction was compared. All other differences observed in the whole interaction remained significant at the $p < .01$ level when only the first three minutes were analysed. When the verbal behaviour in the three situations was compared again taking only the first three minutes of the interaction (Table 6.24, p.314), differences continued to be found in all major categories except probing. The differences among the situations in initial structuring and responding behaviour were highly significant ($p < .001$). The levels of significance were generally very similar to those found when the verbal behaviour over the whole interaction was compared (Table 6.21). Since the difference between probing behaviour for the total interaction was significant at the $p < .01$ level yet not significantly different for the first three minutes of interaction, this suggests that the probing behaviour of adults and children varies much more as the interaction develops. During the first three minutes of interaction

almost all probing was done by the adults in the three situations observed.

Corresponding analysis for the rest of the interaction produced very similar results to those found in the first three minutes of exchange. The father-child (Table 6.25, p.315), other adult-child (Table 6.26, p.315), and teacher-child (Table 6.8, p.303) comparisons, with the exception of initial structuring for the other adult-child situation, produced exactly the same results as had the comparisons for the first three minutes of interaction. The variation in initial structuring behaviour between the first three minutes and the rest of the interaction for the other adult-child situation suggests that, while the other adult dominated initial structuring during the early part of the interaction, the child participated more equally in the latter phase of the interaction.

Comparisons of the three situations for the rest of the interaction did not produce general results different from those above in either the child's verbal performance or that of the adults (Table 6.27, p.316). However, some specific variations were found. Whereas probing behaviour had not differed between situations in the first three minutes of interactions, the differences in probing behaviour in the rest of the interaction were significant at the $p < .02$ level. In other major verbal categories there were some variations in the level of significance obtained - which does not, of course, indicate the degree of difference had changed. But comparison of the median percentages given for the major verbal categories in the first three minutes of interaction and the rest of the interaction suggests there may have been greater participation by the children as the interactions developed. For example, children appeared to do more of the initial structuring behaviour in their dyads towards the end of an interaction. Similar trends were noted for acceptance-evaluation, probing, and sustaining behaviour. Children also seemed to do proportionately less responding behaviour as an interaction developed. For their part, adults (particularly fathers) seemed to do more responding in the latter half of an interaction.

The within group analyses were designed to test for variations in an individual's performance during an exchange, and verbal behaviour in the first three minutes of interaction was compared with that occurring in the latter half of the interaction. These analyses did not reveal variations that applied to all major verbal categories. In the father-child situation, responding and acceptance-evaluation were the only two categories where significant differences were found (Tables 6.28, p.317 and 6.29, p.317). While children did most of the responding during the whole interaction and also in both phases of the interaction, fathers tended to do more responding in the latter part of the interaction than they had in the opening phase. Conversely, while fathers dominated the acceptance-evaluation behaviour in both phases, children tended to do more accepting in the latter half of an interaction than they had during the opening phase. In the other adult-child situation, responding was the only behaviour where significant differences were obtained between the first and latter phases of an interaction (Tables 6.30, p.318, and 6.31, p.318), with the other adult doing more of the responding as the interaction developed. The teacher-child comparisons have already been made earlier (Tables 6.12, p.306, and 6.13, p.306), and initial structuring was the only major category where verbal performance seemed to vary over the two phases. Although teachers dominated this type of behaviour in both phases, children did significantly more initial structuring in the latter half of an interaction than they had done in the first three minutes.

In the teacher-child situation interactions carried on very much in the manner in which they had started, and there was no evidence to suggest that teachers encouraged children to take more of the initiative as an interaction developed. While there were no general changes covering all verbal categories in the other adult-child and father-child situations, the variations in responding behaviour suggest some alteration in the pattern of interaction as the verbal exchange developed. Since differences in structuring, sustaining, and questioning behaviour were not significant in these two situations, the variations were probably due to the nature of the responding behaviour. Earlier description has indicated that more reacting was done in the other

adult-child and father-child situations than in the teacher-child situation, and thus variations in responding behaviour might be attributable to more reacting as the interactions developed.

The results of the analyses described in this section can be summarized as follows:

Hypothesis 3. The patterning of verbal behaviour will differ significantly between situations where the social relationship of the participants varies.

i) Significant differences were found among the child's verbal behaviour in the father-child, other adult-child, and teacher-child situations, and among the adult's behaviour in these same situations. These differences were found in all major verbal categories and in many instances at the $p < .01$ or $p < .001$ levels of significance.

ii) Supplementary analyses showed that these same differences among situations were obtained when the first three minutes of interaction was being compared and when the rest of the interaction was being compared. Probing in the first three minutes was the only category where a significant difference between participants was not observed.

iii) When the verbal behaviour of groups within situations was analysed, differences were found in only a few of the major categories. Responding behaviour varied between the first three minutes of interaction and the rest of the exchange in both father-child and other adult-child situations. Acceptance-evaluation behaviour varied in the father-child situation, and initial structuring varied in the teacher-child situation.

6.3.4 Summary. The division of an interaction into the opening three minutes and the rest (the average length of an interaction was 7.04 minutes) was intended at this stage only to give an indication as to whether or not interactions develop in identifiable phases. In the various analyses conducted above

all situations involving adults were compared, at some point, for variations between the first three minutes of interaction and the rest of the exchange. As far as the groups containing adults were concerned, there were significant differences between the opening and latter phases of an interaction and for all such groups this involved more initial questioning in the first three minutes. In all groups, except the teacher-child dyad, there was less responding by adults in the opening phase. In home situations involving adults the children did less responding in the latter portion of the interactions, but in the school situations with teachers their responding pattern did not vary during the interaction. This was most likely due to the very dominant role the teacher played in controlling exchanges, and because the child did very little else but respond the opportunity for differences in this behaviour were very limited. However, the analyses described above were concerned only with broad categories of behaviour, and the variations which were observed could very well have been caused by a limited range of more specific verbal moves. Indeed, this possibility has been discussed above with particular reference to reactions.

The main purpose for carrying out the statistical analyses described above was to establish whether or not verbal behaviour varied from situation to situation and under different conditions; for example, when the size of the group changed. In the broad sense the findings were very conclusive. Not only did the overall patterns of verbal behaviour vary significantly from situation to situation, but so also did the verbal behaviour patterns of the different participants and, in particular, those of the child-subjects. What is less clear are the factors producing these variations. Because the study was designed primarily to describe language behaviour in a range of natural situations, some experimental controls could not be stringently applied. For this reason it is not possible to state with any certainty that the differences found when comparisons (e.g. of group size) were made, were, in fact, attributable only to the factor examined. What can be stated with more assurance, however, is that an individual's verbal performance does vary significantly from situation to situation, and that these differences relate not only to the substantive focus of verbal exchanges but to the dynamics of

interpersonal relationships.

6.4 Sequences in verbal interaction

The discussion thus far has considered patterns in interaction through quantifying verbal behaviours and considering the proportionate occurrence of various moves made by one participant in relation to the moves of other participants. Such an analysis has provided a general profile of the nature of verbal behaviour, not only in terms of the total situation but also for each of the participants. The description of sub-categories of moves has indicated the substantive-managerial focus typical of different interaction situations and, together with comparisons of the profiles, very clear indications have been obtained of the type of language role played by individuals. What is still not clear, however, is the sequencing of these moves in verbal exchanges, although at various points in the discussion above the consequences of occurrences of one type of move for other moves has been referred to.

In addition, there appear to be factors other than the actual verbal moves that occur, which influence the sequencing of behaviour in interactions. For example, Hinde (1976, p.3) defines a relationship as "a series of interactions in time. By an interaction we usually mean a sequence in which individual A shows behaviour X to individual B, or A shows X to B and B responds with Y. Often interactions consist of a sequence of such events...." In the context of the present study, this notion of reciprocity was of considerable significance. Even in those situations where the adult was clearly in control (particularly where the teacher was involved), it was the nature of the child response which allowed the adult to sustain that control. Evidence is accumulating to suggest that the traditional unidirectional explanations of adult influences on child behaviour may not be taking account of equally important effects the child can have on the adult's behaviour (Bell, 1971; Harper, 1971; Fiedler, 1975; Noble and Nolan, 1976; Thomas and Martin, 1976).

In the context of an interaction, several factors seem to be of importance and relevant to the general findings of the present

study. Many writers have referred to the game-like qualities of social encounters involving language (Berne, 1964; Peursen, 1969; Bell, 1971; Argyle and Kendon, 1972; Goffman, 1972; Kenny, 1973; Fromberg, 1976). In most games there are behaviours which are clearly prescribed by rules (e.g. where to serve in tennis, placing the tee in golf) and others that are less so (e.g. how high to toss the ball when serving in tennis, how hard to hit the ball in golf). Similarly, certain 'language games' seem to prescribe behaviour more rigidly than others. For example, in the 'interview game' there is a clear expectation that the interviewer asks the questions and the interviewee answers them. In the teacher-child situation the interaction often contained just these elements, generally as short sequences; but they demonstrated, in extreme form perhaps, the child's apparent willingness to play the 'question-answer' game.

105-63-1

Teacher:	In your story you told me that - - - when you were a lamb your mother died. Can you tell me why your mother died?
Joanne:	'Cause - - - she - - - when I was born she died - - -
Teacher:	Mmm. How did the farmer come to find you?
Joanne:	He went riding on his horse and - - - like all the other farmers do to find the lost lambs - - -
Teacher:	Mmm. What were you thinking while you were waiting to be found?
Joanne:	I was just - - - um thinking that - - - I was just hoping that the farmer would find me - - -
Teacher:	Did you know that somebody would come and find you?
Joanne:	No - - -
Teacher:	I'm sure you didn't.

002-62-1

Teacher:	Why did you decide to write a play?
Philip:	Because - - - because since I was Little Red Riding Hood and that's the most important part of the play I decided I'd have to write it.
Teacher:	When did you decide - - - who - - - would be in the play? - - -
Philip:	Oh I went up round asking people

	if they'd been in a play and the kids who said "No" I'd - - - - ask them if they wanted to be in my play - - - and so after a while I had - - - enough characters - - - for my play.
Teacher:	And all the puppets that you people made um are they like the characters in 'Red Riding Hood'?
Philip:	No - - - only one isn't - - - Only one isn't because - - - It's not called 'Little Red Riding Hood and the Wolf', it's called 'Little Red Riding Hood and the Monster' - - - Because Billy Ross, he's the monster he was the wolf but he - - - made his - - - thing a bit unusual so I told him it looked a bit better like a monster so he said "I'll be a monster" - - -
Teacher:	And you are Red Riding Hood?
Philip:	Yeah.
Teacher:	And who's the grandmother?
Philip:	Mary.

Whatever the reason, the child plays the game very readily and obviously knows what he is expected to do. Garvey and Hogan (1973) have suggested that as the young child acquires language he also learns the concepts underlying social intercourse - in other words, learning not only the words to say but also when to say them and how. With older participants this type of understanding related to what Goffman (1972) has described as the 'working consensus' of an encounter which involves, among other factors, implicit agreements as to what the encounter is about, who is dominant, and the appropriate level of intimacy (i.e. it may be 'Dr Smith' in the formal interview situation but 'Bob' off camera).

One of the most striking features of the interactions observed in the present study was the communicative control participants exercised over one another. This was indicated mainly through the use of specific types of verbal move. For example, it was shown earlier (p.188) that using a statement on its own to begin an episode was less effective in maintaining the initiative than pairing the statement with a question or even just using a question. Control in any interaction situation

may manifest itself simply as the exercise of a management function (e.g. the role played by a chairman who is not verbally active in the discussion he controls), or it may also involve dominance of the substantive content (e.g. the interview situation. Hinde (1976) has discussed the control function in the context of animal relationships, and identifies what he labels as reciprocal and complementary behaviours. At the level of human verbal interactions these distinctions seem particularly apt. In the present study the situations involving adults demonstrated complementary verbal roles. In the teacher-child situation, teacher and child tended to use different verbal behaviours but they complemented each other. For example, the teachers questioned and the children answered. On the other hand, however, in those situations involving only children, participants used similar verbal behaviours, either simultaneously or alternately, and all participants answered, praised, questioned, and evaluated each other's verbal behaviour. Thus, in a reciprocal verbal exchange, power or control is likely to be a less important factor than in a complementary interaction. In the present study neither of these applied in the extreme form, but the teacher-child interactions, for example, were more complementary than reciprocal, and those involving only children were more reciprocal than complementary. Other situations could be aligned between these two.

Another way of describing the communicative control participants exercise over one another is in terms of the amount of time each individual spends talking. Soskin and John (1963) have suggested that over- or under-participation in an interaction might be determined by the proportion of time each participant claims. For example, if two persons were involved in the interaction each might be expected to 'claim' 50% of the remarks, three persons 33.3% each, and so on.

However, participation described in these terms might not necessarily relate to the exercise of control. For example, in the interview situation the interviewee's comments may take up 90% of the time, but the interviewer may be exercising judicious and effective control over the situation. In the present study, the difficulties of reconciling participation with communicative

control were well demonstrated. If the teacher-child situation had been used then participation and control equated very well. Teachers made 62% of the verbal moves and the children 38%, while the profiles (Fig. 5.1, p.280) showed very clearly the teachers' dominance of those verbal behaviours that allow an individual to maintain control of the situation. On the other hand, in the parents-child situation the child made about one-third (38%) of the verbal moves (which might have been expected in a triadic situation), yet the data indicated the parents were in almost as full verbal control as were the teachers. In the child-child situation the subjects shared their verbal moves (48%) with the other children (52%), including those categories of verbal move that allowed the speaker to control the exchange.

Thus, one factor of relevance to the sequencing of behaviour in verbal interactions is that of communicative control, but sequencing can also be considered in terms of common combinations of specific verbal moves and in terms of predicting consequent behaviour from an initial stimulus move. Analysing verbal behaviour into broad categories may well enable the prediction of differing common sequences of moves, but by doing this much of the specific detail of the language used will be lost. On the other hand, attempts to apply sequencing models to 'fine-grained' category systems will soon be frustrated by the number of permutations in even a brief verbal exchange of three to four moves. Thus, to the writer's knowledge, predictive models have not been particularly successful when applied to complex verbal exchanges, and few writers seem to have gone beyond simple two-stage Markovian constructs and analytic techniques. A number of writers, however, have had some success in identifying commonly recurring patterns of verbal behaviour which lend themselves to predictions of the quality of interaction occurring, particularly in classroom instructional situations (Bellack et al., 1966; Stockton, 1966; Guszak, 1967, Flanders, 1970; Seidman, 1970; Prokop, 1974; Mischler, 1975).

The description of teaching cycles by Bellack et al. (1966) has provided the basis for many subsequent investigations of classroom behaviour. Although Bellack and his co-workers had identified 21 types of cycle, six of these alone accounted for

80% of the teaching sequences in their study, and two of those accounted for nearly 50% of all cycles. The two major teaching sequences identified by the Bellack team were the soliciting-responding-reacting cycle (SOL-RES-REA) and the soliciting-responding cycle (SOL-RES). While solicitations could take different grammatical forms, most were questions. Responding could occur only in relation to a soliciting move and was, in effect, an answer. Reactions were the indirect consequence of a preceding move and served to modify and/or to rate that verbal behaviour. Thus, the SOL-RES in most instances involved a question with answer, and the SOL-RES-REA cycle a question-answer followed by praise, comment, or the like.

Bellack's concept of teaching cycles resulted from observation of a group of high school classes studying a unit on international trade, and the findings could well have related only to that very specific situation. However, Stockton (1966) used the same category system in a Grade 5 classroom to investigate language behaviour during spelling, arithmetic, reading, and writing lessons. Her results indicated the relevance of the same general patterns identified by the Bellack team. The SOL-RES and SOL-RES-REA cycles accounted for almost half the total teaching sequences, and Stockton concluded that the pupil's role in the classroom was primarily to respond to teacher solicitations, occasionally to react, to ask substantive questions very infrequently, and to structure rarely.

Guszak (1967) described sequences of questioning behaviour (Question-Response Units) he identified from his study of reading instruction in primary school classrooms. Unfortunately, as far as a comparison with the present study is concerned, no information was given as to the proportion of question-units that also included an orienting statement or the proportion of the response units that resulted from only a statement. In the Bellack study, 18% of all cycles started with either a statement on its own or one paired with a question. In the present study, 51% of all episodes included an initial statement (however, this figure includes a range of interaction situations beyond the school setting where verbal exchanges were less formally controlled). Although Guszak identified many questioning patterns, he

found the dominant sequence to be the question-answer, which accounted for 86% of all units. Seidman (1970) has also identified a number of recurring sequences, but, like Guszak, her patterns always started with a teacher question.

As a result of studying the structure of interaction during foreign language teaching, Prokop (1974) has analysed 'strings of verbal behaviour' and identified a large number of patterns (413), some of which occurred a few times while others accounted for major portions of the behaviour observed. From a small sample of his total data he identified two dominant sequences; the question-answer plus praise or no praise pattern, and the pattern where a pupil was directed to read, did so, and was then praised or corrected for his reading. This second pattern is more likely to be a feature of special types of interaction, such as those Prokop observed, and raises the possibility that some patterns of teaching behaviour are general purpose strategies, typical in a wide range of instructional contexts and over many class levels, whereas other sequences describe very specific types of verbal activity.

In the present study there was also some attempt to identify recurring sequences of verbal interaction. Each episode was described by the moves with which it was initiated, by the type of move that ended the exchange, and, where appropriate, by the moves that occurred within any particular sequence.[1] This was certainly not a 'fine-grained' technique for identifying interaction strategies, and in a lengthy episode the description of the moves within the sequence was highly generalised. However, the method did provide information on common interaction strategies that could be followed up in a manner beyond the scope of the present study. Sixteen strategies were identified as possible opening sequences. Four of these began with a question, and this type of opening accounted for 49% of all episodes. Seven began with a structuring statement (36%), and the other five began with both an initial question and a statement (15%). Nearly half the interaction sequences (46%) embodied only an opening series of

1. A full description of these interaction strategies is given in Appendix I. This is a reasonably brief statement and could well be read at this stage.

moves (i.e. no sustaining moves), and most sequences ended with either an answer (52%) or an acceptance-evaluation move (38%). From the combination of opening sequences, bodies, and endings, 240 interaction types were possible, but 40 of these accounted for 76% of all interaction sequences. There certainly appeared to be a greater diversity of interaction modes tentatively identified in the present study than, for example, Bellack's 'teaching cycles' or Guszak's 'question-response units'. In part, the difference can be explained by the definition of sequences. Guszak was concerned only with questioning behaviour, so presumably any statements that preceded the question were either perceived as part of the question or ignored for the purposes of coding units. Moves within Bellack's teaching cycles grouped verbal behaviours in a somewhat different manner from the way moves were grouped or ordered in the present study. For example, while Bellack's 'soliciting' moves consisted mainly of questions, they also included instructions or directions to attend ("Joyce, listen instead of talking", "Pass in your books"). The latter behaviours were coded as procedural structuring in Modified SQUAIES. Further, Bellack's 'reacting' category included moves that would have been coded as 'acceptance-evaluation' and 'sustaining' by Modified SQUAIES. Thus, direct comparisons are difficult to make but, nevertheless, general relationships can be established. The greater diversity of interaction sequences described in the present study can also be attributed to the range of situations within which language behaviour was sampled, and many interactions lacked the 'structure' that seems to be imposed within the more formal classroom setting.

Notwithstanding this diversity, comment can be made about the common interaction sequences identified in the present study. The general parameters have already been established: the most common initial move was the question, more than 50% of all episodes ended with a response, and nearly 50% were simple episodes. That is, the episode involved only an initial move and a response that may have been evaluated or commented on but which did not involve a sustaining-probing series of moves as well. Of all interaction sequences, 46% were of this simple type.

If episodes themselves are the unit of analysis, eight types

of simple interaction sequence accounted for 44% of all episodes. The most common interaction sequence was the 'question-answer' (17% of episodes).

101-21-1
Father: What was it made out of?
Alison: It was made out of plaster of paris. No it wasn't plaster of plaster of paris. Paper mache, little plastic men and animals and fences.

006-64-1
Teacher: What do you think might've happened?
Richard: Ah - - - - might've had a car accident.

The other main type of simple interaction sequence was the 'question-answer-evaluation' (8%). However, the evaluation was more often a simple acceptance of the answer given rather than a judgement about the substantive worth of the remarks made.

104-62-1
Teacher: What made you think of this idea to write a story about? - - -
Margaret: Well when I saw the picture - - - I made up my mind I'd write an imaginary story.
Teacher: Mmm.

103-61-2
Teacher: Why do you think some words are printed in big capital letters? - - -
Helen: Because um - - - the troll has a very loud voice and he's r-roaring - - - - shouting.
Teacher: Good girl.

Two other simple interaction sequences were the 'structuring-question-answer' (5%) and the 'structuring-accept' (5%).

002-62-3
Teacher: I noticed that most of your sentences are all right - - - Did you do any checking while you were writing?
Philip: Yes.

004-23-4
Father: That's where I've probably seen them sometimes uh - - - first

thing in the morning when I go for my run I see them uh, out there in the park - - - - They're having a run around - - - So a they quite often run after me and - - - try and jump at me - - - and uh - - -

Michael: Mmm.

In addition to the interaction sequences described above, four of the more complex patterns stood out. The 'QAS/A/S' interaction sequence accounted for 5% of all episodes. This type of sequence opened with a question-answer followed by a sustaining move (which was often a probe-clarification or sustaining opine, but occasionally a sustaining statement). If a probe or opine was used this established the pattern for the body of the sequence which often continued with a series of probes and/or opines.

105-63-3

Teacher: How did you get to the Pet Show?

Joanne: In a car and I didn't like that - - - so much either.

Teacher: Were you inside the car or in a trailer on the back of the car?

Joanne: Inside the car.

Teacher: Were you with the children?

Joanne: Yes.

Teacher: Did they make you feel more comfortable in the car because -

Joanne: Yes.

Teacher: - they were with you?

Joanne: Yes.

Teacher: Mmm.

A similar interaction sequence to the 'QAS/A/S' was the 'QAS/A/S/E', and 2% of episodes were of this type. This pattern started with the same opening series of moves as the 'QAS/A/S', and the major difference between these two types was that in the body of the sequence there was some indication of acceptance-evaluation with one or more instances of this type of move. Thus, the response to a probe or the reaction to a statement was acknowledged in some way, but usually by a simple accept move.

106-31-4

Father: What do you do on a wet day at school?

Barbara: Oh well, the boys come and look after us.

Mother: Do you have girls?
Barbara: Or girls.
Mother: And anyone you know comes to look after you?
Barbara: Sometimes - - - Alec comes.
Mother: Oh-h.
Barbara: Sometimes his friends come.
Mother: Mmm. Margaret never comes?
Barbara: No - - - She looks after next door.
Mother: Does she?
Barbara: Classroom. Mmm.
Mother: Mmm.

The third type of interaction sequence, the 'QAE/A/E' accounted for another 2% of the sequences. This involved an opening sequence with the answer to a question being accepted or evaluated and the body of the sequence being a lengthy reply or series of responses encouraged generally by acceptance moves.

102-61-2
Teacher: What kind of story was the Coun the Country Cats? - - -
Tracey: It was an ex exciting story because first he was at the country and then then he went to a city the city big city and them um - - - the boy thought th he admired the cat the boy did -
Teacher: Mmm.
Tracey: - and um he said he liked the cat -
Teacher: Mmm.
Tracey: - and the man said "Do you want to have this cat?" and he was moving to the country -
Teacher: Mmm.
Tracey: - the next day so um - - - the - - - man said "You'd better take him".

The fourth type of sequence, the 'SS/A/S', accounted for 3% of episodes. This interaction sequence opened with a structuring statement by one person that was queried by another. The query allowed the sequence to develop, and in this type of interaction the body consisted of answers and reactions sustained generally by probes and opines.

104-33-5
Margaret: We did um the 'Cinderella'. We had to finish off those.
Mother: What was 'Cinderella'?
Margaret: Oh the pictures and models that

	we had to do about them - - - to enter them in the competition then we finished them off but first we um - - - we - - - we had dressed them and then -
Mother:	Where did you have to send them?
Margaret:	Oh I don't know. Mr Brown's doing that - - - and tomorrow's the big day 'cause they're going to be judged.
Mother:	Are they?
Margaret:	Yes.
Mother:	Where are they being judged?
Margaret:	Um I think at Founders' Theatre but I don't know.
Mother:	Mmm.

Comparisons between these types of interaction sequences and, for example, Bellack's teaching cycles are not easy to draw for the reasons stated above, namely, the different ways in which some verbal behaviours have been grouped and the extended sampling beyond the classroom in the present study. However, groups of interaction sequences could be established that relate closely to some of Bellack's teaching cycles. For example, the SOL-RES-REA cycle, which accounted for 26% of all cycles in Bellack's study, was similar to the 'QAS', 'QAE', 'QAES', 'SAE', and 'SQAE' interaction sequences, which accounted for 19% of all episodes in the present study. Similarly, the 'QA', 'SQA', and 'SA' sequences (25%) resembled Bellack's SOL-RES (22%). An important factor which seems to account for the differences between interaction sequences and teaching cycles was the much higher incidence of episodes opening with structuring moves in the present study(51%) compared with similar openings in teaching cycles (18%). A small proportion of this difference can be accounted for by the grouping of specific verbal behaviours. For example, moves that were categorized as procedural structuring in Modified SQUAIES would have been classed as soliciting moves by Bellack. But since initial procedural statements accounted for only 7% of initial moves this would hardly account for the large difference noted. What seems to be a more likely explanation relates to the tendency by children to begin an interaction sequence with a statement. This happened more so in the home interaction situations and less frequently in the teacher-child dyadic discussions. The usual consequence of a child doing this was for the adult to

accept the statement and then begin a new episode, or to accept the statement and by reacting to it gain the initiative, or to question the statement and, thus, also gain communicative control of the exchange. Because verbal exchanges in the present study were more loosely structured than Bellack's classroom lessons, interaction sequences were not always characterized by the same formality, even though 64% of all interaction sequences opened with a question accompanied or unaccompanied by a statement. There is, therefore, some confirmation in the present study for the types of teaching cycle identified by Bellack and also for the very common occurrence of the question-answer sequence identified by a number of writers (Bellack et al., 1966; Stockton, 1966; Guszak, 1967; Prokop, 1974). What has become clear, as the data in the present study has been progressively analysed, is that within the wide-ranging possibilities for variations in language performance, recurring sequences and strategies can be identified that relate not only to the nature of the verbal behaviour itself but also to techniques by which individuals come to control and maintain verbal exchanges. Thus, the potential in predictive models of language behaviour may lie not so much in being able to state the probability of one specific type of verbal move following another, but rather in identifying the probable communicational consequences of using particular types of verbal move.

CHAPTER 7: SUMMARY AND CONCLUSIONS

Overview. This chapter recapitulates the problem being investigated, the research approach, and the results. Conclusions are also drawn, and reference is made to the limitations of the study, suggestions for future research, and the educational implications of the findings.

7.1 Summary

The systematic investigation of children's verbal behaviour dates back at least to the late eighteenth century. These early and somewhat simplistic records of child language seem to bear little relationship to the diverse, and sometimes contradictory, explanations of language acquisition and development advanced in more recent times. Thus, it is not surprising that current studies of child language are not centred on one universally accepted approach, but derive from the interests of researchers representing a range of philosophical and psychological persuasions: the linguists, social psychologists, cognitive theorists, psycholinguists, behaviourists, sociolinguists, developmental psychologists, and the like. Each group has made its contribution to the greater understanding of the origins of children's language, the processes by which it is acquired, and factors influencing its development. At times, understandings have come from the resolution of theoretical controversy, but the accumulation of research data from studies with a relatively limited focus have provided the main source for our growing knowledge about child language.

There seems, however, to have been a tendency in much of the past research to focus on the structure of language in isolation from the social settings in which it has occurred. One consequence of the emphasis on structure has been the somewhat artificial procedures by which the language sample has been obtained. This has often occurred in response to stimuli (e.g. pictures) that do not seem to be representative of those that provoke language in real-life situations. Similarly, the eliciting of language from children has often occurred under somewhat stark, laboratory-type conditions with adults who are usually unfamiliar to the child and who play a neutral language role.

7.1.1 The research problem. More recently, researchers have sought to investigate verbal behaviour in more naturalistic settings and under more realistic social conditions; researchers have sought not only to describe natural language behaviour but also to understand the social factors that influence verbal performance in interactive situations. It is this type of orientation that provided the context for the present study. An earlier piece of research by the investigator (Hanlon, 1973) had given indications that children's language behaviour varied, in both quantitative and qualitative terms, under different stimulus conditions. These stimulus conditions were representative of those used in typical studies of child language. The present study sought to shift the location of the sampling to more natural settings and to determine whether differences in verbal behaviour occurred when the nature of the setting, the relationship between participants, and the size of the group was changed.

7.1.2 The research approach. The aim of the study was to investigate the language behaviour of a group of eight-year-old children in a range of interaction situations, and although the basic orientation to the research approach was naturalistic the research plan was also influenced by recent developments in the analysis of classroom interactions. The proliferation of coding systems used to describe behavioural transactions between teacher and pupils has, in one sense, made it more difficult to gain a clearer impression of the classroom scene. Rather than add to the bountiful supply of analysis systems, an existing instrument was modified (Katterns, 1974). This system, SQUAIES, had been developed from the theoretical model elucidated by Bellack (Bellack et al., 1966), and was one of a number of systems that had Bellack's work as a source. The major verbal categories developed in the Modified SQUAIES system (Hanlon and Katterns, 1975) provided the specific focus for the analysis of verbal behaviour sampled in the present study.

7.1.3 Describing verbal behaviour. Although the study was concerned with the verbal behaviour of the group of subjects, the context within which the exchanges occurred and the language of the other participants was never lost sight of. In the presentation of results the description of language behaviour within a

situation included all participants, and the performance of one person was considered in relation to that of the others.

Where adults were involved in situations they dominated all major verbal categories except responding, and this communicative control by the adult was seen in its most extreme form in the teacher-child situation where approximately 90% of the child's verbal moves were responses. It was only in the peer group situations that the children seemed to have the opportunity to demonstrate their ability to use a wider range of verbal behaviours.

Where initial structuring moves were used these tended to be substantive rather than procedural, and in the home setting this was one of the few major types of verbal behaviour that adult and child tended to share. Procedural statements (and questions) generally occurred more frequently in peer-group situations, and this was often the consequence of the types of activities children engaged in while talking.

Asking initial questions was very much an adult behaviour, and in the two situations involving teachers children asked very few, if any, initial questions. Even in the home situations adults dominated this form of language, and there was a heavy reliance in both home and school on questions of the recall-recognition type and on those that called for a simple expression of opinion. For their part, teachers did use many comprehension questions, but very few initial questions challenged children to analyse, synthesize, or evaluate information available to them, or to apply ideas in different ways.

Children seemed to spend most of their verbal activity in responding, and in the teacher-child interactions they did little else but answer teacher questions. While responding was also the major verbal category in home discussions, many of these responses were reactions to comments or remarks made by other persons, rather than answers to questions directed to the child. Most responses (approximately 90%) were short, containing fewer than five ideas or being simply a yes/no; and where longer responses did occur they were more likely in the teacher-child situation than in any other. When adults responded they were usually

reacting to previous verbal behaviours rather than answering, and this pattern was understandable in the general context of verbal behaviour where few questions were directed at them.

Considerable evaluative feedback was given to those talking, in the form of encouragement to continue, acceptance of what was said, or more deliberate comments of praise or correction. However, most of this type of feedback behaviour was simply acknowledging or accepting the substantive content of another's comments. Although these were basically very simple verbal moves (e.g. Uh-huh, Mmm), they appeared to perform a very positive feedback function and did not occur in a haphazard fashion that might lead to the conclusion they were idiosyncracies of speech. Of the evaluative-types of verbal behaviour (e.g. praising, correcting), more occurred in the school situations than in the home. Teachers were more prone to praise than correct, whereas children interacting with their peers were more likely to correct than praise. However, the correcting of behaviour was directed almost entirely at the substantive content of utterances and not at the personal behaviour of the individual.

Interactions can be sustained in a number of ways; one of which is to probe, through questioning, the remarks other persons are making. This verbal technique was used in all situations, but most frequently in the teacher-child interactions and least frequently in the two peer-group exchanges. While the overall proportion of probing moves was similar in the adult home and school situations, the nature of the probes used did vary. Most probing questions asked by adults in the home situations simply called on the child to clarify a response that had been given, or to add more information. Teachers also asked children to do these same things, but they were much more likely to challenge the child's response and to ask for justification of the comments made or for reasons to support a point of view expressed. Occasionally adults helped the child to respond by prompting him. Probing is just one technique by which verbal exchanges may be sustained, and adults, in particular, often used other types of questions or made statements of various types to keep an exchange going. The substantive statement and the opine question were other important types of sustaining move. Children were more likely to make substantive

statements, although adults generally did more of the sustaining behaviour than did the children.

While exchanges may have lasted over seven or more minutes, the focus of the discussion changed frequently, although the same general theme of an interaction may have been sustained over all, or much, of the exchange (particularly in the school situations). For example, in the teacher-child situation whole sessions were devoted to the discussion of a story but various aspects of that story were explored - the characters, plot, setting, and so on. The home exchanges tended to follow a number of quite different themes. However, regardless of the number of themes in an interaction, episodes (each representing a change in focus) were generally very short, containing 5 - 6 moves. In most interactions, a considerable amount of verbal activity took place. However, since verbal moves could vary considerably in length, from one word to several sentences, and periods of silence could influence the number of verbal moves made in a given period of time, the measures used gave, at the very best, a crude indication of the amount of verbal behaviour occurring in any particular period of time.

7.1.4 Sequences in verbal interaction. The present study was concerned as much with the interactive factors operating in a verbal exchange as it was with the nature of the language occurring. While the latter provided the specific focus for the statistical analysis of the data, the former supplied the essential context to which the analysis had to be related. Peer group interactions indicated that children were capable of asking questions, evaluating comments, and sustaining exchanges as well as responding, yet in their interaction with adults there was relatively little evidence of verbal behaviour other than responses. Variations of involvement in interactions seemed to relate most directly to the control participants exercised over one another, and in the situations involving adults the management of the verbal exchange was firmly in their hands.

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participants use the various types of verbal move. That is, all persons ask questions, probe, evaluate, respond, and so on. These were described as reciprocal interactions, and the peer-group discussions were good examples of this type. On the other hand, there are the verbal exchanges where each participant typically uses different combinations of moves. For example, one person asks the questions and they are answered by the other person. This was described as a complementary exchange, and the teacher-child interactions were exemplars of this type. However, most verbal exchanges involved both types of sequence.

From one perspective, therefore, sequencing or patterning of verbal behaviour can be viewed at the managerial-control level as the dominance, or otherwise, of one or more participants over the continuing series of verbal moves. However, sequencing can also be considered in terms of common combinations of specific verbal moves, and a number of writers have had some success in identifying recurring patterns of verbal behaviour (Bellack et al., 1966; Guszak, 1967; Prokop, 1974). In the present study, episodes were described by the general grouping of moves within them, and two common patterns were the 'question-answer' (16.5%), and the 'question-answer-evaluation' (7.7%). These two patterns seem to be frequently observed, according to the relevant literature, although exact comparisons are not always easy to make because of variations in the definition of the specific moves that make up these sequences. However, within the considerable variability of language performance, recurring patterns of behaviour can be identified, and the nature of the moves in these sequences gives an indication of the type of interpersonal dynamics that seem to be operating.

7.1.5 Situational influences on the language performance of children. Although the study was largely descriptive in nature, a specific focus was provided by the three research hypotheses. The results of the statistical analysis of the data produced significant differences for most of the comparisons made. Differences in the verbal behaviour of children in home and school settings were found for all major verbal categories ($p < .01$). Comparisons in situations where group size varied produced significant differences

in initial questioning, responding, probing (all $p < .02$), and sustaining behaviour ($p < .05$), but not for initial structuring or acceptance-evaluating moves. When the degree of formality in the relationship between participants varied, significant differences were found in all major verbal categories. The results above refer only to the children's verbal behaviour. The behaviour of other participants was also analysed, as were the characteristics at different phases of an interaction.

It is unlikely that the differences found for the various comparisons made are attributable only to the factors identified: for instance, the unavoidable confounding of size and role-composition of groups has already been referred to. However, the study was designed primarily to test the proposition that an individual's verbal performance does vary under different situational conditions, and this was shown quite conclusively to be the case with the subjects of this particular research.

7.2 Conclusions

7.2.1 Individual communicative performance. A simple paradigm for individual communicative performance was presented at the beginning of this report (p.8) to provide a contextual framework for the review of the literature. It would seem profitable to return to the paradigm at this point.

The observations recorded in the present study have resulted not only in drawing attention to the varying patterns of verbal behaviour elicited under different conditions, but have also given confirmation of the complexity of this behaviour, and the interplay between a wide range of influences. For example, varying the numbers of persons in a group situation seems to affect the nature of the resulting language behaviour, and verbal behaviour seems to be affected also by the closeness of the social relationship that exists between participants. Factors such as these are readily apparent - four people talking, father and son exchanging views, and so on.

Once persons begin to converse, however, a level of interplay emerges that is more readily discernible when the total communication situation is systematically analysed than by simply observing

the talking that occurs. There is the level of verbal interaction, the using of appropriate language initiators, and the giving of appropriate responses. But, there is also a level at which meaning goes beyond the substantive content of an isolated utterance. And there is at least one other level which relates to the roles which persons play (or are perceived to play) and the effect these have on the verbal behaviours that are allowed to develop. Each of these levels (or aspects of interaction) can be related to the general framework of the simple paradigm of individual communicative performance presented earlier in this study. None of these levels is independent of the others, but in drawing the threads of the study together a number of these deserve further consideration.

The language game. While the description and identification of patterns of language behaviour remained the focal point right through the present study, the importance of interpersonal factors and the influence they exerted on verbal exchanges became increasingly evident as the sequential analysis of data proceeded. A number of writers have discussed the child's acquisition of the rules of language as an activity paralleled by the concurrent development of the social rules of speech (Garvey and Hogan, 1973; Tough, 1973; Hansen, 1974; Fraser and Roberts, 1975; Harms, 1975; Edelsky, 1976). There was clear evidence in the present study that the child had learned to play the school 'game' of language. Although the teacher made 62% of the verbal moves in her interactions with the child, this did not necessarily relate to the amount of talking done since some verbal moves contained only one or two words and others several utterances. However, there is a remarkable similarity between the proportion of teacher talk in the present study and the 'one third-two thirds rule' proposed by Flanders (1970) in discussing the dominance of teacher talk in most classroom situations. Tough (1973) has described the relationship between teacher and child as a listening-speaking dichotomy, with the teacher spending most time talking to the child and very much less in listening to his talk.

In the present study, the referee, captain, and star player in the classroom language game seemed to be the teacher. In

general, she decided the topic, how the interaction would develop, and when the child was allowed to play. The latter conditions were a consequence of the almost exclusive use of questions by the teacher, and dominance of this type of verbal behaviour seemed to place her in a very powerful position to control and direct the flow of the interaction. Hymes (1967) has discussed speech in the context of settings where language is proscribed or prescribed: there are numerous examples in our own society where the language ritual of certain settings is quite deliberately prescribed (e.g. religious services, state ceremonials), and others where the form, rather than the detail, of the language ritual is generally understood by all (e.g. court proceedings). While none of the situations in the present study were characterized by extremes of language ritual, there were numerous indicators that participants were 'playing' the interactions according to certain perceptions they had of what was appropriate for them to do in certain situations.

The perception of role status seemed to be an important factor in determining the form the interactions took. The teacher-child situation was a good example of this. The children had shown in the peer-group situations that they were able to ask questions and use a reasonably wide variety of verbal behaviours, yet in the teacher-child interactions, and to a lesser extent in all situations involving adults, they did virtually nothing else but answer the teacher. In that situation, the lowest proportion of reactions and the highest proportion of answers occurred. Since the child was doing the responding, the teacher was very much in communicative control of the situation. This was certainly not done in any threatening way, and all three teachers gave frequent indications of their interest in the pupils. Nevertheless, it was they, rather than the children, who determined the direction the interactions followed.

If a much higher proportion of child reactions had occurred then the teacher's dominance in asking questions might have had lesser significance, as the reacting behaviour might have been exerting an indirect, but quite effective, influence on the nature of the interactions. However, the children did not react verbally to any large extent, and it seems likely that teacher

and child had reasonably clear perceptions of the roles each should be playing in the classroom 'game'. The children appeared to accept as quite normal that, even when talking to the teacher about things they had done (e.g. a story they had written, puppets they had made), it was the teacher who determined what aspects of the event would be discussed; by and large the child kept within the framework established by the teacher, and only occasionally was allowed to divert from the immediate substantive focus created by her.

Developing social independence in conversational settings. Pedersen and Shears (1973) have very aptly described the pattern of relationships in interaction situations as a 'web of expectations'. They discuss the communication milieu in the context of personal space, and describe relational space as the orientation of people towards one another, locational space as the use of fixed locations or settings, and interactional space as the set of interlocking role expectations.

Within the context of the present study, this tripartite notion of space seems particularly relevant. Since the group of subjects provided the constant factor from situation to situation, the variations in verbal behaviour that were noted bring to the fore the concepts of relational and interactional space. That a clear difference between adult and child verbal roles existed was established by the analysis of the data. The reasons for the differences are not so clearly evident. Adults may assume the leading role in interactions because they perceive children to be as dependent on them in language as they are in so many other facets of living in a modern western society. Thus, the leading role in conversation becomes a natural extension of general adult responsibility for children. But children are, for the most part, functionally independent in language much earlier than they will be socially, physically, or economically independent of adults. By the time most children start school they have control of all the basic structures of language, and have achieved this facility without special teaching (Rosen and Rosen, 1973). Therefore, if adults perceive language ability in the same terms as the physical and social development of the young child, and see growing participation in family discussion only as a privilege of

advancing age, then valuable opportunities to develop children's linguistic competence in a seemingly informal and ad hoc manner may be missed.

The real problem faced by many adults is not so much an unrealistic perception of a child's ability to use language but rather a lack of understanding of the processes of cognitive development in young children. This may lead them to conclude, wrongly, that an apparent inability to comprehend a situation is a language difficulty, when it may more correctly be the consequence of the particular stage of cognitive growth the child is passing through (Piaget, 1952).

Whatever the reasons for the very distinct and separate roles played by adult and child, in contrast to the nature of verbal roles in peer group situations, it was possible to identify two distinct types of interaction pattern in this study. The peer-group verbal exchanges were the clearest examples of what came to be labelled as reciprocal exchanges. These were defined as interactions where all participants shared the use of the different types of verbal behaviour; that is, all participants asked questions, made statements, responded, probed, and the like. On the other hand, a complementary exchange was seen to be one where the participants used different types of verbal behaviour, but the verbal moves of one person were complemented by the behaviour of another - for example, the asking of questions by one person and the answering of them by someone else, as happens in interview-type situations. The teacher-child interactions best represented this mode of exchange. In most cases these extremes occurred as sequences within an interaction, but it would certainly be possible to describe an interaction as more reciprocal than complementary or vice versa. Distinguishing interactions in this way gives some indication of the degree of initiative taken by each person in an interactive situation.

When the form of exchange is understood by those participating then they generally play the particular language game according to the perceived rules. In one sense the social rules of interaction, knowing what to say, when, and in which manner, give a stability to the speech act which is essentially dynamic in

nature. Even a stable relationship (e.g. between mother and child, teacher and pupil, husband and wife) will undergo changes over time as new perceptions are developed. The subjects in the present study adopted what seemed to be the appropriate role for particular situations, and this seemed to be done quite naturally. Thus, they appear, by this stage, to have assimilated the social rules of speech fairly adequately. Even Simon, who was probably the most forceful and linguistically capable of the children played the various language games with due consideration for the setting.

Social relationship and the nature of verbal interaction. One feature of the communication exchanges that characterized interactions in the home setting was the familiarity with the material by all those participating. Most of the conversations were concerned with sharing familiar experiences; places the participants had been to, events they had taken part in, people they had met, activities they had engaged in, and often the same topic was referred to time and time again. Not only were the happenings familiar, but they were frequently events that had already occurred rather than experiences to be anticipated. The sharing of these past occurrences was like turning the pages of a photo album with the memories as verbalized images rather than physical pictures.

There did not appear to be the same intensity of interaction in the home situations as was the case with the teacher interactions, particularly the teacher-child exchanges. In the home the ideas seemed to arise more spontaneously, and the association of ideas often occurred in leaps and bounds rather than the logical flowing of one idea to another. The shared family milieu created a meaningful context for what often seemed to be a jumble of ideas. On the other hand, the interactions involving the teacher had a greater degree of structure to them and the teacher gave the impression of knowing which direction she wanted the exchange to take. In part, this was due to the clearer focus that interactions had in the classroom setting but, even in those exchanges where the teacher was faced with a more spontaneous situation (e.g. discussion of a model zoo), the verbal development of the discussion proceeded in a fairly definite step by step sequence. In part, the structure in classroom interactions

was also due to the firmer communicational control teachers exercised over the verbal exchanges. What was important about the structure of the interactions was that this went beyond considerations of the types of language used, and became a function of the relationships between those participating in the situations.

Substantive content and interpersonal meaning in verbal communication. Wells (1974) has discussed the relationship of meaning in language in a context that seems to complement the type of discussion advanced above. Meaning, as he describes it, involves not only the substantive content of the message but also interpersonal meaning - the relationship between those involved and the purpose for which the conversation is taking place. A characteristic of the 'verbal messages' in the present study was the essential simplicity of the communications in terms of the broad parameters of language used. Questions were mostly matter-of-fact, and even in the school situations the discussions did not seem to be intellectually challenging although, as examples have shown, the children were capable of using language to explore quite sophisticated concepts. Helen's discussion of gravity, Simon explaining the atom, and Richard's probing of his mother's information on chloride containers were all cases in point, albeit brief instances. Initial questioning tended to call mainly for the recall of information or a simple expression of opinion, and the subsequent discussion was not generally 'lifted' by the use of appropriate probes. Although probing questions were used, they tended to ask for more of the same type of information that had been given originally. However, teachers certainly did tend to 'lift' the discussion more frequently than did adults in the home situations. One consequence of the type of question asked was that they could usually be answered very briefly, and responses were mostly short, consisting of fewer than five ideas.

The simplicity of language in home interactions was perhaps understandable in the context of the substantive focus of the verbal exchanges. The examples given above of discussions at a very sophisticated level indicate that these do occur but are probably not common instances of the general tenor of home

conversations. The simplicity of school interactions was less understandable, since the substantive focus provided many opportunities for teachers to challenge and extend the children. While this happened more frequently than in the home environment, it was not sustained at a level that might have been expected, given the ability of the children, and the potential of the tasks.

The type of feedback given was also essentially very simple (e.g. Mmm, Uh-huh) and, although serious consideration had been given initially to exclude such verbal expressions from the coding, the decision to include them was a wise one, since the very frequency of such moves showed them to be very important characteristics of the speech act, and the manner in which they were used suggested that most were not occurring as habits of speech. The incidence of simple accepts was remarkably consistent from situation to situation when it is considered that at least 75% of all acceptance-evaluation moves were of this type, and the variation between the most and least frequent use of simple accepts in situations was only 7%.

Proportionately, the variations between the situations in occurrence of praise and correcting moves was much more extreme. The use of simple accept moves would appear to be a general characteristic of all verbal behaviour, regardless of the nature, function, and size of the interacting group. This general function did not seem to apply to the more evaluative-type moves. There appeared to be very clear differences between the use of praise and of correcting verbal behaviours by teachers, by adults generally, and by the children on their own in peer groups. In the home situations adults tended to do as much praising as they did correcting, but the teacher, particularly in the dyadic situation, praised about ten times as frequently as she corrected. There would be reasonable accord as to the preferability of positive, as opposed to negative, reinforcement in school-based learning situations. However, in the present study, the dichotomy was not really one of praise and punishment but rather praise and correction. The correction was directed almost entirely at the substantive content of verbal remarks and not at the verbal behaviour of the individual.

In the school situations, children were generally dealing with different types of knowledge than was occurring in the home exchanges and, thus, the opportunities for praise were greater. That few corrections were made in interactions with the teacher could be explained as a very accurate perception by the teacher of the level of difficulty involved. On the other hand, it may well be then, because the teacher has become convinced of the efficacy of praising, that she is more sensitive to responses that can be praised, avoids comment on most responses that could have been corrected, and focusses only on the more serious instances of substantive or linguistic error.

Perhaps there is confusion in some teachers' minds between correcting behaviour and negative reinforcement, which may involve more the element of punishment. Correcting verbal responses may be done in such a way that the quality of the verbal interaction is enhanced rather than inhibited. For example, if correction involved not only the indication of the 'error' in the response given but the encouragement to re-think the position taken, be it a word said wrongly or an explanation that was substantively false, then in time the use of only the correction behaviour may be sufficient to stimulate the re-phrasing, re-stating, or re-formulating of the original proposition.

The inclination towards correction rather than praise in the peer-group situations related, in part, to the tendency for children to engage in physical activities while talking with peers, and this seemed to create more opportunities where correcting behaviour was seen as necessary by a participant. Discussion with adults was generally on issues where little occasion for differences of opinion arose, and where alternative explanations were possible they were generally seen as just that, rather than 'right' or 'wrong' comments. On the other hand, however, the child's egocentrism showed through in some of the minor peer-group 'conflicts of opinion'. In these instances it was one child's perception of the situation that was important rather than the realization that another child's different perception may have been equally valid.

7.2.2 Research problems

Obtaining valid samples of verbal behaviour. The comments above, and throughout the discussion in this report, have indicated that a research worker is unlikely to obtain a representative sample of a child's language performance within a single situation; all the less so if this situation involves interaction with only one other person. However, if we explore verbal performance in different interaction situations and over a number of sessions, we then have to decide the extent to which it is appropriate to cumulate behaviour sampled at different times but under similar conditions. Since it has been shown that verbal behaviour does vary from situation to situation, it could also be argued that within a specific set of conditions (e.g. mother-child interactions) variations in particular characteristics of language might well occur from session to session. Although there is some evidence in a study by Rose et al. (1975) to suggest that general behaviour in specific situations may remain stable over time, there were indications in the present study to show that specific sessions could develop a verbal character of their own. This usually occurred when the participants were engaging in particular types of physical activity (e.g. Michael making a model while talking to his father, Simon and his parents playing cards, or Joanne making a sand saucer for the school's flower show). The incidence of procedural moves (either statements or questions) in such exchanges was a good example of a verbal behaviour that seemed to be very specifically related to the 'action' occurring in the setting. In other words, as a part of 'normal' verbal exchanges participants did not usually direct or give instructions about the behaviour of each other. Even in the situations involving teachers, where a higher proportion of procedural moves might have been expected, this did not happen. It was generally in the peer-group situations where more procedural moves were made, and again these were usually oriented towards specific activities that were taking place concurrently with the discussion. Due recognition must be given to the fact that the special character of some of the language samples obtained was the result of specific situational conditions: this in itself, however, shows up the dangers of limited sampling.

The major problem in establishing a corpus of language for analysis is getting a pool of data that will be sufficiently large to enable statistical measures to be applied. Because there is a limit to the time children can reasonably be expected to interact with each other and with adults under normal conditions, it is most unlikely that single sessions would produce an appropriate quantity of verbal behaviour. As long as the researcher is sensitive to the possibility of 'atypical' variations occurring, then cumulating data from different sessions, but under similar conditions, is probably an acceptable procedure, provided that the possibility of unusual situational factors is recognized and watched for. The researcher should, therefore, attempt to record a number of interactions involving the same participants. If general verbal behaviour is being described, rather than verbal behaviour in specific settings or with particular persons, then several different types of situation should also be sampled.

Anticipating intention in verbal exchanges. The emphasis given to the totality of the interaction situation, by describing the verbal behaviour of all participants, provided a much more meaningful context for the discussion of the children's language than an analysis of that behaviour in isolation. This type of focus reflected an earlier decision to code verbal moves in the context of the general discussion. For example, the coding of a question as a particular type could be influenced by the nature of the response it elicited. Under most circumstances, asking a question such as "Did you like the movie?" might elicit a simple opinion in the form of a yes/no response. However, if the respondent answered the same question with "Yes, because I felt the portrayal of the central characters was done with such sensitivity that...." then, from the communicative control point of view, the form of the question has permitted, and has indeed elicited, much more than a simple opinion. This was reflected in the actual coding of the question.

Establishing relationships in this manner raises the issue of 'intentions'. When the question used as an example above was framed in that particular form, did the teacher expect a simple answer or hope for the type of response that was given. Conversely, did the child respond in that manner because he wanted to or

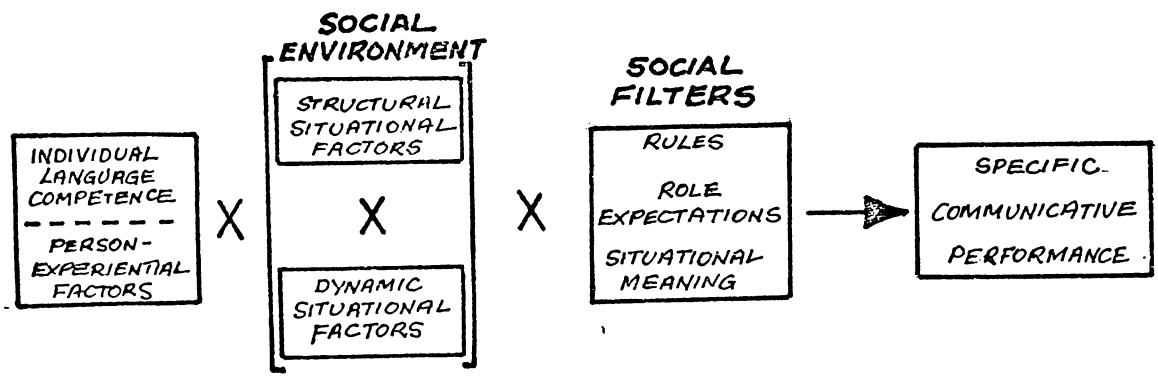
because this was his perception of what was expected. The implications of such relationships between types of verbal moves was beyond the scope of the present study, but indicated yet another area worthy of further investigation. The point noted here is that, while language behaviour usually has to be interpreted in relation to the context in which it occurred, this procedure introduces some problems in subsequent analysis because of assumptions made by the coder. It is essential, therefore, that special attention should be given in training procedures to the reliability of coding decisions made in these more subjective areas of judgement.

Problems of fluency in verbal exchanges. While there were numbers of lengthy responses given and lengthy statements made throughout the study, these tended to be the exception rather than the rule. Most of the longer responses or statements made by children were memorable for the individual ideas that occurred, rather than the fluency and structure of the utterances. Longer comments were usually punctuated by false starts, hesitations, and repetitions; characteristics that Loban (1963) has described as language mazes. In one sense, the longer utterances resembled the first draft of a written presentation where the fundamental ideas are present but where the structure and organization is often poorly formed. Longer utterances were often not fluent, grammatical units and the listener had to cull the essential meaning from a disjointed series of phrases. Although no measures were used to analyse the frequency or number of words in a maze, they were characteristic of all the children's verbal language and, to a lesser extent, of the adults' comments. The incidence of language mazes is, in itself, not surprising. To speak coherently, with ideas arranged in a systematic and orderly fashion, requires a skilful command of language and a competent grasp of the subject matter. Children of the age of the subjects in the present study are still refining the former and developing the latter.

The hesitations and repetitions that characterize language mazes may perform a number of functions. At the simplest level, they may indicate a child's groping for the right words to say, and even if the words are there the ideas may need time to be put

together. False starts, repetitions, and the like can create that time while allowing the child to maintain control of the exchange. Simon seemed to have developed this particular technique to a relatively high degree. On the other hand, some children were more prone to pause and collect their thoughts. Rochester (1973) suggests that one consequence of doing this would be to allow the verbal control to shift to another person. Although no formal analysis of these speech characteristics was made, the investigator was not unmindful of the part such characteristics (as well as non-verbal behaviours) played in the totality of the speech act.

7.2.3 A modified paradigm of individual communicative performance. The foregoing discussion, based on the results of the present study and the findings of other writers, suggests that the simple paradigm presented earlier could be modified to take account of a set of factors that might well be labelled 'social filters'. This modified paradigm is presented below.



A MODIFIED PARADIGM OF INDIVIDUAL COMMUNICATIVE PERFORMANCE

At least three types of 'filter' could be suggested. It seems fairly clearly established that children acquire not only a set of linguistic skills and competencies but also social rules of discourse (Goffman, 1972; Garvey and Hogan, 1973; Edelsky, 1976). These appear to influence what it is appropriate for a child to say in a given situation, and the manner in which this might be done.

The language one uses seems to be influenced by the role expectations a person has, not only of other persons in the

conversational setting but also of the language part he will play himself (Goffman, 1972; Pedersen and Shears, 1973). Thus, changes in the participants in an interaction situation may quite dramatically alter the nature of the verbal behaviour occurring as well as the dynamics of the social relationships. For example, a teacher joining a children's discussion group may shift the locus of communicative control from a shared group basis to teacher-direction and the verbal interaction from a reciprocal to a complementary mode, almost without uttering a word.

While semantically many verbal utterances can be understood in isolation from the context in which they occurred, there are others where the meaning context is essential to a full understanding of the verbal comments being made (Wells, 1974; 1975). Speakers seem very often to moderate the meaning context of their utterances to an appropriate level for their audience. Thus, in a family setting the word 'table' may be sufficient verbal input to indicate that it is time for Mary to set the table for dinner. Non-verbal cues are obviously important supports in these truncated meaning contexts.

The interpolation of these 'social filters', between 'social environmental factors' and the 'specific communicative performance' outcomes, adds a category of influences that are not readily accommodated by those sets of influences already described, but at the same time offers a set of possible factors that moderate the more general influences of the social environment.

7.3 Limitations within the Study

One of the aims of the investigation was to sample children's verbal behaviour in more than one type of situation so as to get a more complete picture of their language performance. The findings provided clear support for the necessity to do this, particularly if, on the basis of the specific behaviour sampled, it is desired to draw conclusions about children's language behaviour in general. The home situations appeared to be very successful in eliciting natural interactions. However, there the nature of the interaction was determined by the relationship between the participants, rather than by either the location or the topic, as has been observed in other studies (Rausch, 1965). In retrospect, the original decision

was probably the right one, since specifying locations and topics may have resulted in more artificial sampling conditions.

Recording in the school setting combined the elements of both size/relationship and topic specification. The activities involved in each session had been selected on the assumption that these presented commonly-experienced opportunities for dyadic or small group interactions, given the prevailing philosophy in the language arts curriculum. A wider range of language situations may have given a clearer indication as to whether these samples were indeed typical of the types of verbal interaction that occurred in these classrooms, although others might have been difficult to obtain without resulting in artificial conditions.

The size of the subject group, in view of the detail of the data gathered, was certainly not too small when compared with groups in similar studies. To increase the size of the group would have required either a more limited sampling schedule or a larger research team, as live observations would be required to identify participants. The constraints imposed on the present study arose primarily because an in-depth study was perceived to be the most productive solution to the particular problem that had been posed. Replicating the study using subjects with different characteristics (e.g. older or younger, lower or higher language ability, low socio-economic status, and so on) would likely cause few problems in the school setting. However, sampling in the home situation could be more difficult because of the need to have volunteer families willing to participate over a number of weeks and also families where talking with children was a regular and typical activity.

Informal evaluation of the project, immediately after observations had been completed, indicated that parents found in the last day or so that children were commenting about the recording sessions. There was no evidence in the recordings that these expressions of feeling were influencing the nature of the interactions. What was most likely occurring was a higher incidence of interactions with adults over the period than would normally be the case. Thus, if an extended period of samplings were to be adopted, then it might be advisable to make fewer recordings of

interactions each week.

Some writers have indicated that when recordings are made in home situations adults appear to be on their best behaviour, and they find little evidence of swearing, yelling, and the like (Lytton, 1973; Moerk, 1974). In the present study, with the exception of some swearing in the peer-group situation, participants certainly did not display these facets of verbal behaviour, but neither did they appear to be 'acting' for the recordings. One father was very enthusiastic in the praise he gave his daughter, but this seemed to be characteristic of his general pattern of behaviour. There was no real evidence to suggest that participants moderated their behaviour to any appreciable extent. All the adults involved probably yelled at their children some time or other, and possible swore at them also! No doubt, their children would do likewise. But the type of incidents that might lead to those sorts of behaviour did not arise during the interactions sampled in the present study.

Non-verbal behaviour was not analyzed in the present study, and some verbal moves were perhaps incorrectly coded as a result. The rhetorical question was probably an example of such a move. Many of these most likely received a non-verbal response, and would thus have been more accurately coded as opine questions. However, since rhetorical questions (both initial and sustaining) accounted for less than 1% of all verbal moves, the overall effect was probably minimal. It is likely that non-verbal cues were also used to support verbal behaviours, particularly in acceptance and evaluation of verbal comments. If a sample of the school situations had incorporated video as well as audio recordings, then this could have given some indication as to the incidence and nature of non-verbal behaviours, but the problems of using video equipment in the home, as discussed previously (Lytton, 1973), would still have mitigated against its use there.

The analysis of phases in an interaction suggested that if the verbal character of the discussion changed as the interaction developed then this was revealed in changes in use of specific types of verbal behaviour, and was not reflected in all of the major categories. The divisions were most likely too 'coarse-

grained' to reveal minor differences, and the division of interactions into three or even four phases might possibly have brought out more variations in verbal behaviour as an interaction developed. Dividing interaction into a specified number of phases is likely to produce more useful comparisons than sequenting exchanges of different lengths into one minute or two minute units and comparing what might be the last minute in one interaction with the middle minute in another.

Each minute of interaction was indicated on transcripts (and subsequently punched on the computer cards), thus the data can be re-analysed using any combination of one minute intervals. Such an analysis could provide a worthwhile follow-up study.

Although there were significant differences when the verbal behaviour of children in different-sized groups was compared, changes in group size within the investigation were very small and, as indicated previously, were confounded with changes in social relationships between participants. Comparing verbal behaviour in groups where size varied quite markedly, for example groups of four, eight, or 12 members, might have given a much clearer indication not only of the group's patterning of verbal behaviour but also that of the individual. Including larger-sized groups might also allow for a more systematic investigation of the effects of group dynamics. Good and Brophy (1971) have suggested that what is coded in many systems as teacher-class interaction is really a dyadic relationship between the teacher and one of the pupils, particularly where evaluative comments and the use of a specific pupil's ideas are concerned. Even smaller-sized groups may present alternative arrangements: Scott (1962) has suggested that, in a triad, the two highest ranking persons give greatest support to each other and least to the lowest ranking member. In the present study there were many signs that such an interaction pattern was occurring in the parents-child situation. Mother and father shared the control function of the interaction, and their efforts were directed mainly at the child and not at each other. What the present study has highlighted is an adult control effect that could well circumvent the influence of individual group members. The peer situations gave some indication of the variations in group dynamics when the age factor was

controlled for. Thus, the size effect would seem to involve considerations other than number of group members. Varying status and size systematically would be a more productive way of exploring this particular factor.

7.4 Further research

In projects that have a very general base, such as the present study, it is likely that a number of avenues worthy of further investigation will be opened up. Some of these will seek simply to determine the extent of the population to which such findings can be applied. Others will relate to areas where there are educational implications, if the findings are indeed supported by broader based studies.

The present study has indicated significant differences in the broad patterning of children's verbal behaviour in what might appear to be similar situations. Thus, one area which could be well worth pursuing would be to investigate a wider range of social situations, either within the general context of one setting (e.g. the home) or within a range of different settings. This investigation focussed on specified individuals in interaction (e.g. mother-child, teacher-child). For other purposes the focus could be on social occasions for language, for example, in the home, breakfast, after school, in bed, or in the car. The excellent work being done by such researchers as Tough (1973), Rosen and Rosen (1973), and Cazden et al. (1972) is providing rich descriptive analyses of child language in home and classroom situations. However, there is a need to find out more about the language children use in specific situations, if we are to come to as full an understanding as possible of the social and interpersonal factors that influence the use of language.

Nevertheless, the analysis indicated that interpersonal relationships were of crucial importance. The variation between the patterning of children's verbal behaviour in the peer situations with that in interactions involving adults suggested that factors other than verbal competence were operating to influence the type of exchanges that developed. A study of the relationship between the expectations participants have of the type of roles

they and others should play, and the verbal behaviour that results could provide another productive area of research.

In the context of the very extensive literature available on teaching behaviour, the findings of the present study on teachers' questioning patterns, the proportion of teacher talk, and the pupils' largely passive role were all consistent with trends that have been described by numerous writers over the years. However, this pattern of behaviour occurred in situations where it was least expected. Discussing books children had read or stories children had written, led very much to interview situations that did not seem to be consistent with the prevailing philosophy for the teaching of language arts in New Zealand schools. While the sample of teachers was very small, they all behaved in a very similar way. The manner in which teachers interpret curriculum principles (particularly in the area of language) and apply these in classroom practice could provide yet another fruitful area for further investigation.

The suggestions above refer, in the main, to broader based studies. These are necessary to establish the extent to which findings from narrower studies, such as the present one, can be generalized to the wider child population. The comments made about interactive factors, contextual meaning, interpersonal relations, the language game, and the like, suggest other areas for investigation that relate to a more theoretical conceptualization of the speech act. Developments in this direction are likely to have as far reaching educational implications as further descriptive surveys of the type undertaken in the present study.

7.5 A final comment

The description of verbal behaviour given earlier was characterized by some general patterns that could be identified from situation to situation. At the level of analysis adopted, there were significant quantitative variations in the kinds of verbal behaviour used. When the specific sub-categories of verbal moves were examined these were even more indicative of qualitative differences in language usage, as was discussed in some detail as part of the descriptive analysis. Thus, the statistical analysis

showed quite conclusively, for this sample of children, that variations existed in the broad patterning of behaviour from situation to situation. This was not unexpected, of course, being in accord with everyday human experience, but the value of the study may well lie in its identification of the types of verbal behaviour most likely to be affected.

The variations in the child's language, between home situations involving adults and school interactions with teachers, indicated the very strong influence teachers exerted over the manner in which exchanges took place. Although there was a general similarity in the child's pattern of verbal behaviour in both settings, there did appear to be a greater cognitive effort required of the child in the school situations. This was evidenced particularly by the nature of initial and probing questions asked by the teachers. While very few of the initial questions asked in any situation were of the higher-order type, teachers asked many more comprehension questions than did adults in the home interactions. Teachers also used a much higher proportion of probing questions which challenged the children to think critically about responses they had given.

These particular variations were probably due, in part, to the nature of the tasks, and at school children were obviously expected to <u>think about</u> the topics they were discussing. In the home, on the other hand, the emphasis was more on <u>sharing</u> experiences and reminiscing about events that had happened. The variations in verbal behaviour were probably the result also of the function which interactions performed in the school setting. The specific focus for the school interactions was known in advance and this was generally not the case in the home, where topics often arose spontaneously. Further, the teachers obviously had some planned goals in mind as they worked with the children, and these were reflected in the types of leading questions they asked.

There were many occasions in the samplings of home interactions where children and adults engaged in 'intellectual' discourse. However, informal discussions with parents suggested that there was probably a more intensive period of adult contacts

during the course of the sampling period than would normally occur. Thus, the more 'intellectual' exchanges in the home may not occur as frequently as examples above might indicate. On the other hand, the incidence of teacher-pupil contacts in the school setting, and the intensity of these, would have been fairly typical of the level of interaction which would occur in such a period as that sampled in the present study.

Because of the variations referred to above, home and school would seem to complement each other in terms of the type of communication expectation each has of the child. One aspect of this is likely to be the continuing acquisition by the child of the social rules of discourse. The period of sampling was obviously too limited to see the long term effects each setting has on the child, but indications were there, and have been referred to at various points in the discussion above. For example, the peer-group interactions suggested a modelling factor that would not have been immediately apparent if these situations had not been sampled. In the peer-group exchanges children were adopting verbal roles they had not used in interactions with adults. The adult-child patterns of interaction observed served also to highlight the very important role that relationships between participants play in the nature of the verbal exchanges that develop.

Since language is primarily a social activity, it should either be studied within the types of social contexts in which it most typically occurs or, if investigated in isolation for specific purposes, the social contexts should be kept very clearly in mind. This type of focus has been sustained throughout the present study and, in particular, the analysis of data has been presented in such a manner as to maintain the essential social nature of the speech act. Its results have provided insights into not only the child's relationship with himself and his environment, but also the means by which opportunities to communicate these experiences are facilitated or inhibited by others in his social world.