Some Aspects of Syntactic Development In 5-6 Year Old Tamil Speaking Children : A Descriptive Study

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CERTIFICATE

This is to certify that this dissertation titled " Some Aspects of Syntactic development in 5-6 year old Tamil speaking children: A Descriptive study" is the bona fide work in part of fulfilmentfor the degree of Master of Science (Speech and Hearing), carrying 100 marks, of the student with Register No. 14.

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CERTIFICATE

This is to certify that this dissertation titled " Some Aspects of Syntactic development in 5-6 year old Tamil speaking children: A Descriptive study " has been prepared under my supervision and guidance.

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DECLARATION

This dissertation is the result of my own study undertaken under the guidance of Dr.K.Rangan, Reader-cum-Research Officer, Central Institute of Indian Languages,Mysore-6, and has not been submitted earlier at any University for any other Diploma or Degree.

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CONTENTS

"...there is no reason to discourage detailed observational and experimental studies of process of language learning, particularly as applied to language learning in the child....."

-John,B.Carroll (1962)

Chapter I

INTRODUCTION

> 'Linguistic structure does not exist apart from the knowledge of the world which the speaker-listener communicates about. Neither meaning nor syntax exists in vaccum: nor do the two of them together exist independent of situational settings"
>
> -Oller (1972-48).

The learning of language by a child is not just the imitation of an adult model but is an insightful progressive discovery of grammatical structures by the child. This process of acquisition is dependent on the ability of the child to perceive and organize 1. the environment and 2. the language that is a part of the environment, in addition the child must relate these two.

Language is defined as the infinite set of grammatical sentences in a language (Chomsky,1957). The grammar is a finite set of rules that will generate the infinite set of grammatical sentences and none of the ungrammatical ones.

The importance of sequencing of words to form grammatical sentences can be laid down as in the words of Whorf (1962-258):

> "Sentences, not words are the essence of speech, just as equations and fractions, and not bare numbers, are the real meat of mathematics."

Recently psychologists and linguistis became interested

in studying the process of language acquisition. Their research tried to answer questions such as: How does a child learn to understand and produce sounds, words and sentences? How does a child learn to form grammatically acceptable sentences? But why, to study language acquisition at all?

Language acquisition studies have not only given us insight into the process of learning language, but have also helped us to understand cognitive development. Further language acquisition studies have shown that regularities in linguistic performance and acquisition of normal children provide a handy, ever available instrument against which retardation as well as deviance can be measured. Intact perspective, integrative and cognitive apparatus are needed if normal age related linguistic structure are to be developed. With the help of language acquisition studies we may be able to pinpoint the area and level of disorder from which a deviant performance may arise (Shapiro and Kapit,1978).

During past two decades, a common assumption prevailed among many child language investigators. It was assumed that a 5 year old child would be 'linguistically an adult' and accordingly most of the research in the area of

acquisition of syntax has concentrated on children under the age of 5 years, dealing with the period of rapid progress and more readily observable changes in their language (Braine,1963; Brown and Bellugi,1964; Miller and Erwin, 1964; Klima and Bellugi,1966; Brown,1968; Menyuk,1969; Brown and Hanlon,1970; McNeill,1970; Brown,et.al,1973; Ingram,1972; Chapman and Miller,1975 and de Villiers and devilliers,1978).

But, infact, a 5 year old child will not be linguistically an adult. " Work in generative grammar over the last decade has considerably extended our knowledge of the depth and nature of the complexities of grammatical structures, and has given rise to the suspicion that the child of 5 or 6 may still not have mastered certain aspects of his language that the mature speaker takes for granted and commands quite readily," (Chomsky,1969-28). Language acquisition continues beyond the age of five at a slower rate and mare subtle manner (Chomsky,1969; Kessel,1970; Palermo and Molfese,1972).

Many studies have compared the syntactic abilities of normal and different linguistically deviant children. Such studies include children who have been deprived of environmental stimulation (Curtiss,1977), deaf children

(Quigley, et.al,1977; Russell,et.al,1976), children with cluttering (Tiger,1980), dyslexic children (Vogel,1975) and autistic children (Shapiro and Kapit,1978). These studies indicate that linguistically deviant children do not develop linguistic systems that are qualitatively different from normal children. Rather, they develop quite similar linguistic systems with a marked delay in the onset and acquisition time.

Knowledge of normal process of language development may help us to diagnose early (eg. dyslexic children may be identified before they start to read, Vogel,1975) and prepare programmes of therapy that approximate and follow the patterns of normal language acquisition. Traditionally, language programs have been developed by the prescriptive method. That is, these programs have concerned themselves with how language should be used with little or no concern with how language is actually used. But, in recent years, research workers have developed interest in knowing how language is used. Many tests have been developed in western countries to assess language development both in normals and in the deaf. These include the ITPA (Kirk,et.al,1968), Developmental sentence scoring (Lee, 1974) and Test of syntactic abilities (Quigley,et.al,1978).

Recently there is a strong urge among the speech pathologists to develop tests for assessing language abilities of children in different Indian languages. Vijayalaxmi (1981) has completed developing a test of language acquisition for Kannada speaking children between 1.5-5 years. Sudha (1981) has come with a screening test of comprehension of Tamil language for children between 2 and 5 years.

There are few studies in language acquisition. Thirumalai (1972) studied Tamil phonology in a child above 4 yrs. The relationship between articulation and discrimination in Kannada sounds in 4-8 year old children has been investigated by Kumudavalli (1975). Sreedevi (1976) has studied aspects of acquisition of Kannada by children above two years. The other studies deal with the aspects of acquisiton of articulation in Kannada (Tasneem Banu,1977) and morphology in Kannada speaking children (Subramanya,1978). Some aspects of development of syntax in 5-6 year old Kannada speaking children and 4-5 year old Hindi speaking children have been studied by Prema (1979) and Roopa (1980) respectively.

In the present study an attempt has been made to describe the following syntactic aspects: negation, interrogation, imperative, coordination, pronominalization and relativization in four 5-6 year old Tamil speaking children, mainly in terms of their production ability. The four children were divided into 5 year age group and 6 year age group.

One male and one female child were selected to form each age group. All the four are from nonbrahmin families residing in Mysore city. They use Tamil as their mother tongue and are exposed to English and Kannada languages outside.

Speech samples were collected from each child at his/her home environment, using a portable cassette tape recorder with a built-in-microphone. Totally four 45 minutes separate recordings were done with each child and an aggregate 3 hours sample collection with each child was used for final analysis. Duration of 6 days elapsed between the first and final recordings of children. Speech was elicited using interview, story telling, picture description, children appreception test and spontaneous speech elicitation techniques. The members of the family had also participated in the process of data collection. All the children's speech sample was transcribed

in broad phonetic transcription. The samples were then analyzed with respect to the syntactic pattern under study. The transformational grammarian approach has been adopted for analysis.

Limitations of the Study:

1. Large number of children are not included for the study. Only two male and two female children's speech sample could be collected and analyzed due to the constraint on time.
2. Description and comparison of syntactic pattern is limited to only the 5 years and 6 years age group of children. Because of this, the results have not been elaborately stated and only limited number of inferences have been made.
5. As this study mainly deals with the expressive part of language ability, only the spoken utterances have been analyzed.
4. No objective tests have been used to elicit specific speech responses, hence the children's complete grammatical structure may not have manifested itself.
5. The reliability of obtained speech sample could be questioned, as all the adopted techniques of speech elicitation could not be employed with equal efficiency with all the children.

6. Some of the sentences could not be analyzed, as they were contaminated by structures of Kannada and English languages to which the children are exposed to.
7. Though the children did exhibit many types of syntactic structures only limited number of syntactic patterns have been extracted from their corpus of speech sample.

Implication:

1. Studies on language acquisition in Indian set up are few. Such type of studies would help to understand the development and use of language by normal children.
2. Description of normal language can be used to identify and diagnose the children who are linguistically deviant or retarded.
3. It would be helpful in planning therapy programs for deviant children of equivalent ages. The transformational rules used by normal children may be adopted in
   - therapy session for teaching different structures systematically and in a simplified manner.
4. Knowledge of the normal course of development would help us to understand the regression and recovery processes of language in aphasic patients.
5. The results of this study can be taken into account

while constructing tests of syntactic abilities for a specified sample of children.

6. Evaluation and identification of dyslexic children can be done early as reading test can only be done after school age.

Chapter II

REVIEW OF LITERATURE

> ".... for I was no longer a speechless infant, but a speaking boy. This I remember; and have since observed how I learned to speak. It was not that my elders taught me words.... in any set method; but I, longing by cries and broken accents and various motions of my limbs to express my thoughts, that so I might have my will and yet unable to express all that I willed, or to whom I willed, did myself, by the understanding which Tou, my God, gavest me, practice the sounds in my memory... And thus by constantly hearing words, as they occured in various sentences, I collected gradually for what they stood; and having broken in my mouth to these signs, I thereby gave utterances to my will. Thus I exchanged with those about me these current signs of our wills and so launched deeper into the stormy intercourse of human life...."
>
> -St.Augustine
> Confession (c.400A.D)

The mystery of how a child learns to speak has intrigued and puzzled many since antiquity. The above speculation is no more an exception to it.

For many decades, psychologist and linguist were the two among many professional, who have maximally contributed to the understanding of the nature of linguistic development of children.

Recently studies have been done to explore the major developmental trends without fully specifying as to how the child masters the intricated aspects of a language and how well does he/she comprehend or produce utterances. Thus there is strong need for the description of development of language in children.

The process of language learning is not just the imitation of an adult model but is an insightful progressive discovery of grammatical structures by the child. The perceptual and organization skills of the child would faster such process of acquisition.

In the past two decades investigators have become mare interested in how the child learns language rather than what the child learns. To gain insight into the language of children, investigators have studied the phonological development (Templin,1952; Tasneem Bane,1977), morphological development (Steckol and Leonard,1979; Subramanya,1978) and syntactic development (Chomsky,1969; Menyuk,1971).

2.1.The different approaches to language acquisition studies in children can be divided into 3 view points (McLaughlin,1978). 1. Empiricist or Behaviorist approach 2. Transformational generative grammarian approach and 3. Process approach.

The Behaviorist Approach:

According to Skinner (1957) " one need not study language learning as such, it is enough to study general principles of behavior." This approach presumes that

language learning is a function of reinforcement. Language like any other behavior is learnt gradually and through selective reinforcement most errors will be corrected. But as more information accumulated about children's language, it became quite apparent that the child's linguistic behavior is much more complex than was supposed to be and this approach has been criticized by many as being incapable of explaining the language acquisition process in it's entirety.

The Transformational grammarian view:

This approach which is propagated by Chomsky, notes that the grammar of a language can be thought of as a hierarchy. The base sub component of syntax generates a set of deep structures. A set of transformational rules operate on the deep structure to derive the surface structure. Addition to that there are semantic and phonological components.

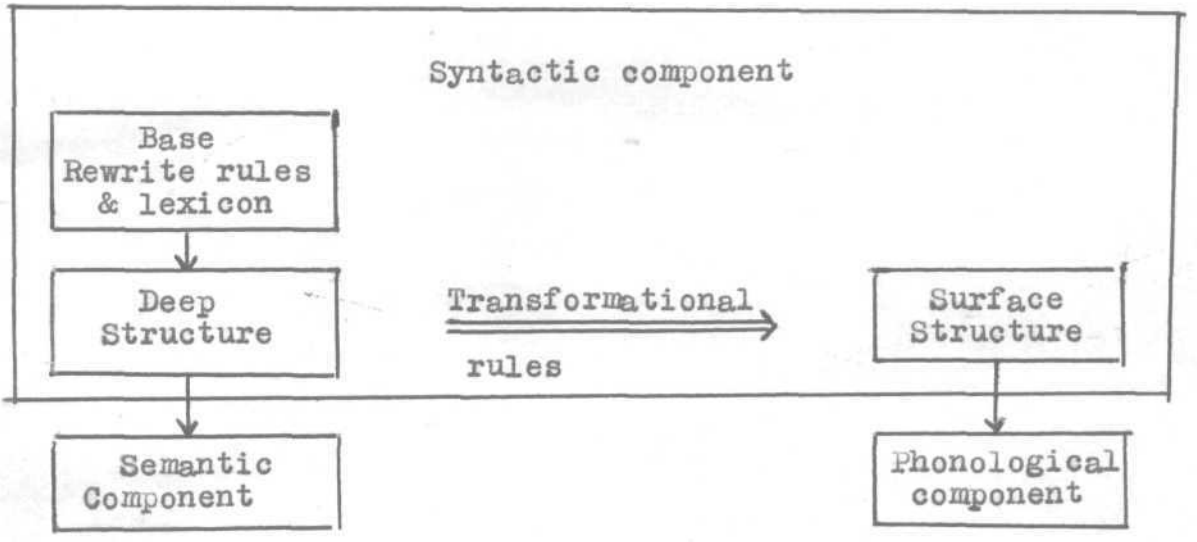
A transformation may involve any of the four proce-sses: 1.addition 2. deletion 3. rearrangement and 4. substitution.

By addition, it is meant that some element is added in the surface structure that is not present in the deep structure. Since the transformations do not bring about any change in meaning (Katz and Postal,1964) only elements

which are semantically empty in meaning may be added transformationally.

Deletion process is meant to delete some element from the deep structure when the surface structure is derived. The elements that cause no change in meaning may be deleted.

Schematic representation of the Chomskian Model (adopted from Rangan,1972)



Rearrangement changes the ordering of the phrase markers at the surface sturcture in relation to the deep structure.

Substitution involves replacing an element of the deep structure with another element in the surface structure.

According to transformational grammarian view, language is acquired by developing and testing hypotheses

about regularities in the corpus to which the child is exposed. Language acquisition is a process of implicit theory construction whereby children formulate hypotheses qbout the rules governing the linguistic structure of sentences they hear, test these hypotheses against new evidence they acquire, eliminate those hypotheses that are contrary to the evidence and evaluate those that are not eliminated by a simplicity principle that select the simplest as the best hypothesis concerning the rules underlying the linguistic corpus.

Engel (1977) made an analysis of transformational generative approach and indicated that this approach is not the most adequate system to explain language acquisition process. The critical points on which he had argued are that 1. syntax is not all of language 2. no language is said to begun after grammatical relations begin, the child's communicative behavior before the age of 18 months is ignored. 3. meaning is in discourse and not in a sentence, and 4. this system ignores intonation, finally broader context of culture and environment is ignored.

Braine (1971) rejects the view that language acquisition process is based on hypothesis formation and assumes that it would be based on discovery procedures.

Process Models:

They are essentially cognitive models of language.

This model attempts to delineate how language is processed cognitively and how it is manifested hehaviorally. This model has been considered as inefficient because it attempts to accomodate both competance and performance simultaneously and no processing model exist that presently can account for all relevant linguistic and behavioral phenomena.

2.2 The acquisition and development of syntax

" Language " is defined as the infinite set of grammatical sentences.

" Grammar " is a system of a finite set of rules that generate the infinite set of grammatical sentences and no ungrammatical ones.

Recent research in child's acquisition of syntax included children from 18 months till the age of 13 years. Large number of studies of early child speech have been done (Braine,1963; Brown and Bellugi,1964; Miller and Irwin,1964). Brown and Hanlon (1970) and McNeill (1970) indicated that the most active period for learning syntax is between 18 months and 4 years and that this period reflects distinct levels of linguistic development. Many investigators assuming that the acquisition of syntax is complete by the age of 5, have limited their syntactic studies only upto 5 years. Though a 5 year old child's

language resembles that of an adult on the surface Borne of the complex rules of language are not yet fully acquired by the age of 5 years.Only, by making a depth analysis of the language structure it is possible to prove the incompleteness of child's language at the age of 5 years (Chomsky,1969).

'The following questions might be explored in studying the process of acquisition of syntax:

1. What forms does the child use to express various meanings at different stages of development?
2. What is the relationship between comprehension and production?
3. Why are some forms understood or produced before others?'

Studies on the stage of single word utterances revealed that these utterances are used to express imperation, declaration and interrogation rather than to simply name the objects. These utterances may be articulated in a standard (normal) or in a distorted manner and even in an entirely different manner. During this stage the child may be producing long babbled utterances with no or few lexical items but with stress and intonation. As the child grows there is an overlap of structures learned and new structures. This overlap can be found throughout all

developmental stages (Menyuk,1969). During the stage of two or three word utterances the function words, couplas, articles are often omitted. This function word omission is just due to the lack of stress on these utterances, when the children hear sentences (Brown and Bellugi,1964).

Shipley, Smith and Gleitman (1969) compared the responses of children aged 15 to 56 months, for the comprehension of various types of utterances: N, YN, 'telegraph' imperative, and utterances containing non-sence forms of the NV etc. The children were divided into 2 groups: less advanced (primarily one word spontaneous productions) and more advanced (two word spontaneous productions). The more advanced group most often responded to the grammatical imperative sentence. The less advanced children responded frequently to the word in isolation (necessarily the noun stressed) and to the word separated delivery of the telegraph utterances with each item distinctly stressed. Studies of similar kind indicate that while children use stress and intonation to differentiate meaning within the sentence types, the adults use different devices.

The results of Shipley, Smith and Gleitman studies (1969) also revealed that comprehension does not precede production, with the less advanced children. The more advanced group, understood complete grammatical utterances,

while producing only two word utterances. There may be stages where production may precede comprehension and other stages druing which comprehension may precede production or closely matched (Menyuk,1971).

/The order of emergence of production and comprehension was tested by Chapman and Miller (1975) by making use of word order in early two and three word utterances. Three groups of five children were participated in the study each having an average MLU of 1.8, 2+4 and 2.9 morphemes respectively. The investigators reported that in the object manipulation frame work production preceded comprehension. However, the age range of the subjects was not taken as a criterion for selection.

Wood (1976) has found the following 6 district stages of syntactic development in children between the age of 1 year and 10 years.

Stage of development	Age(yrs.)	Nature of development
1. Sentence like word	1-1½	The word is combined with nonverbal cues(gestures and inflection)
2. Modification	1½-2	Modifiers are joined to topic words to form declarative, question, negative and imperative structures
3. Structure	2-3	Both a subject and predicate are included in the sentence types.

4. Operational changes	3-4	Elements are added, embedded and permuted within the sentences.
5. Categorization	4-7	Word classes (name, verbs and prepositions) are subdivided
6. Complex structure	5-10	Complex structural distinctions made as with 'ask-tell' and promise.

With regard to male and female differences in language acquisition, McCarthy (1954) reported that there was a slight difference in favor of girls in pronunciation, mean length of sentence, vocabulary, verbosity along with the fact that boys show more incidence of language disorders.

Many recent studies tried to explain the development of syntax in children based on transformational generative approach. Ingram (1972) outlined 5 stages in the development of structures from the corpus that he had collected from 15 children who used snetences of 2 to 3 words in length and their age range was 1.17 to 3.0 years. He described each stage with adequate phrase structure rules as given below:

The first stage was represented by

i. $S_1 \longrightarrow (NP_1)\ (VP)$

ii. $VP \longrightarrow VB\ (NP_2)$

iii. $NP \longrightarrow (S_3)\ N$

In ii. NP_2 occurs only if S_1 is rewritten as VP

iii. S_3 occurs only if S_1 is rewritten as NP

During the second stage there is a consistent use of modals and negatives and the appearance of NP_3

i. S_1 —> (NP_1) (T) (VP)

ii. VP —> VB (NP_2) (NP_3)

iii. NP —> (S_3) N

In ii. the condition is that

VP -—>VB (NP_2) (NP_3), NP_3 occurs if S_1--->VP

In i. (T) only occurs if

$$S_1 \longrightarrow \begin{Bmatrix} VP \\ NP \end{Bmatrix}$$

In stage III the VP in obligatory and complement structure appear but without the NP_2.

i. $S1 \longrightarrow (NP_1)\ (T)\ VP\ S_2$

ii. $VP \longrightarrow VB \begin{Bmatrix} V\ (NP_2)\ (NP_3) \end{Bmatrix}$

iii. $NP \longrightarrow (S_3)\ N$

In VP there is an embedded sentence.

Stage IV:

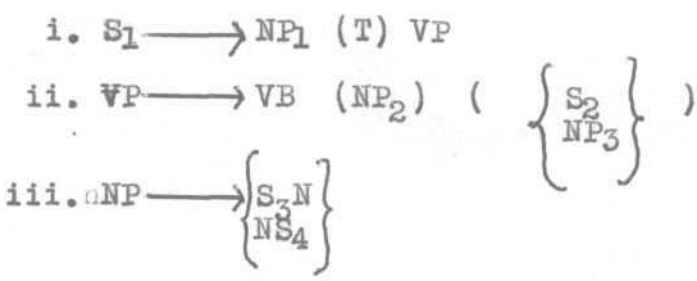
i. $S1 \longrightarrow NP_1\ (T)\ (VP)$

ii. $VP \longrightarrow VB\ (NP_2)\ \left(\begin{Bmatrix} S_2 \\ NP_3 \end{Bmatrix} \right)$

iii. $NP \longrightarrow (S_3)\ N$

At this stage the subject is obligatory and a pronoun or noun appears in this position.

Stage V :



In this stage the relative clauses appear.

Studies have indicated that a child's developmental rate and not his age is the most critical indicator of his progress in acquiring syntactic rules.

'Studies of syntactic development based on transformational grammarian approach tend to follow a procedure of collecting a corpus of sentences from children of various ages and an analysis of that corpus in terms of a set of grammatical rules that could be used to describe it.' 'Comparison of these rules with adult forms and evaluation of development are then made'. Studies are numerous on the above lines.

'Menyuk (1963,1964,1968 and 1969) examined the language of children from 2-7 years of age. 80-120 sentences were collected from each child. On the basis of the grammar written to describe the sentences of children, Menyuk concluded that nursery school children have completed the phrase structure and morphological levels of grammar. Though all the children showed the transformation used by adults, the nursery and the first grade children did not complete development of 1. suxillary 'have' 2. nominali-

zation 3. pronominalization and 4. conjunctions 'with' 'if' and 'so'.'

O'Donnell et.al (1967) collected samples of oral and written language from 5-14 year old children. The analysis of data was based on terminal units (T-units). Simple or complex sentences were defined as T-units, but a compound sentence was analyzed in the smaller T-units, of which it was composed. The length of T-units increased from about 7 words for K.G children to about 10 for the 7th graders. Between KG and 1st grade and between 5th and 7th grade are developmental periods where large increases in new grammatical constuctions or sudden increases in the use of constructions previously evidenced at low frequencies and higher rates on some kinds of constructions seem to occur. In both the periods there was a marked increase in nominal, adverbial and coordinate constructions. Nominals with adjectives and prepositional phrases increased especially between 5th and 7th grade.

More research focused on these two periods may be of particular interest in revealing what is happening at these ages. It could be that if some structures are being acquired at this stage, then they could affect and disturb the structures that the child had learned earlier.

" Language is an integrated system in which a change in one structure can not help but affect other structures within the system," (Palermo and Molfese,1972-417)'

Chomsky (1969) has dealt with the acquisition of syntactic structures by children from 5-10 years of age. 40 children were selected from KG through 4th grade and comprehension of the following structures were tested with no contextual or semantic clues to influence the child's interpretations. The 4 structures that were tested were: 1. ask/tell 2. promis e/tell 3. easy to see and 4. pronominalization. The structures 1 and 2 were acquired between the ages of 5.6 to 9 years and there was a lot of individual differences. Structure 3 was still imperfectly learned by some children till the age of 10. The structure pronominalization was acquired by the age of 5.6 years.

'Recently much work on language acquisition after the age of 5 years has been done. It is not only the complex structures that develop after the age of 5, but some other aspects of language like tagging of general principles with rules for exception, the progressive passage from coordination to subordination, avoidance of redundant marking et., are acquired completely only after the age of five (Earmilogg-Smith,1979).'

2.3 Development of specific Transformations:

2.3.1 Negation

" Negative is considered as a formant which combines with parts of the sentence to constitute negation in sentence," (Klima and Bellugi, 1966). If a morpheme negative is present in the deep structure of a sentence then by a series of transformations the sentence will be realized as a negative sentence.

Some of the negative markers in English are not and a small set of negative words including the negative pronouns nobody and nothing, the negative determiner no. the negative adverbs never and no where. In Tamil negation is expressed by ille (no), Kedayaadu(no) and by affixes -le, maatt-. -aa-, -aad- and-aanal. The constitutents with which a negative marker can occur are verbs, participles, participal noun and verbal nouns (Radha,1977).

1 Acquisition of Negation

Klima and Bellugi (1966) indicated that the syntactic expression of negation in children's speech passes through four stages.

'Stage I: It is a pretransformational stage, occuring early in the acquisition process.' At this stage there are no negatives within the sentence and there are no auxiliary,

verbs. Negation is signalled by the presence of a no or not outside the nucleus of a sentence. Rule for Ist stage negation is,

$$\left(\begin{Bmatrix} \text{no} \\ \text{not} \end{Bmatrix} \text{---} \text{ Nucleus } \right) S \quad \text{or} \quad \left(\text{ Nucleus --no} \right) S$$

Stage II appears 3-6 months after the onset of negation. Still it shows no use of transformation. However auxiliaries (don't and can't) are used before nonprogressive main verbs in negative construction. Children understand the negative embedded in the auxiallary at this stage.'

S—>Nominal—--Aux^{Neg} —--predicate main verb

$$\text{AuxNeg} \longrightarrow \begin{Bmatrix} \text{Neg} \\ V^{Neg} \end{Bmatrix}$$

$$\text{Neg} \longrightarrow \begin{Bmatrix} \text{no} \\ \text{not} \end{Bmatrix}$$

$$V^{Neg} \longrightarrow \begin{Bmatrix} \text{can't} \\ \text{don't} \end{Bmatrix}$$

'Stage III. Another 3-6 months later, modal auxiliaries can and will, do and be appear in negative sentences as well as in declarative and interrogative sentences.' In these sentences be is optional, but restricted to predicate and progressive verbs. Can and do are restricted to non-progressive main verbs.

S --->Nominal -—Aux———Predicate main verb

Aux—> Tense —- VAux —(Neg)

$$V^{Aux} \longrightarrow \begin{Bmatrix} \text{do} \\ \text{modal(will or can)} \\ \text{(be)} \end{Bmatrix}$$

Stage IV: In the final stage 2 main types of transformations found:

'l. optional 'be' deletion

NP____be==>NP

2. 'do' deletion

do_V==>V'

At this stage negative auxiliaries are no longer limited to don't and can't. Suxillary verbs now appegr in other kinds of sentences. There is also appearance of indeterminates in affirmative and negative sentence.

Menyuk (1969) in her study of 4-7 year old children found aspects of negation developing in stages similar to those of Klima and Bellugi (1966).

Quigley et.al (1974) deviced a test Based on Klima and Bellugi's (1966) model of negation acquisition to study the acquisition of negation in a group of normal children between 8 and 10 years. Results indicated that by the age of 8 years almost all aspects of negation were acquired.

'Bloom (1970) distinguished three aspects of negation

1. Non existence - here the object of reference no longer exists.
2. Rejection - here some aspect of the environment is rejected.

3. Denial - child makes denial of something asserted.'

Developmentally, the above 3 types of negation follow the same order.'

Wode (1977) proposed 4 early stages for the acquisition of negation. Stage I, one word negation eg. 'no'. Stage II, two or more word negation eg. 'no more'. Stage III a) anaphoric negation eg.'no, outside,no,I want to go outside.'Stage III b) nonanaphoric negation eg. 'no close I can't close the box. Stage IV, intransential negation eg. ' I can't open it.' He studied these aspects in German and English languages.

Park (1979) criticizing Wode (1979) argues that Wode (1977) had very few sentences in the sample he collected and the sample size was not indicated. Park(1979) has questioned the Wode's (1977) theory of acquisition of negation.

Sreedevi (1976) while studying the aspects of acquisition of Kannada by 2 year old children found that negative tansformations employing mere addition of ll.ill and beed are acquired earlier than other types of negative morphemes like negative marker with modal auxiliaries. Prema (1979) reported that the structure of the negative sentences in 5-6 year old Kannada speaking children is similar to the adult form. Negative particles like illa.

alla, and beda are used in adult fashion, but bound forms are very few.

Roopa (1980) reported that the negative marker nahi in the preverbal position of a sentence is indicative of negation in 4-5 year old Hindi speaking children, but word negations were not found in the sample. Adults also use the same marker.

2.3.2 Interrogation

'There are two major categories into which questions fall, yes/no questions and wh- questions. Tag questions are a form of yes/no question. To form a yes/no question the subject and auxiliary verb of the sentence are generally inverted. When there is no auxiallary verb, the verb 'do'ip provided by the rule of do-support (Quigley et.al,1974).'

Tag questions involve a complex set of rules:

1. Copying the whole sentence (John left, 'John left)
2. replacing the second occurence of the subject by a pronoun (John left, 'he left')
3. reversing the negative polarity of the tag (John left, 'he Neg left')
4. applying the do-support (John left, 'he Do Neg left)
5. adjustment of the tense and transition of the remainder of the VP produce the final form (John left,'didn't he).

Wh- questions require the replacement of the element being questioned by the appropriate wh- word (who, what, when etc.).

In Tamil yes/no questions are generated by attaching a suffix -aa to any one of the NPs in a sentence. Wh-questions like nominal (evan), verbal (enna). adjectival (enta) and other subclasses of adverbial questions (enge. epdi. eppe) are generated by the combination of the e- element in the determiner system with the other constituents of the NP. The tag questions are formed by adding a negative morpheme ille and the suffix -aa (Rangan,1972). According to Shanmugam Pillai (1966) the element e- has the following distribution:

Initial					Final
Before pronominal termination		Before other suffixes			after taan
before vowels	before consonants	before vowels	before N_1C_1	before other C's	
ev- evan who (mas.)	e- etu which (neu.)	evv- evvaaru how	e- enda which	eC_1- emmurai in which order	-ee avandaanee Is he

Among the non pronominal suffixes some are bound forme and some are free forms . Bound forms are : ena- which, enna-what, ennanam-how, eppadi-how, engu and engee-whwre, ettanai- how many.

Free forms are: evvalavu-ho much, emmurai- in which order, evvaaru-how. Rise in intonation and pitch at the end of the sentence are also indicative of interrogation.

The differences between yes/no questions and tag questions is that the tag question in general always involve assertion whereas yes/no questions do not involve any assertion. In Tamil the tag formation is unvarying because there is no need to copy tense and other elements (Rajaram,1974).

Acquisition of Interrogation:

During past three decades many studies have been done (Smith.,1933; Klima and Bellugi,1966; McGrath and Kunze,1973) to evaluate the following syntactic aspects: the types of interrogative sentences used by children, the order of difficulty, the rules that are used by children, the reasons for differential difficulty etc.

'Smith (1933) studied 3095 questions found in language samples from 219 children between the age of 1.6 and 6.0 years. According to her study it was found that with respect to the order of acquisition what and where were the most frequent interrogatives for young children and how, when and why gradually appearing in the older children's sample. Questions constituted 13% of the children's total language sample. What and where the only frequent

items with when questions being infrequent. Smith (1933) has not mentioned the age of acquisition of the wh- types or the criteria for classifying the children as belonging to the younger or older age groups.'

Carpenter (1966) collected sentences from 70 KG children in the age range of 4.11 to 5.10 years. About 23% i.e 31 out of 136 sentences were interrogative sentences. Among these sentences, there were:

1. 3 questions (10%) by the reversal of the subject and verb
2. 10 questions (32%) by using an auxiliary and reversing the subject and the suxillary.
3. 3 questions (10%) by use of a question word
4. 6 questions (19%) by using a question word with the reversal of the subject and the verb.
5. 9 questions (29%) by use of a question word and an auxiliary with the reversal of the subject and auxiliary.
6. 25 questions (81%) required a reply in either the noun-verb or noun-verb-noun statement pattern
7. 6 question (19%) required a reply in either the noun-verb-adjective or noun-linking verb-noun statement pattern.

This kind of investigations give us a clue as to the

kinds of sentences that are used by children and this information may be used in planning therapy programs for deviant groups.

Klima and Bellugi (1966) derived rules for question formation in English speaking adults and children.

Rules for adults:

$$S \longrightarrow Q - WH - NP - Aux - VP$$

$$NP \longrightarrow \left\{ Wh + Indet \text{ (provided that Q, but not Q-WH introduces S)} \right\}$$

$$VP \longrightarrow \left[\left\{ \begin{matrix} V \\ be \\ have \end{matrix} \right\} (NP) \right]$$

Transformations:

1. Replacement of do

$$T - do - (Neg) \left\{ \begin{matrix} M \\ have \\ be \end{matrix} \right\} \Longrightarrow T - \left\{ \begin{matrix} M \\ have \\ be \end{matrix} \right\} - (Neg) - \emptyset$$

2. Interrogative proposing (optional)

$$Q - X^1 - WH + Indet - X^2 \Longrightarrow Q - WH + Indet - X^1 - X^2$$

3. Interrogative inversion

$$Q - WH(+Indet) - NP - Aux - X \rightarrow Q - WH(+Indet) - Aux, - NP - X$$

4. Do deletion

$$T - do - V \Rightarrow T - \emptyset - V$$

Rules for children:

Period I

$$S \rightarrow Q \text{ yes/no - Nucleus}$$

$$S \rightarrow Qwhat - NB - (doing)$$

S___)Q where - NP - (go)

Period II

$$S \rightarrow \left\{ \begin{array}{l} Q\ yes/no \\ Q\ what \\ Q\ where \\ Q\ why \end{array} \right\} \quad Nucleus$$

$$Nucleus \rightarrow NP - V - (NP)$$

$$NP \rightarrow \left\{ Q \text{ if the sentence is introduced by Q what} \right\}$$

Period III

$$S \rightarrow Q(Wh) - NP - Aux - VP$$

$$Aux \rightarrow T - V^{Aux} - (Neg)$$

$$V^{Aux} \rightarrow \left\{ \begin{array}{l} can \\ do \\ will \\ be \end{array} \right\}$$

$$NP \rightarrow \left\{ Wh + Indet \right\}$$

Transformations

1. Interrogative word preposing
2. Interrogative inversing (characterizing only of yes/no questions)
3. Do deletion

These acquisition rules were the result of a study undertaken by Klima and Bellugi (1966) with 3 children for a duration from the time the children had a MLU of 1.75 morphemes till the time they had a MLU of 3.75 morphemes.

Klima and Bellugi (1966) distinguished two stages in the development of yes/no questions. A rising intonation pattern along with the nucleus of the sentence characterizes

the first stage. In the second stage 'do-support' and 'subject auxiliary' inversion appear but tense adjustments are not yet applied. They also pointed out that in yes/no questions, subject auxiliary inversion is optional. Later the use of subject auxiliary inversion in yes/no questions become stabilized when children start using auxiliary verbs.

There are 3 stages in the development of wh- questions (Klima and Bellugi,l966). In the first stage the wh- questions are limited to the form what-NP and where-NP. Here most often children give inappropriate answers to wh- questions put to them. The responses to these questions become consistent during the second stage and in children's speech these two question forms become stablilized. 'why' and 'why not' questions also appear. Auxiliaries are limited to can't and don't.

The IIIrd stage is characterized by the use of auxiliaries but untill auxiliaries appear in declarative sentences the subject auxiliary inversion does not appear. There are 3 stages of acquisition of subject auxiliary inversion: 1. with yes/no questions 2. with positive wh- questions and 3. with negative wh- questions

Though children use why questions in IInd stage, they do not respond to them till stage III (Brown,1968). He also noted that the surface structure of the wh- questions may not represent the underlying structures.

Klima and Bellugi's (1966) findings were supported by Menyuk's (1969) study, which shows that till aux/modal mode of the base structure of the grammar is acquired by the child, completely well formed structures can't be derived and the transformational rules that have been described for the generation of negative and question sentences can't be applied.

In another study of comprehension of interrogation Erwin-Tripp (1970) selected two groups of children: 1. 2 years age group, 5 children and2. 2.6-3.9 year age group,24 children. Language samples were collected over a period of one year from the former group of children. She considered both the order of development in discourse agreement and the nature of answers children made before agreement was similar to the adult form.

Questions euch as yes/no, what and where were understood first by the first group of children. For the other group the order of comprehension was 1. why 2. who subjects 3. how, where form and 4. when,who object. As there was much individual differences in the acquisition, the reliability of such an ordering is questionable (Erwin - Tripp,1970).

Tyack and Ingram (1977) made an extensive study on comprehension and production of questions in children

between 2 years and 5.5 years. In the comprehension study 100 children in the age range 3.0-5.0 were tested by controlling the syntax and vocabulary. It was noted that the frequency of correct ansers increased with age.

The order of correct response during this comprehension task was as follows: 1. where-intransitive verb 2. why-intransitive verb 3. why-transitive verb 4.who-subject, 5.where-transitive verb 6. what-object, 7.who-object, 8.when-intransitive verb 9.when-transitive verb 10.how-transitive verb 11.how-intransitive verb and 12. what-subject.

In contrast to the findings of Erwin-Tripp (1970) when questions were earlier and easier than how questions. Except for how the intransitive tended to lead to better comprehension than transitive verb.

The production study included 22 children between the ages of 2.0 to 3.11. The chronological order of development of these questions was I. yes/no- 1.normal 2. tag II. wh- questions: l.what 2.where 3.why 4.how 5. who 6.where and 7.others. At the age of 2, children produced 'yes/no', what and 'where' questions very often, 'why' and 'how' questions increased with age. 'who'and 'when' were rare in the age group of 2.0 to 3.11 years.

Brown & Hanlon (1970) report that tag questions appear only after yes/no question are well established. At the first stage tags in English appear only as positive tags, whether the sentence is a affirmative or a negative sentence.

McGrath and Kunze (197%) investigated the hierarchical difficulty in the process of acquisition of tag questions, by analyzing the elicited tag questions from 48 normal children between the ages of 5 and 11 years. There are 4 operation in English which lead to the generation of a tag question. In these children, the order of difficulty of the acquisition of the four operations (from less difficult to most difficult) was as follows: 1. inversion of the pronoun and the auxiliary verb. 2. pronoun selection 3. auxiliary verb selection 4. addition or deletion of negation. This hierarchy remains constant from 5-11 years of age. It was concluded that younger children tend to abstract alternate phrase structure rules which are less complex than the rules which can account for spontaneously generated tag questions.

Sreedevi (1976) while studying the aspects of acquisition of Kannada language by 2+ year old children observed that yes/no type and a few wh- type (elli, yaake, and yaaru) were present in the spontaneous speech sample of children. By the age of 10, the yes/no

type, wh- type and tag type of questions seem to be understood by normal children (Russell et.al, 1976).

Cairns and Ryan Hsu (1978) made an attempt to explain the reasons for late acquisition of some types of questions. They studied the responses of 50 children (3-5.6 years) to wh- questions after they were shown vedio taped sequences. The differential difficulty of various forms of wh- questions is believed to support a parallel model of information retrieval and processing during discourse. The younger children used 'what for' or 'how can' rather than 'why', 'when'. In 'why' questions only an antecedant consequent relationship needs to be developed, while in 'when' questions a two way relationship needs to be developed. The child must be able to relate events to the events that follow it.

'Another possible reason for 'why' being easier than 'when' is that causality is acquired before temporality, 'how' questions seem to be difficult because more demands are placed on the child if the child chooses to respond to the question. How questions may involve many unrelated skills.'

'Prema (1979) observed that by the age of 6 years, Kannada speaking children develop 'yes/no' and wh-type of question.'

Roopa (1980) noted that yes/no type and tag questions were being used by 4 year old Hindi speaking children, but wh- type questions were still in the process of acquisition.

'Studies in interrogation have included children from the age of 2 years to children till about 11 years of age. Results of these studies indicate that there is a developmental hierarchy in learning syntax of question sentences. The yes/no and wh- type are acquired by the age of about 6 years, but the tag questions may be more complex and may be acquired even after the age of six.'

2.3.3 Coordination

'The process of coordination by which two or more sentences are combined into one compund sentence, is one of the recursive process that enables language to generate an infinite number of sentences from a finite number of rules (Wilbur et.al,1975).'A coordinate conjunction is a construction of two or more members which are of the same grammatical rank and are bound together at the same level of structural hierarchy by means of a linking device called coordinator (PushpaValli,1975)'.

'All languages have two major types of coordinate structures 1. sentential coordination (coordination of

full sentences) 2. non-sentential or reduced coordinations (coordinations of noun pharases, verb phrases, verbs etc), (Ardery,1979). Transformational model of coordination assumes that reduced coordinations are derived from their sentential counterparts by means of a rule that deletes the identical elements. This is.rule of conduction reduction.

In Tamil coordinate conjuction can be divided into 3 subgroups: 1. Additive coordination, -um(and) 2. Alternative coordination or disjunctive coordination, -oo(either...or), -aavadu(either ...or) and alladu(or) 3. Adversative coordination, aanaal(but),(Pushpavalli, 1975).

Acquisition of Coordination

'Coordination is known to develop quite early in the first language acquisition process and to provide a foundation for the development of other complex structures, eg. subordination or embedding. The following are the studies done in the area of acquisition of coordination.

Katz and Brent's (1968) investigation on comprehension and production of connectives because, then, therefore. but, although and and, is one among the aarlier studies. They analyzed samples of spontaneous speech from 1st

grade-6th grade school children and a group of college students. Results suggested that first graders understood most of the temporal relation of because rather than a causal one. They did not seem to have more than a sequential meaning for because. The 3 connectives because, then, and therefore were marked semantically as then. The first graders showed little evidence of comprehension of other connectives but and although. The 6th graders on the otherhand could identify sentences correctly using these words, but could not account for their choice. In general a developmental trend was observed revealing an increase from grade 1 to 6 in the preference for the linguistic order of clauses to mirror the temporal order of cause and effect events. These results reflect a general cognitive developmental awareness of cause and effect by the older children.

'Wilbur et.al (1975) reported that by the age of 8 all the normal children had all apsects of coordinating process well under control, both in comprehension and expression task.'

Coordination may be constrained at early stages of child language in two ways (Lust,1977):

1. Constraint on optionality of redundancy reduction: Order of development appeared to be consrrained so

'that young children (2-3years) acquire sentential coordination before they acquire phrasal coordination (coordination of phrases, nouns, verbs and adjectives etc).

2. Constraint on directionality of redundancy reduction or deletion directionality hypothesis:

Coordination with forward deletion patterns are attained prior to coordination with backward deletion.

Lust's (1977) study with 32 young children between 2-3.1 years provided evidence for the above constraints on the development of coordination and also a constructive course of development of coordination.

Ardery (1980) evaluated the above two hypotheses by studying the comprehension and production of coordinator, 'and' in 60 children between the ages of 2.5 and 6.0 years. Two experiments were conducted, one evaluating the comprehension and the other checking the non-imitative production skill.

For the comprehension experiment, the following is the increasing order of difficult structures which are conjoined by 'and'. 1. intransitive verb 2. object NP 3. intransitive sentence 4. VP 5. subject NP 6. transitive sentence 7. gapped verb (with particle) 8. transitive verb 9. gapped verb (with no particle) and 10. gapped object.

A comparison of order of difficulty in comprehension experiment and non imitative production experiment revealed that those structures that were easy to comprehend were also easy to produce. The elements which were difficult to comprehend were rarely produced in the form of simple sentences. Sentential coordination was produced more often than comprehended.

The results of Ardery's (1980) study do not support either of the Lust's hypothesis. He reasoned out as follows: 1. these hypotheses can't account for the relative difficulty of the reduced coordination and non-redundant sentential coordination or for the relative difficulty of particular reduced coordination. 2. these hypotheses can't account for the errors children made in the comprehension experiment.

To account for the above drawbacks Ardery (1980) proposed the following 3 hypotheses:

1. Verb primacy: The verb serves as the primary unit of clausal structure in child language. This hypothesis would account for the difficulty of gapped verb coordnation and may explain why many children failed to interpret second conjuncts as independent clauses.

2. Linear sequencing hypothesis: For declarative sentences in English the children expect a sentence initial

subject to be followed by a verb and a transitive verb to be immediately followed by an object. This hypothesis initially serves as the primary constraint on children processing, allows sentential final coordination (intransitive verb, object NP and VP coordinations) to be easily interpreted.

3. Coordination strategy: Any sequence of 2 or more elements joined by 'and' with the same constituent structure and function should be interpreted as a single larger constituent that has the same function as the individual elements joined by 'and'.

The final hypothesis is formulated on the basis of sentence final coordination and is generated first to sentence initial coordination (subject NP) and then to sentence medial (transitive verb) coordination.

Neimark and Slotmick(l971) studied the comprehension of and and or in a group of 3rd graders, 9th graders, and college students. The analysis revealed that with age there was better performance. During error analysis it was observed that most of the children interpreted or as and.

On production side, Menyuk's (1969) study results showed that the technique of conjunction is well established for most children by 3 years of age. Forty two percent of the nursery group in the study were using all aspects

of conjunction correctly. Eighty one percent of grade-1 students were using correct conjunctions, although some errors in tense sequencing were still made by 55% of them. Coordinator 'and 'was used by all nursery group children. Subsequently, Bloom (1970) reported that the earliest forms of conjunction seem to occur merely be juxtaposing two words together around 2 years.

Sreedevei (1976) observed no coordinators in spontaneous speech of 2+ year old Kannada speaking children. Recently, Prema (1979) studied 5-6 year old Kannada speaking children and reported thatpause, matte, and ameele were used as NP coordinators, -u was used as a VP coordinator.

In a descriptive study of acquisition of some aspects of syntax in 4-5 year old Hindi speaking children Roopa (1980) observed that though pause.3r were used as NP coordinators, they were not fully stabilized and VP coordinators were pause, 3r, 3rphir and k2r. Some sentences were not conjoined but uttered as simple declarative sentences.

The above studies indicate that the process of coordination acquisition may start very early and may continue even beyond 5 years. The emergence itself is quite late

compared to other kinds of transformations. The acquisition of complex, related skills to construct coordinated sentences goes along the maturation of children.

2.3.4 Pronominalization

'Pronominalization is the replacement of a fully specified noun phrase by a pronoun which agrees with the referent in case, number, person and in genger in the third person. It is a means of reducing redundancy by eliminating features of the NP which the speaker has already transmitted to the listener (Wilbur et.al,1976).

Pronominalization may be obligatory, only relatively obligatory or totally optional. It is obligatory in sentences with relative clauses and reflexive pronouns. Pronominalization may occur within a sentence(backward or forward) or across sentences.

Acquisition of Pronominalization:

Loban (1963) found that difficulties with pronominal forms persists into the junior high school level.

Menyuk (1969) did not investigate the pronominalization but included various aspects of it in her study of the emergence of syntactic structures in children. She reported that the general ability to use pronominalization was established in only l/3rd of the nursery school subjects and slightly more than half of the first grade subjects.

A study by Huxley (1970) indicated that the speaker/ listener (first/second person) distinction is made before the thrid person reference appears. Singular pronouns are acquired before plural. The more complicated cases such as possessive pronouns and reflexives are acquired late, and many children may not have completely mastered these before they begin school.

Chomsky (1969) investigated the effects of syntactic environment on the interpretation of pronoun. She studied pronoun reference in forward and backward pronominalization environments as interpreted by children aged 5-10 years. She found that the ability to correctly determine the reference of the pronoun was established during child's 5th year.'

The group of hearing children tested by Wilbur etal, (1976) also pro vides some data about older children's continued acquisition of pronouns. The results indicated that most hearing children have the pronoun system well under control by the age of 10 and all the aspects of the pronoun system were being correctly used at that age more than 90% of the time.

On the production aspect, Prema (1979) reported that both forward and backward pronominalization were present in 5-6 year old children. However, the frequency of

usage of such sentences varied widely in the 4 children studied.

In a similar study of Hindi speaking children between 4-5 years Roopa (1980) observed few sentences containing pronominalization across sentences.

Thus it seems that the development of structures involving pronominalization are far from complete by five years of age.

2.3.5 Relativization

'Relativization is one of the recursive process of language exemplifying the process of embedding sentences in other sentences.'

Relative clauses can be classified according to their placement with respect to the main sentence. The embedded sentence can be final ' I saw the boy who went home' or medial ' the boy who went home is my friend'.

They can also be grouped according to the function of the relative pronoun. Eg. 'the boy who went home is my friend' 'who' serves as the subject of the relative clause. In ' the boy who(m) I saw is John' 'who(m)' serves as the object of 'saw'. Object relatice clauses can occur with or without a preposition, 'the boy who(m) I saw,' 'the boy to whom I talked'.

'Acquisition of Relativization:

In her study of the development of language use by children between the ages of 3 and 7 years, Menyuk (1969) found that 87% of her 7 year old subjects were using relatice clauses.' Her subjects used both medial clauses and final clauses, but clauses appeared earlier in the final position than in medial and seemed to be easier for her children at all age levels.'

'Quigley et.al (1974) found that 83% of their subjects (10year old) were able to respond correctly to the items of various tests concerned with relativization. Their findings also support Menyuk's (1969) results that relative clauses were more difficult in medial than in final position in sentences and further that greater difficulty was found in understanding relative clauses when the pronoun had been in object position in deep structure than when it had been in subject position in deep structure.'

These findings also support Slobin's (1971) view. He after having cited data from several studies of child speech showed that children have more difficulty in re-peating centre-embedded subject relatives than the right branching object relatives.

Cook(l975) who nsed elicited imitation with children

aged between 5 and 5 years found many errors on centre-embedded than right branching relative clauses.

Studies on comprehension of relative clauses also show similar findings. For example, Brown (1971) used a picture cued comprehension task with a choice of 2 pictures to match a sentence. Centre-embedded sentences were more difficult than right branching for his 4 and 5 year old children but easier for this 3 year old children.

In an extensive study of children's comprehension of relative clauses, de Villiers (1979) tested 114 children (3-7years) on a test of comprehension using an act-out, procedure of 9 different relative clause sentences that exhaust the possible combination 3 roles of the complex NP in the sentence and 3 roles that the head noun plays within the relative clauses (in each case subject, direct object and indirect object). Results indicated that all construction were better understood with increasing age of children.

2.4 Some aspects of syntactic development in Linguistically deviant children

Menyuk's (1964) early work represents the systematic attempt to compare normal and deviant children using descriptive technique based on Chomsky's early trans-

formational grammar. She matched both groups according to age, IQ and socioeconomic level and found that the utterances sampled from linguistically deviant children were qualitatively different from those of normal children. The deviant group used fewer transformations and produced more restricted or ungrammatical forms than did the normal group.

Lee(l966) designed a 4 levels of developmental sentence types for comparing syntactic progress in normal (3years old) and deviant children (4½ years old) and found only qualitative differences. These levels are:

Level I - two word combination
Level II - noun phrase
LevelIII- construction (designative, predicative and stereotyped)
Level IV - sentences (designative, predicative and actor and action)

In a comparative study of spoken language samples obtained from 30 normal and 30 hearing impaired children, Brannon and Hurry (1966) found a total score of syntactic accuracy for each children by combining the errors of addition, omission, substitution and word oreder. The differences between syntactic soores were significant among all 3 groups (normals, hard of hearing and deaf children). A high correlation was obtained when hearing loss and measures of syntax were paired. General retard-ation in spoken language existed among the hearing impaired.

The findings of Lee (1966) are not supported by Morehead and Ingram (1973). They compared the development of base syntax in 15 linguistically normal and 15 linguistically deviant children. From the results, they concluded that linguistically deviant children do not develop bizaare linguistic systems that are qualitatively different from normal children. Rather, they develop quite similar linguistic systems with a marked delay in onset and acquisition time.

A series of studies on development of various syntactic structures in deaf children done by the investigators, Smith et.al (1974), Wilbur et.al (1975,1976), Power and Quigley (1976) and Quigley et.al (1974,1976, 1977) revealed that deaf children in general show a greatly retarded development, but the process of acquisition and the order of acquisition of aspects of syntax are quite similar to that of normal children.

Liles et.al (1977) made a comparative study of judgement of grammaticality by 15 normal and 15 language disordered children after having matched the groups for age, sex and receptive ability. The children were asked to judge the sentences as right or wrong and to change the sentences that were wrong. 3 types of agrammatical

sentences that represented rule violations of syntactic agreement (Type A), lexical restriction (Type B) and word order (Type C) were noted. The two groups differed significantly in the ability to judge grammatical errors in sentences in the type A and type C errors. No significant difference existed between the two groups in type B errors. When the children were asked to correct sentences that were worong, the linguistically normal children corrected upto 90% of the errors. The linguistically deviant children only corrected the type B errors. Often the children were able to recognize the error but were unable to correct them.

Shapiro and Kapit (1978) compared young autistic children with some speech competence to a matched group of normal children on negation tasks. Analysis of results indicated that autisitic children showed fewer and more rigid negation and good imitation, thus there was an adequate registration but poor integrative processing. It was also noted that at the syntactic level the autistic do not select complex grammatical forms the way normal children do.

Recently some investigators have reported language deviancies and deficiencies in the dyslexic (Vogel,1975) and in clutterers (Tiger et.al,1980).

After reviewing these studies, one would be keen in getting a comprehensive view of development of specific syntactic aspects in normal as well as language disordered children. Before gaining an understanding of deviant children's language, if one thoroughtly analyzes the stages of development of different grammatical structure that a normal child might go through, by making descriptive nature of studies, he would be saving time and accumulating information related to the exact nature of the process of language development. Making elaborate studies of such type in different Indian languages would highlighten the areas of assessment and intervention that the speech-language clinician require.

Chapter III

METHODOLOGY

This study is aimed at describing some developmental syntactic pattern of Tamil speaking children between 5 years and 6 years of age.

A group of 4 normal children were included in this investigation. Tamil language was the native language of all the children and their families belong to middle class, residing in Mysore.

The age range for the goup varied from 4 years 8months to 6 years 1 month. Children were divided into 2 age groups- 5 year old and 6 year old. Each group consisted of one male and one female child.

All the four children, except one, had no previous history of hearing loss, ear pain and ear discharge. Impedance audiometric screening showed A type tympanogram with presence of contralateral reflexes bilaterally at normal levels. As all the children stay at Kannada speaking localities and being educated in English medium schools, they are subjected to both Kannada and English language exposure.

The details of four children are given in the following table.

Table showing details of children

Details/Names	Suresh Kumar	Arathi	Bhaskar	Gayathri
1.Community	NonBrahamin	NonBrah-min	NonBrah-min	NonBrah-min
2.Native language and spoken languages	Tamil Tamil & Kannada	Tamil Tamil & Kannada	Tamil Tamil & Kannada	Tamil Tamil, Kannada & Telugu
3.Child attending Nursery/ school or not	Yes,UKG	Yes, UKG	Yes,1st standard	Yes,1st standard
4.Socio-economic status	Middle class	Middle class	Middle class	Middle class
5.Order of birth	Second	Second	Second	First
6.Father's education & employment	Ph.D Lecturer	Ph.D Research Officer	Ph.D Research Officer	Ph.D Lecturer
7.Mother's education & employment	S.S.L.C -	B.Bc.B.T Teacher	S.S.L.C -	B.A. -
8.Joint family or individual family	Individual family	Individual family	Individual family	Individual family
9.Number of sibilings	one	one	-	one
10.Developmental milestones (motor,speech& language)	Normal	Normal	Normal	Normal

Table showing age of four children
(Age as on 15.2.81)

Age group	Name	Date of birth	Age in Years	Months	Days
5 years	Suresh Kumar	10.6.76	4	8	5
	Arathi	7.6.76	4	8	8
6 years	Bhaskar	20.4.75	5	9	26
	Gayathri	30.12.74	6	1	16

Speech sample collection:

Speech samples were collected from each child at his/her home. A portable Philips cassette tape recorder with a built-in microphone was used to make the recordings.

Maximum speech sample recorded with each child was of approximately 3 hours duration and that contained four separate 45 minutes recordings. A span of 6 days elapsed between the first and final recording of each child.

The members of the family were also actively participated in the data collection. For one child, as she was non-cooperative, two out of four 45 minutes recordings were done by the parents themselves.

Techniques of speech elicitation:

The following techniques of speech elicitation were mainly resorted to.

1. Interview: The child was asked simple question about himself and his environment. Questioning helped in building up of conversation.
2. Story telling: The child was asked to tell stories that he/she know. Picture story books were also used to get new stories narrated.
5. Describing pictures: A view master with color slides, magazines were also used. Here, the children were probed to describe certain features of pictures.
4. Children's Appreception Test (Uma,1961): This test consisted of 10 describable picture plates. Upon each, children had to build up a story.
5. Spontaneous speech: This was recorded while the child was interacting with parents, sibilings, friends or investigator.

Children's motivation was maintained throughout the recording sessions through adequate verbal and tangible reinforcement. Children enjoyed looking into the view master slides and listening to their own recorded speech.

Sample Analysis:

The obtained speech sample forom each child was analyzed with reference to the kinds of sentences and syntactic patterns used by child. Negation,Interrogation,

Imperative, Coordination, Pronominalization and Relativization were the structures included for the study.

The extracted sentences from each child's speech sample were transcribed in broad phonetic transcription.

The sentences were then analyzed on the following lines:

1. Structure of the sentences used by the children
2. Developmental order of aspects of syntax under study
3. Characteristics of the deviant sentences uttered by each child, and
4. Comparison of forms used by children to the forms used by adults.

The analysis of the data was done using the techniques of Transformational-generative grammar model developed by Chomsky (1965).

Since it is a descriptive study, statistical analysis has not been undertaken. The next chapter presents the results and discussion.

Chapter IV

RESULTS AND DISCUSSION

The obtained speech sample from four normal children- two boys and two girls- of age range 5-6 were combined together. The combined data were classified intothe following sentence types - declarative, negative, interrogative, imperative, coordinated, pronominalized and relative clause - and deviant sentences and also with regard to the developmental arder.

The results of the study are presented under the following categories:

4.1. Structure of the sentences

4.2. Developmental order among the four aspects

4.3. Characteristics of deviant utterances of each child

4.4. Comparison to adult forme.

4.1. Structure of the sentences:

The structure of the sentences with regard to different types of sentences is presented here. Each structure of sentence is exemplified with suitable examples extracted from the speech sample of the children.

A sentence is a string of words occuring in a linear sequence and having a specific hierarchical arrangement. Structurally a sentence has two main constitutents, the NP (Noun Phrase) and the PDP (Predicate Phrase).

The basic sentence structure of the children can be represented by the following rule:

Rule I $S \longrightarrow \left(\left\{ \begin{matrix} Q \\ Imp \end{matrix} \right\} \right) + (Neg) + NP + PDP$

This rule abbreviates different types of sentences that can be generated. These sentences are illustrated below:

Rule I(A)S____>NP + PDP (Declarative sentence)

1. naan inge irukkeen

'I' 'here' 'be' PNG

I am here.

Rule I(B)S____>Neg+NP + PDP (Negative sentence)

2. appaa neettu poogale

'father' 'yesterday' 'go' 'didnot'

Father yesterday did not go.

Rule I(C)S____> Q + NP + PDP (Interrogative sentence)

5. nii enna seyyare?

'you' 'what' 'doing' PNG

What are you doing?

Rule I(D)S____> Imp + NP + PDP (Imperative sentence)

4. anda tamlare kudu

'that' 'tumbler' 'give'

Give that tumbler.

Rule I(E)S____-> Imp + Neg + NP+PDP (Negative imperative sentence)

5. ade nii edukkaade

'that' 'you' 'take"donot'

You do not take that.

Rule I(F)S——> Q + Neg +NP +PDP (Negative interrogative sentence)

6. unakku kaadu keekkaadaa?

'toyou' 'ear' 'hear' 'donot'

Dont you hear?

4.1.1 Declarative sentences

The declarative sentences in the children's speech can be represented as:

Rule I(A)S——>NP+PDP

7. ammaa veele eeyraanga

'mother' 'work' 'doing' 'is'

Mother is doing work.

In this sentence 'ammaa' is the NP and 'veele geyraanqa' is the PDP. The constituents of NP and PDP can be expanded further.

Noun Phrase: consists of 1. a noun, a determiner and an optional S element 2. a pronoun.

$$NP \longrightarrow \begin{cases} (Det)\ (S)\ N \\ Pro \end{cases}$$

Det+N

8. oru vellai maan oodum

'one' 'white deer' 'run' 'will'

A white deer will run.

Here, 'oru' is the determiner, 'vellai' is the adjective and 'naan' is the noun.

Pronoun:

9.i. ava ippa vanduttaa

'she' 'now' 'come' 'had'

She had come now.

ii. avanga viidu ange irukku

'their' 'house' 'there' 'is'

Their house is there or There is their house.

In sentences 9.i & ii. 'ava' and 'avanga' are pronouns. Each of the NP constituent is discussed below:

Determiner: The determiner can be represented as

$$D \longrightarrow (e\text{-}) \left\{ \begin{matrix} \text{Determinate} \\ \text{Indef.det.} \end{matrix} \right\}$$

Indefinite determiner:

10. oru ootte irukku

'one' 'hole' 'is' PNG

There is a hole.

Here, 'oru' is the indefinite determiner.

Determinate: The determinate is represented as

Determinate ——> (Limiter) Def.Det. (Quan)

where,

$$\text{Def.det.} \longrightarrow \left\{ \begin{matrix} (\text{Demon}) & (\text{Aggre}) \\ \text{Demon} & \\ \text{Aggre} & \end{matrix} \right\}$$

where,

$$\text{Demon} \longrightarrow \left\{ \begin{matrix} \text{Remote} \\ \text{Proximate} \end{matrix} \right\}$$

Examples for each structure:

Limiter:

In Tamil, usually the limiter follows the head noun at the surface level. But in the deep structure it precedes the head noun. An obligatory rule is to be applied to derive the surface sentence in which the limiter follows the head noun.

This rule can be represented as:

Limiter+Demon+Quan+N----> Demon + Quan + N+Limiter

This rule converts,

11. i. maatram raatri nilaa varum
'only' 'night'(in) 'moon' 'come' 'will'
Only in night moon will come.

into,

ii. raatri maatram nilaa varum
'night' 'only' 'moon' 'come' 'will'
Moon will come in night only.

The sentence ll(ii) is the surface form after the rule has been applied, 'maatram' raatri' in ll(i) is the NP of Adv_T, where 'maatram' is a limiter,'raatri' is the noun following limiter and in the following sentence 12, mattum is the limiter, following head noun'naanum appaavum'.

12. naanum appaavum mattum poonoom
'I' (conj) 'father' 'alone' 'went'
Myself and father alone went.

Demonstrative:

Remote Demon:

13. anda paapaa viidu ange irukku

'that' 'baby's' 'house' 'there' 'is'

That baby's house is there.

'anda' in the above sentence is indicative of remote demonstration and it precedes the noun 'paapaa'.

Proximate Demon:

Here,'inda'precedes a noun in the following sentences.

14. inda rendu puunaiyum meele eerum

'these' 'tow' 'cats' 'up' 'climb' 'will' -

These two cats will climbup.

15. inda pencil enndu

'this' 'pencil' 'mine'

This pencil is mine.

Aggregate:

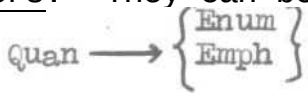
16. anta glaasellaam nallaa irukkum

'those' 'glass' 'all' 'good' 'be' 'will'

All those glasses will be good.

Here, ellaam is an aggregate.

Quantifiers: They can be represented as



Emphatics:

17. maisuurdaan idu

'mysore' (emph) 'this'

This is Mysore.

'daan' in the above sentence is the emphatic which follows the noun 'maisuur'.

Enumerative: is represented as

Enum ⟶ Num ({Collective / measure})

Only cardinal and ordinal types of numerals preceded the noun in few sentences of the sample.

Examples:

Ord+N: When a child was asked ' who camefirst and second in the running race?' he answered as follows:

18. modalle vijayaa, rendaavadu naviin

'first' 'vijaya' (conj) 'second''Naveen'

First Yijaya and then second Naveen.

Here, the underlined segments are ordinals and there are two sentences conjoined by a pause,with the deletion of verb.

18.a.modalle vijayaa vandaa

'first' 'vijaya' 'came'

First Vijaya came.

b.rendaavadu naviin vandaan

'second' 'Naveen' 'came'

Second Naveen came.

Card+N:

19. muunu peeru poolaam

'three' 'persons' 'go''can'

Three persons can go.

Cardinal(aag)+N:

20. rendu kannum kurudaacci

'both' 'eyes' 'become' 'blinded'

Both eyes become blinded.

The element e- is illustrated with examples along with interrogation.

The embedded sentence (S): A few relativized sentences are found in the children's speech. The following is an example of an embedded NP, which is obtained through the process of relativization.

21. ange poora ponnu peeru ennaa?

'there' 'is going'(Pre.Rel.part) 'girl' 'name' 'what'

What is the name of the girl who is going there?

Here, 'ange poora ponnu' is the embedded NP.

Nouns:

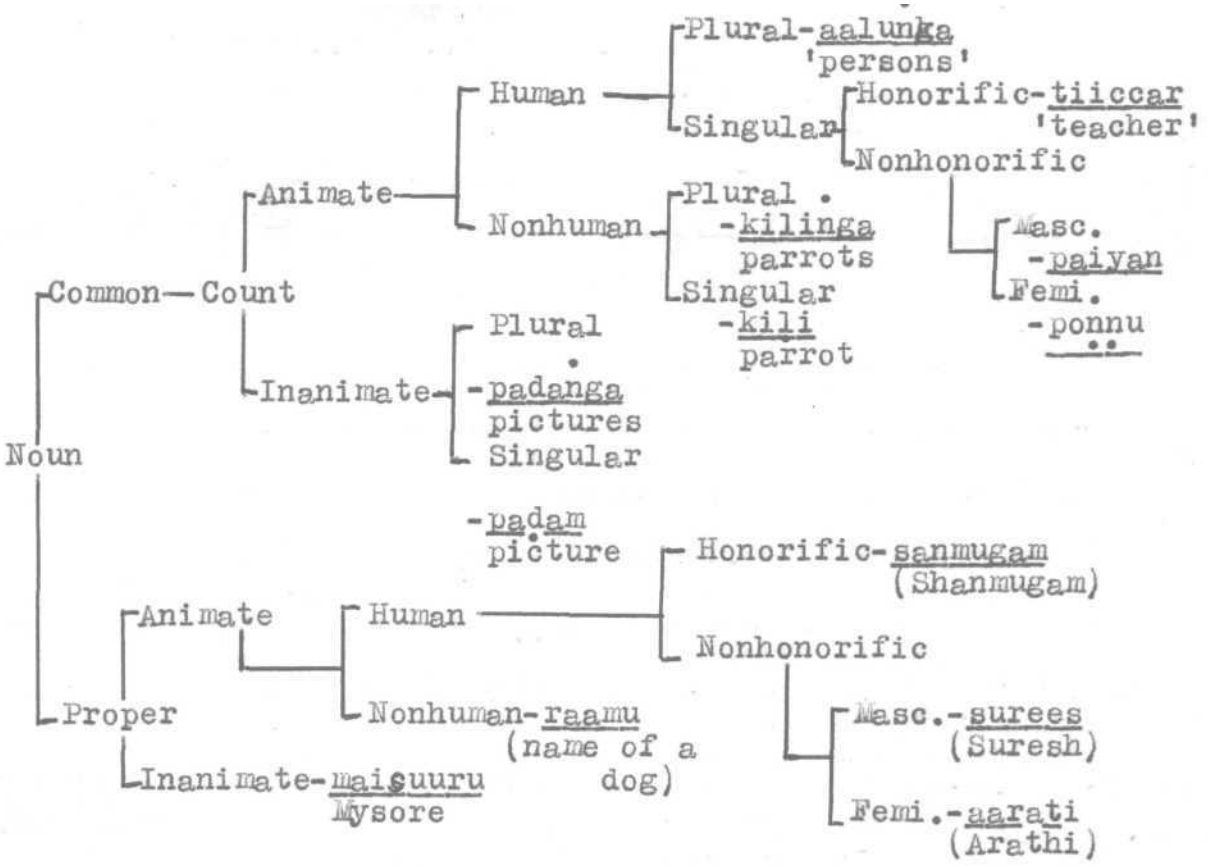
Noun can be written as

N-___>[+N ±Pro]

Nouns in the children's speech can be classified based on whether they are 1.±common 2.±animate 3.±count 4.±abstract 5.±human 6±plural 7.±honorific and 8.±masculine.

The nouns which belong to [+common] can take numerals and they can be inflected for plurality, whereas [-common] can't.

Nouns in the speech of the children selected here, are classified as given below, following the general paradigm of classification given by Rangan (1972-60).



Pronoun:

The pronouns in the children's peech are classified on the following basis:

[±Pro] ——> [±Participant]

[±Participant] —> [±Speaker]

[±Speaker] ——> [±Plural]

[±Plural] ——> [±Inclusive]

[-Speaker]-->[±Plural]

[-Plural]—>[± Honorific]

[-Participant]-----> [±Human]

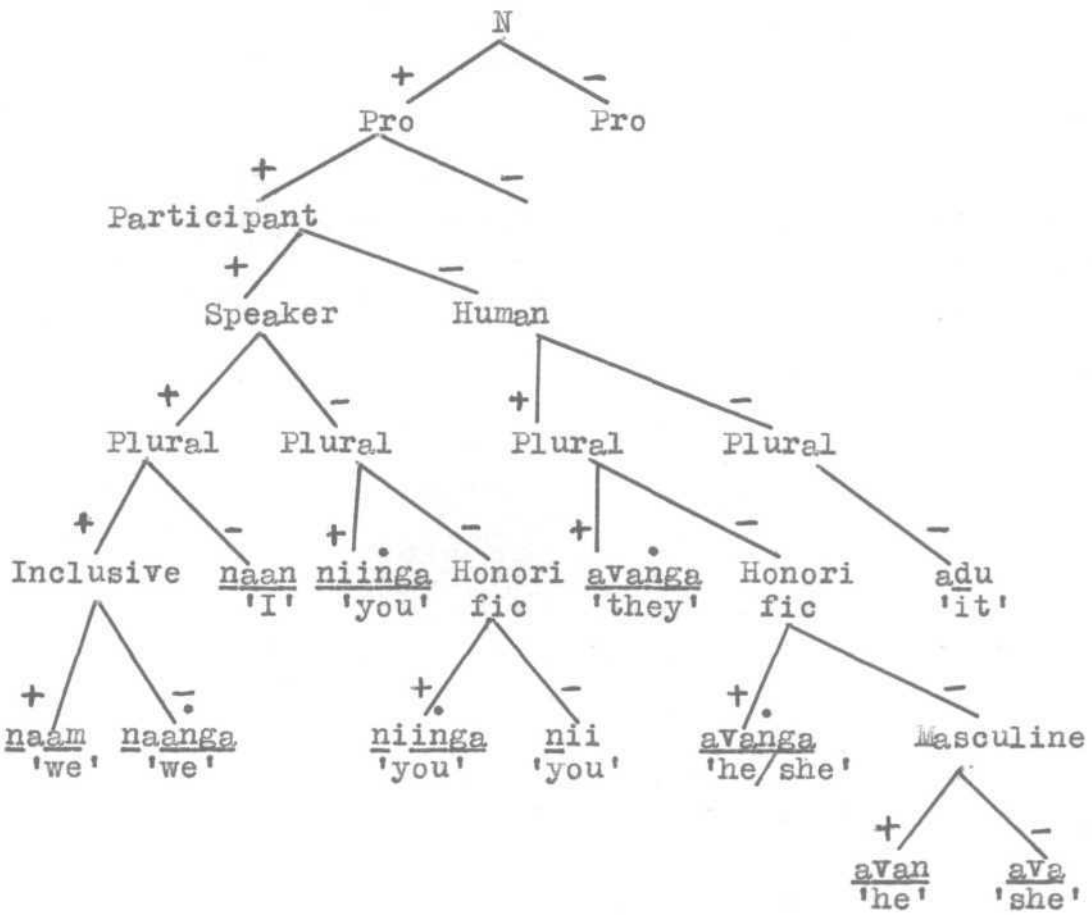
[+Human]———>[±Plural]

[-Plural]—>[± Honorific]

[-Honorific]—>[±Masculine]

[-Human]———>[-Plural]

The following branching diagram has been adopted from Rangan (1972-46) to illustrate the various pronouns that are used by children.



Predicate Phrase:

The predicate phrase which is immediately dominated by S can be written as:

PDP——————> (Adv_T) + (Adv_P) + VP + Aux

Adv_T+VP:

22. mundaanaal rediyaacci

'day before yesterday' 'ready' 'got'

Day before yesterday got ready.

The underlined segment is the Adv_T in the above sentence.

Adv_P+VP:

23. peenavle inku irukku

'pen' 'in' 'ink' 'is there'

There is ink in the pen.

VP:

VP————> (Adv_m) + (PP) + (NP) +V

24. kaaka kaattukku nidaanama pooykittrukku

'crow' 'forest' 'to' 'slowly' 'going' Aux PNG

The crow is slowly going to the forest

In the above sentence 'nidaanama' is the Adv_m, 'poo' is the verb, 'kittru' is auxiliary and 'kaaka' is the subject NP.

Another constituent of the VP is the Post positional Phrase or PP. It can be represented as:

PP————> Obj + Inst +Soc + Dat

PP stands for various case relations that the NP or N may show and the verbs are categorized accordingly. The expansion of PP as above, is representative of children's speech. The further expansion and exemplification of each of the constituent of PP is as follows:

Objective ——> NB+e

25. naan padatte paappeen
'I' 'picture' 'see' 'will'
I will see the picture.

Instrumental —> NP + aale

26. tirudan poolise kattiyaale kuttraan
'thief' 'police' 'knife' 'with' 'plunging'
Thief is plunging the police with a knife.

Sociative ——> NP + oode

27.i. appaa annanoode varuvanga
'father' 'brother' 'with' 'come' 'will'
Father will come with brother.

27. ii. korangu puliyoode sande poottadu
'monkey' 'tiger' 'with' 'fight' 'did' PNG
Monkey did fight with the tiger.

Dative ——> NP + Ku

28. akkaa skuulukku poonaa
'eldersister' 'school to' 'went'
Eldersister went to school.

Auxiliary: can be represented as:

Aux ⟶ (Asp) + (Mod) + Tense

where,

a. Asp ⟶ (Perf) (Prog) (Comp)

Perfective:

29.a. avan neettu inge vandirundaan

'he' 'yesterday' 'here' 'come' 'had'

Yesterday he had come here.

Progressive:

29.b. oru kaaka kaattukku pooykittrukku

'one' 'crow' 'to forest' 'going' 'has bee:

One crow has been going to the forest.

Completive:

29.c. baaskar vanduttaan

'Bhaskar' 'come has'

Bhaskar has come.

The underlined segments in the above examples indi the above structures are aspects.

b. Mod ⟶ {-num / mudiyum}

30. naalekki niinga varanum

'tomorrow' 'you' 'come' 'must'

You must come tomomrow.

51. basle pooga mudiyum

'bus' (in) 'to go' 'can'

Can go in the bus.

c. Tense ⟶ {Fut, Non-Fut}

where,

Non-Fut ⟶ {Pres, Past}

Present ⟶ {Kkiru}

52. surees padikkraan

'Suresh' 'reading' 'is' PNG

Suresh is reading.

The underlined segment in 'padikkraan' is indicative of present tense

Past ⟶ {aa, no}

53.a.ava doose tinnaa

'she' 'dosa' 'ate' PNG

She ate dosa.

b.naanga uurukku poonoom

'we' 'to village' 'went' PNG

We went to the village.

Similarly in the following sentence 'di' indicates past tense.

c. niinga vandiinga

'you' 'came' PNG

You came.

Future Tense——> {vii}

34. niinga pooviinga

'you' 'go' 'will'

You will go.

Certain Characteristics of NP and PDP:

During the analysis of children's speech sample, some observations were made with respect to the NP and PDP present in the sentences of children.

a. Deletion of Subject NP

35. pallu velakkineen

'teeth' 'brushed' PNG

(I)brushed (my) teeth.

Here, the Subject NP (naan) has been deleted.

b. Shifting of Subject NP

36. ide muricci poottaan, raaju

'to it' 'broke' 'down', 'Raju'

Raju broke it down.

The subject NP 'raaju' is shifted to the end of the sentence.

c. Shifting the pronoun to the end of a sentence

37. rendu kannirukkum adukku

'two' 'eyes' 'will be' (there) 'it to'

There will be two eyes to it.

adukku is the pronoun.

d. Deletion of Object NP

58. naan paakkale

'I' 'see' 'did not'

I did not see.

'padam' (picture) is the object NP, whose deletion is optional.

e. Deletion of subject NP and object NP

39. juule paattirukkeen

'zoo' (in) 'seen have' PNG

Have seen in the zoo.

'naan' is the subject NP and puliye' (tiger) is the object NP.

f. Displacement of main and embedded sentences

40. ivan sonnaan enga ammaa irukkaangannu

'he' 'told' 'our' 'mother' 'is there'(that)

He told that our mother is there.

The embedded sentence 'enga ammaa irukkaangannu' should have come in the beginning so as to get embedded in the main sentence.

The same child in some other context has made the correct embedding as in the following sentence.

41. enga appaa irukkaangannu baaskar sonnaan

'our' 'father' 'is there'(that) 'Bhaskar' 'told'

Bhaskar told that our father is there.

g. Prepositioning of the Adv_m in VP

42. nyeaa raatri varaikkum velayaadittu vandaa.

'coolly' 'night' 'till' 'played having' 'came'

PNG

Having played till night(she) cage ccdLly.

The Adv_m 'nysaa' should have been spoken after Adv_T 'raatri varaikkum' The subject NP ava is deleted.

h. Pronoun deletion during Imperative embedding

43. appaa kuutittupoongannu solveen

'father' 'take'(me) 'that' 'tell' 'would' PNG

(I) would tell that father take me.

In this example, pronoun 'enne'(me) and Naan(I) are deleted.

Without deletion the sentence would have been,

43.i. appaa enne kuutittupoongannu naan solveen

'father' 'me' 'take' 'that' 'I' 'tell' would'

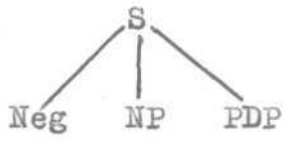
I would tell that father take me.

The shifting and deletion of certain constituents of either NP or PDP are not only restricted to children's speech but also seen in adults. Shifting and deletion are not considered to be deviant form of sentence structure but to be a stylistic variation. In Tamil, as there is no strict word order, the rules that shift and delete certain constituents are optional.

4.1.2 Negative Sentence

Rule I (B) S ——> Neg+ NP + PDF

The deep structure form of the negative sentence would be



All the children used the negative marker ille(not/ no) and other future, nonfuture negative affixes such as -aa-, maatt-, -aad and -le.

The negative marker ille was used in following contexts:

1. ille occuring independently:

When the children were asked yes/no question, they ended up saying just ille. All other elements were deleted. This negative sentence was noticed only fewer times at the final recordings of children.

2. Verb ille:

Sometimes, the verb 'irukku' (is there) in some sentences were negated by the negative marker ille occuring at the end.

44. inda kaakaavukku kaalu ille

'this' 'cow' 'to' 'leg' 'no' (is there)

There is no leg for this crow.

45. avangitte peena ille

'him with' 'pen' 'not' (is there)

There is no pen with him.

46. engitte sevappu surtu illavee ille.

'me' 'with' 'red' 'shirt' 'not at all' (is there)

I do not have red shirt at all.

In the above sentence, illavee ille is to stress the negative utterance.

47. inda saami nallaa ille

'this' 'god' 'good' 'not' (is)

This god is not good.

Here, ille ne gates Adv_m 'nallaa'. This was the only utterance containing adverbial negation.

Sometimes, simple yes/no question, resulted in a form of double negation in an attempt at persuading the experimenter as in the following utterances:

48. ille, odambu eariyille avanukku

'no' 'not well' (is) 'to him'

No, he is not well.

49. ille, naan innekki engeyum poogale

'no' 'I' 'today' 'anywhere' 'go' didnot'

No, today I didnot go any where.

One utterance contained a complex form of negation.

50. tuungavum ille, saapaadu tingavum ille.

'sleep' 'even' 'no' 'food' 'eat' 'even' 'no'

Neither slept, nor ate the food.

When the coordinators-um .... -um are removed, the sentence would be two simple past tense negative sentences.

50.i. tuungale

'sleep' 'didnot'

Did not sleep.

ii. saapaadu tingale

'food' 'to eat' 'didnot'

Did not eat the food.

Negative affixes: Some of the sentences containing negative affixes -aa-, -le, maatt-, -aamal and -aad are as follows:

51. naan poogale

'I' 'go' 'didnot'

I did not go.

52. enga appaa varale

'my' 'father' come' 'didnot'

My father did not come.

The above two sentences have the negative suffix -le occuring finally.

The negative affix -aa- negates nonfuture sentences:

53. enakku veenaam

'tome' 'want' 'donot'

I do not want.

54. avanukku peesa teriyaadu

'tohim' ' to talk' 'know' 'does not' PNG

He does not know to talk.

-aa- in sentence 53, negates the complete sentence, and in 54 it negates the VP.

55. ammaa sudu tannii veendaam

'mother' 'hot water' 'want' 'donot'

Mother, I do not want hot water.

The negative affix maatt- has been used to negate the sentences with future tense.

56. enga appaa vaangitaramaattaanga

'my' 'father' 'having bought' 'to give' 'willnot' PNG

My father will not buy and give it.

Here, maatt- negates the futures tense form of this sentence 'enga appaa vaangitaruvaanga' 'My father will buy and give it'.

Sometimes emphatic marker -ee has been added with VP.

57. suuriyane kaaleyile paakkavee maatteen

'sun' 'morning'(in) 'see'(emph) 'wouldnot' PNG

I would not even see the sun in the morning.

The negative affix -aad negates imperative sentences as in the following:

58. appadi uuttaade

'likethat' 'pour' 'donot'

Do not pour like that.

59. inda ulagattle irukkakuudaadunnu solaanga

'this' 'world'(in) 'be' 'shouldnot'(there) (that) 'say' PNG

They say that(they) should not be there in this world.

The following sentence exemplifies negative interrogation, with the interrogative marker -aa.

60. unakku peesa teriyaadaa

'to you' 'to talk' 'know' 'donot' (how) PNG

Dont you know (how) to talk.

In one sentence, the negative affix -aamal followed an adverbial participle.

61. kaakka ettaama, činnačinna kalellaam poodudu

'crow' 'having not reached' 'small small' 'stone(aggr) 'drops' PNG

Crow having not reached(the jar) drops all the small stones.

Here.-aamal negates the adverbial participle etti (having reached). činnačinna is an adjective and ellaam is an aggregate.

Thus the speech sample consisted of all the negative structures of adult speech. All the four children have been using the negative marker ille and other affixes -le, -aa-, maatt- and -aad.

4.1.3 Interrogative Sentence

Rule I (C) S——> Q + N P + PDP

The presence of Q element in the deep structure indicates that the sentence is interrogative. There were 3 types of interrogative sentences in the obtained speech sample. They are A. yes/no questions B.Tag questions and C.Wh-questions.

A) Yes/no questions: The intetrrogative marker of yes/no question is the suffix -aa as in the following sentences:

62. naalekki kudukriingalaa?
'tomorrow' 'give' 'will' (you)
Will you give tomorrow?

63. raaju, enakku oru baal tarriyaa?
'Raju', 'tome' 'one' 'ball' 'give' 'will' (you)
Raju, will you give me one ball?

64. ungakitte caaklet irkkaa?
'you' 'with' 'chocolate' 'have' 'do' PNG
Do you have chocolate with you?

65. naanaa unakku gonneen?
'I'(is it) 'to you' 'told'
Is it me/I who told you?

66. idu ungalukku veenaamaa?
'this' 'to you' 'do not' 'need'
Don't you need this?

The sentence 66 is an example for negative interrogative utterance.

B) Tag questions: In tag questions the speaker pre-supposes that the proposition is true and expects the listener to confirm it.

The tag marker is derived from the following rule.

S ---> Q + Neg +NP +PDP

First the Negative element ille is moved to the end of the sentence and then realized as a change in intonation.

67. mundaasu kattikitt irukkaanga, ille?

'turban' 'wearing' 'are' (they)PNG, 'aren't'

They are wearing turban, aren't they?

68. adukku muukku perisaa irukku,ille?

'to it' (it's) 'nose' 'big' 'is', 'isn't'

It's nose is big,isn't it?

In both the sentences a rise in intonation at the end of the sentence, formed a basis for tag question construction.

C) Wh- Questions: Here, the e- element which is posited in Det. system attaches itself to different elements of NP to derive different wh- type questions. In Tamil, the combination of e- with other elements gives different question forms.

Q+e-+AdV_p ——————> 'enge' 'where'

69. enge anda kaalendar?

'where'(is) 'that' 'calendar'

Where is that calendar?

70. niinga engirundu vandirukkiinga?

'you'(hon) 'from where' 'have come'

From where have you come?

q +NP ——————> 'yaar' 'who'

[+Pro
+Human
+Honorific]

71. unga klaas tiiccar yaaru?

'your' 'class teacher' 'who'

Who is your class teacher?

72. ippa yaar vandirukkaanga?

'now' 'who' 'come' 'has'

Who has come now? -

In both the sentences 71 and 72, yaar questions the subject NP.

Q+e-+VP ——————————> 'enna' 'what'

73. nii enna seyyare?

'you' 'what' 'doing' PNG

What are you doing?

The following was one reduplicated form of wh- type question that gives a distributive meaning.

74. unga skuulle ennenna seyije?

'your' 'school'(in) 'what what' 'did'

What are all you did in the school?

Q + e- +AdV_m ——————————> 'epdi' 'how'

75. niinga aafiiskku epdi pooviinga?

'you' 'to office' 'how' 'go' 'will' PNG

How will you go to the office?

Q + e- +AdV_{reason} ——> 'een' 'why'

76. nii een inge vande?

'you' 'why' 'here' 'come' 'did'

Why did you come here?

Q+e-+Demon + Adv_p reason——>'edukku' 'what for' or 'why'

77. edukku enakku anda tifun vacci kudutte?

'whatfor' 'tome' 'that' 'tiffin' 'keep' 'did' 'give'

What for did you keep that tiffin and gave for me?

Not all the children did use this form of interrogative marker 'edukku', but some did use of another similar marker 'entukku' which means the same.

Q+e- +AdV_T————————> 'eppa' 'when'

78. avan eppa varuvaan?

'he' 'when' 'come' 'will'

When will he come?

Q+e- +Cardinal——> 'ettanai' 'howmany'

79. nii ettanai doose saapitte?

'you' 'howmany' 'dosa' 'eat' 'did'

How many dosa did you eat?

6.+ e-+measure————> 'evvalavu' 'how much'

80. inda peena evvalavu vele?

'this' 'pen' 'howmuch' 'cost' 'does'

How much does this pen cost?

Q. + Dem——> 'yaarukku' 'to whom'
[+Pro
+Human]

81. idu yaarukku?

'this' 'to whom'

To whom this is?

82. niinga een uurukkp poogamaattiinga?

'you' 'why' 'to village' 'to go' 'will not'

Why will you not go to your village?

The structure of the above sentence can be written as:

S ——> Q +Neg + AdV_{reason}

Q + e- 1-Dem ——————> 'enda' 'which'

83. nii enda uurukku poore?

'you' 'which'(to) 'place' 'going' PNG

To which place are you going?

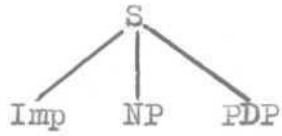
All the wh- types of questions were present in the speech sample of children. Structure of these sentences does resemble to the adult forms.

4.1.4 Imperative Sentence

Imperative sentences indicate command or request.

Rule I (D) S ——> Imp + NP + PDP

In the deep structure, imperative sentence is represented as:



The speech sample of children consisted following types of imperative sentences.

a. Verb root

84. peesu

'talk'(you)

You talk.

Such verb root utterances were more frequently noticed in the sample.

b. Pro+Verb root

85. ide taa

'this' 'give'

Give this.

This form of imperative utterance was noticed only when the children were talking with peers of similar age level or lower age level.

c. Pro+verb+ second person plural

86. ade poodunga

'that' 'put' PNG

(you) put that.

The subject NP is deleted in sentences 85 and 86. Object NP has also been deleted optionally in sentences such as:

86.a. (ade) poodu

b. (peena) kudu etc.

d. Adv_T +NP+Verb+ Second persons plural

87. ippa lytt poodunga

'now' 'light' 'put on' PNG

Put on the light now.

e. Adv_p-Verb + Second person plural

88. ingeeye irunga

'here'(only) 'be'(you) PNG

You be here only.

Here, inge is the AdV_P marker and ye is the emphatic marker.

f. NP + Adv_m + Verb

89. nii ippadi pudiccikkoo

'you' 'like this' 'hold' PNG

You hold like this.

g. Neg+Adv_m+Verb

90. appdi uuttaade

'like that' 'pour' 'donot' PNG

Do not pour like that.

Here the deletion of object NP 'appdi'(tanniiye) uuttaade' is optional.

h. Adv_m +Verb root

91. urakka peesu

'loudly' 'talk'

Talk loudly.

All the above forms of imperative sentence are also found in the adult's speech.

4.1.5 Coordination

Coordination is the process by which two or more sentences are joined together with the help of coordinators. The obtained sample had a limited number of coordinated structures. The coordinated sentences found in the children's speech can be divided into three categories.

A. Sentential and Phrasal coordination - -um 'and'

B. Alternative coordination - aavadu 'or'

alladu 'or'

C. Adversative coordination - -aal 'if'

- adanaal 'therefore'

A. Sentential coordination:

This type of coordination was very rarely found in the speech sample. A pause between two sentences functioned as a coordinator as in the sentence given below.

92. oru korangu irukku. oru puli irukku

'one' 'monkey' 'is'(there) (conj) 'one' 'tiger' 'is' (there)

There is one monkey(and) there is one tiger.

When the common elements 'oru' and 'irukku' in the second sentence are deleted, the sentence would be:

92.a.oru korangum puliyum irukku

'one' 'monkey'(and) 'tiger' 'is' 'there'

There is a monkey and a tiger.

This kind of deletion resulted in NP coordination.

95. appaavum ammaavum uurukku poonaanga

'father' (and) 'mother' 'to village' 'went' PNG

Father and the mother went to the village.

In sentence 93, the subject NPs 'appaa' and 'ammaa' are coordinated even after the deletion of -um in both NPB.

94. appaa ammaa uurukku poonaanga

'father' (and) 'mother' 'to village' 'went'

Father and mother went to the village.

When describing pictures, pause between sentences resulted in meaning of both 'and' and 'but' as in the sentence given below:

95. adu persu. idu pereu. idu cinnada

'that' 'is bigger'(and) 'this' 'is bigger'(but) 'this' 'is smaller'

That is bigger and this is also bigger but this is smaller

Here, aanaal is deleted.

Phrasal coordination:

Noun Phrase:

The pause between two NPs functions as a conjunction in some of the sentences.

96. taata,sitti,appaa, ammaa ellaam poonoom

'grandfather' 'sister-in-law' 'father' 'mother' 'all' 'went'

Grandfather,sister-in-law,father,mother all went.

In this sentence a pause between'taata'and'sitti'and between appaa and ammaa functions as coordinator. ellaam. is an aggregate marker.

In some sentences the use of -um functions as a conjunctive device.

97. raamanum latcmananum kaattukku poonaanga

'ram'(and) 'lakshman' 'to forest' 'went'

Ram and Lakshman went to the forest.

This has two simple sentences having coordinated by the marker -um. The sentences are:

97.a. raamar kaattukku poonaar

'Ram' 'to forest' 'went'

Bam went to the forest.

b. latcmanan kaattukku poonaar

'Lakshman' 'to forest' 'went'

Lakshman went to the forest.

Thus the conjunction of two simple sentences requires the deletion of one of the two identical verbs and addition of coordinator -um between NPs maintaining the subject NP verb agreement.

The sentence 97 exemplifies subject NP's coordination. Similarly object NPs are coordinated using -urn as the coordinator.

98. naan breddum aamlettum saapitteen

'I' 'bread' (and) 'omlet' 'ate'

I ate bread and omlet.

Sometimes in subject NP's coordination, the coordinator -um is optionally replaced by quantifiers like 'rendu'(both).

99. aanandu, surees rendu peerum vandaanga

'Anand' 'Suresh' 'both' 'came'

Anand, Suresh both came.

There was no consistency in terms of the usage of pause and -um with regard to variations in the number of NPs coordinated, Maximum number of NPs coordinated in this manner was limited to 4 NPs.

Verb Phrase coordination:

Pause and -um also function as coordinators of VP.

i. Pause as a VP coordinator

100. kaalaile elundeen. kuliceeen,saapitteen,skuulukku pooneen
(I)'morning'(in)'got yp' 'took bathe' 'ate food' 'school'(to) 'went'

(I) got up in the morning,took bathe, ate food (conj) went to school.

Here, the NP naan(I) has been deleted. Pause conjoins the temporally related events.

ii. -um as a VP coordinator

101. poogavum,varavum evvalavu selavaacci?

'to go'(conj) 'to come' 'how much' 'costed'

How much(it) costed to go and come?

Two simple interrogative sentences are coordinated here.

l0l.a.pooga evvalavu selavaacci?

'to go' 'how much' 'costed'

How much(it) costed to go?

b.vara evvalavu selavaacci?

'to come' 'how much' 'costed'

How much (it) costed to come?

The subject NP of both sentences is 'Panam'(money). It had been deleted after the coordination.

iii. Verbal participle as a coordinator

In Tamil, verbal participle can be used as conjunctive device. This feature was found in the children's speech.

102. todaccittu vaa

'clean' (conj) 'come'

Clean and come.

In this imperative sentence, the subject NP (nii) and object NP (ade) are deleted. Without the verbal participle(the underlined segment) this sentence would be two simple imperatives.

102.a.todaccidu

'clean'

Clean(it).

b.vaa

'come'

Come.

103. pooyi padu, neeranaacci

'go'(conj) 'sleep' 'time passed'

Go and sleep, time passed.

VPs in declarative sentences are also coordinated in a similar way.

104. appaa vaangi taruvaanga

'father' 'purchase' (conj) 'give will' PNG

Father will purchase and give.

B. Alternative Coordination

Disjunctive coordinators -oo(or) and aavadu(or) are found in the speech sample.

105. kaappiyoo paaloo kudu

(either) 'coffee' (or) 'milk' 'give'

Give either coffee or milk.

106. appaavaavadu ammaavaavadu poovaanga

(either)'father' (or) 'mother' 'will go'

Either father or mother will go.

C. Adversative Coordination

This type of coordination which makes use of aanaal (but), -aal(if) and adanaal(therefore) is rarely found in the obtained speech sample.

107. tannii poottaa, vaaylirundu tannii varum

'water' 'put'(if),'mouth' 'from' 'water' 'will come'

If (you) put water, it will come from the mouth.

Here, 'tannii poottaa' is a conditional clause with the coordinator -aal and'varylirundu tannii varum' is a declarative sentence.

108. avan skuulukku poole, adanaale adiccaanga

'he' 'to school' 'go did not' 'therefore' 'beat'PNG

He did not go to the school, therefore(they)beat(him).

All the adult forms of adversative and alternative coordination have not been developed completely in the children's speech.

4.1.6 Pronominalization

Pronominalization is the process of substituting a pronoun for a NP where an antecedent NP is a co-referential

of the NP. Pronominalization may be forward or backward. It can be within sentence or across sentences.

109. aajat kumaarnnu oruttan irukkaan, avan vandirundaan
'AjatKumar' 'called' 'a boy' 'is there' 'he' 'had come'
There is a boy called Ajat kumar,He had come.

This is an example for pronominalization within sentence as well as across sentences. 'oruttan' is thepronominalized form of the antecedent NP 'aajat kumaar'. This is pronominalization within sentence. The pronoun'avan' in the subsequent sentence also refers to the same antecedent NP and thus it forms pronominalization across sentences. In backward pronominalization first subject is a pronoun and co-referential subject is a noun.

Forward Pronominalization

Here two types of sentences are noticed.

1. Antecedent noun with a co-referential pronoun
2. Both NPs are pronouns (which is seen when pronominali-
is taking place across sentences)

Type:I

110. baaskarnnu oruttan irukkaan, avandu
'Bhaskar' 'called' 'a boy' ' is there' 'his'
There is a boy called Bhaskar, his.

'baaskar' is the subject of the sentence and 'avandu' is a pronoun which refers to 'baaskar'.

Type:II Both the NPs are ponouns. Only one sentence for this type of pronominalization is observed.

111. yaaru udaippiingalo, avangale jaiccavanga

'whoever' 'breaks' 'he' (emph) 'successor' PNG

Whoever breaks he is the successor

Here,'yaaru' and'avanga' refers to the same person.

Backward Pronominalization

Pronoun is referred by a noun later in the sentence.

112. appuram adu ammaakitte pooydum,korangu

'then' 'it' 'mother' 'to' 'go' would' 'monkey'

Then it would go to the mother, monkey.

Here, adu refers to korangu.

113. avandaan sekandu, naviin

'he' (is) 'second' 'Naveen'

He is second, Naveen.

'avan' refers to 'naviin'

4.1.7 Relativization

Relativization is a process through which 2 or more sentences are combined into a more complex sentence. A sentence may be embedded as a relative clause only if contains an NP identical to the NP it modifies. When transformational rules operate, the NP_2 is moved to the beginning of the embedded sentence and replaced by a relative pronoun.

Relative clauses can be middle embedded or final embedded. There were few sentences in the speech sample containing relative clauses.

114. ange poora ponnu peeru ennaa?

'then? 'going' (who is) 'girl's' 'name' 'what'

What is the name of the girl, who is going there?

Here, poora is the present relative participle. This is a medially embedded relative clause.

115. neettu kondaandta buk enge?

'yesterday' 'had brought' 'book' 'where'

Where is the book that(you) had brought yesterday.

Only few adult forms of relativized sentences were noticed in the present speech sample.

4.2 Developmental order among the aspects studied

To study the developmental trends among the four children, the data from the two five year old children were combined together and compared with the data of the two six year old children. Table II (p.98) summarizes the structures that are present in the two age groups.

4.2.1. Negation:

The negative marker ille and affixes -aa-, maatt- and -le are consistently used by both the groups of of children. But the negative suffix -aad is inconsistently used in conversation by these groups of children. The form and the context in which specific negative marker

TABLE I

Table showing structures which are present in each child's speech sample

Structures	5 yrs. age group		6 yrs. age group	
	ARATHI (F)	SURESH KUMAR (M)	GAYATHRI (F)	BHAKSKAR (M)
1.Negation				
ille	P	p	P	P
-aa-	P	p	P	P
maatt-	P	p	P	P
-le	P	p	P	P
-aad	P	A	P	P
2.Interrogation				
Yes/no type	P	P	P	P
Wh- type				
enge	P	P	P	P
yaar	A	P	P	P
enna	P	P	P	P
epdi	P	P	P	P
een	P	P	A	P
eppa	P	A	A	P
ettanai	P	A	P	A
evvalavu	P	P	P	A
edukku	A	A	P	A
yaarukku	A	A	P	A
enda	P	A	A	A
Tag-type	A	P	A	P
3.Imperative				
positive	P	P	P	P
negative	A	A	P	P
4.Coordination				
Sentential				
pause	P	P	P	P
aanaal	P	A	A	A
Phrasal(NP)				
pause	P	P	P	P
-um	P	P	P	P
Phrasal(VP)				
pause	P	P	P	P
-UM	A	A	P	P
verbal part.	P	P	P	P

P- present
A- absent

Table I (cont...d)

Structures	5 yrs. age ARATHI (F)	SURESH KUMAR (n)	6 yrs. age GAYATHRI (F)	BRASKAR (M)
Alternative				
-oo	A	p	A	P
-aavadu	A	p	P	A
Adversative				
-aal	P	A	P	P
-adanaal	A	P	P	A
5.Pronominalization				
Across sentences	P	P	A	
Within sentence	P	P	A	P
Forward	A	P	A	B
Backward	P	P	A	P
6.Relativization	A	A	P	P

TABLE II showing the syntactic structures which are present in five year old and six year old children

Structures	5 yrs. age group	6 yrs. age group
loNegation		
ille	P	P
-aa-	P	P
maatt-	P	P
-le	P	P
-aad	P	P
2.Interrogation		
Yes/no type	P	P
Wh-.type		
enge	P	P
yaar	P	P
enna	P	P
epdi	P	P
een	p	P
eppa	P	P
ettanai	P	P
evvalavu	P	P
edukku	A	P

Table II (cont...d)

Structures	5 yrs. age group	6 yrs. age group
yaarukku	A	P
enda	P	A
Tag type	P	P
3.Imperative		
positive	P	P
negative	A	P
4.Coordination		
Sentential		
pause	P	P
aanaal	P	A
Phrasal (NP)		
pause	P	p
-urn	P	P
Phrasal (VP)		
pause	P	P
-um	A	P
verbal parti.	P	P
Alternative		
-00	P	P
-aavadu	P	P
Adversative		
-aal	P	P
-adanaal	P	P
5.Pronominalization		
Across sentences	P	P
Within sentence	P	P
forward	P	P
backward	P	P
6.Relativization	A	P

is used resembles to that of adult's speech. There are no obvious difference between the five year old children and six year old children in negation. However, a specific form of negation such as illavee ille (not at all) is present in one of the six year old children. Deviant forms of negative utterances are described under sectio n 4.3.

4.2.2 Interrogation:

All three types of interrogation, yes/no type, wh- type and tag type are present in these two age groups. The use of tag question is not consistent when compared with other two forms. Among the consistent forms of wh- type question are enge. enna. epdi. een, yaar and evvalavu. The remaining forms of wh- type question eppa. ettanai and enda are inconstent in these two groups of children's speech. The five year old children do not use edukku and yaarukku. But the six year old children do use them with inconsistency. The wh- form enda is absent in the older children and inconsistently present in the younger children. These forms may be still in the process of acquisition. The results of this study support the findings of Tyack and Ingram (1977) that 'when' and 'which' are the last forms to be acquired.

4.2.3. Imperative sentence

Both positive and negative imperative sentences are used by older children, but only positive imperatives found in younger children's speech. The negative marker -aad is used in negative imperative sentences. +Honorific feature is maintained in all the children's utterance, while using a imperative sentence. None of the four children show any embedded form of imperative utterance.

4.2.4 Coordination

All the three types of coordination, sentential and phrasal, alternative and adversative coordination are found in both the age groups. For both the groups, sentential and phrasal coordinations are consistent than the other two coordinations. Pause is the chief coordinator of sentences in all the children's speech. Only one of the 5 year old child do use aanaal to coordinate sentences.

NP coordinators pause and -um are equally consistent in both the group of children's speech. VPs are coordinated by both the groups using a pause and using -um in the elder group children. Thus younger children do not make use of -um for VP's coordination. All the four children make use of verbal participle to coordinate verb phrases. Deviancies in coordination are equal for both the groups of children and this is discussed under section 4.3. Alternative coordinators -oo and-aavadu are not frequently used by these two groups of children. The usage of adversative coordinators -aal and adanaal is equally consistent in both the groups. None of the four children has acquired aanaal as an adversative coordinator. The acquisition of coordination seems to continue well beyond this age groups. Adult's form of coordination are not fully acquired.

4.2.5 Pronominalization

There are very few pronominalized sentences in the obtained speech sample. Both 5 year old children and 6 year old children show pronominalization across sentences and within sentence. Exceptionally, one 6 year old child has not acquired any type of pronominalization. Reason for this could be the limitation in the employed methods of sample collection with this child. Out of 4 total recordings, 2 recordings were done by the parents themselves. Both the groups show forward and backward type of pronominalized sentences. However, backward pronominalization is not a characteristic feature of adult's speech. Backward pronominalization disappears as the child grows.

4.2.6 Relativization

In this speech sample relative clause utterances are least in number when compared to other structures. Five year age group children have not shown any relativized structures. The older group children showed few utterances containing relative clause. The acquisition of relative clause starts after 6 years of age.

4.2.7 Differences between the sexes

To investigate the differences between the sexes, the male and female child in each age group were compared. Table I (p.97) summarizes the structures that are used by each child.

a. An overall comparison of males and females

Male children do not show all the negative affixes in their speech when compared with females. Male children have not started producing the following types of interrogative sentences: ettanai. edukku, yaarukku and enda which the females have. Only tag type of questions are lacking in female children's speech. Male and female children are equally proficient in producing imperative utterances. Male children have not yet acquired sentential coordinator aanaal and females the alternative coordinator -oo . Both the sex groups show an overall inconsistent use of other sentential, phrasal, alternative and adversative coordinators in their speech. The usage of pronominalization is inconsistent with females than males. Relative clauses can't be compared across sex groups as there was limited number of sentences.

b. Within sex - across age comparisons

The results of comparison of a 5 year old male child with a 6 year old male child in terms of structures are as follows: 5 year male child lacks negative affix -aad, interrogative markers eppa. ettanai. edukku,enda and yaarukku while the 6 year old male child does not have ettanai. evvalavu, edukku, yaarukku and enda. The younger child speech has no negative imperative sentence,VP coordinator -urn and adversative coordinator -aal.

The older group child does not show, disjunctive marker -aavadu and adversative coordinator adanaal. In general both the male children are equally consistent in producing these different aspects.

Female children

All the negative markers are present in both 5 year old female child and 6 year old female child. The 6 year old child does not use certain wh- type interrogations such as een. eppa and enda which the 5 year child does. In contrast, 5 year old child lacks interrogations like yaar, edukku and yaarukku which the 6 year old has acquired. Both show no tag formation; negative imperative sentence is not found in younger child, but the same is used inconsistently by 6 year old children. Both these children do not show alternative coordinator -oo. The younger child does not produce sentences with VP coordinator -um, alternative coordinator -aavadu and adversative coordinator, adanaal. Other child does not produce pronominalized sentences and younger child the relative clause sentences.

c. Between sex - within age group comparison

Five year age group: The female child in this group uses all the forms of negative markers, while the male does not use the negative affix -aad. Both do not

produce wh- question markers edukku and yaarukku. The male child has not been using the interrogations with eppa, ettanai and enda, but the female has been. Only the female child does not use tag questions. Both of these children do not produce negative imperative sentence, sentences with VP coordinator -um and relative clauses.

Six year age group: In this group, the negative markers and other negative affixes are found in both sexes, 'enda' is not found in both children's speech. The female child does not produce wh- type uttaances based on een and eppa interrogative markers, Male child's speech sample does not contain sentences consisting of ettanai, evvalavu, edukku and yaarukku interrogative marker. Only the female child does not produce tag questi-ons. Sentential coordinator (aanaal) is not found in these children's speech. The female child does not produce any pronominalized sentences owing to the limitation in the mode of speech sample collection. Both the children have started using relative clauses. The structures which are used by this group are consistent in their speech.

The difference in the use of structures by the two sexes is basically on forms, that the children have not acquired completely yet. These difference could also be reflecting the individual variation in the developement of language.

4.3 Characteristics of deviant utterances of children

Among the four children only one child has not shown any deviant sentence. One reason for this could be the limitation in the mode of speech sample collection. Out of four recordings, two were done by her parents themselves. All the technique of sample collection could not be employed with this child. The second reason is that the parental correction of deviant utterance and strong training since early age. Thissample does not contain any type of deviancies which are common to all children. All the deviancies aBidiosyncratic.

Idiosyncratic deviant utterances:

The deviant utterances found are peculiar to each child's speech.

(A) SURESH KUMAR: Age 5 years.

Interrogation: When one of his parents told him 'nii pooga maattee' (you will not go), a negative declarative statement, he denied himself by using a wrong negative interrogation.

116. adeen poo maatteen?

'why' 'go' 'will not' PNG

Why will not (I) go?

The interrogative marker 'een' does not agree with a negative marker 'maatt-' for first person singular. The appropriate question form would be:

116.a. adeen pooga kuudaadu?

'why' 'go' 'should not'

Why should not (I) go?

(B) ARATHI: Age 5 years.

a. Personal endings: She was using improper personal endings occasionally.

117. unga viitle yaaru irukkriinga?

'you' 'house' (in) 'who' 'are there' PNG

Who are all there in your house?

Here, the pronoun yaaru does not take the personal ending inga which is a personal end marker for second person plural or second person + honorific. The correct form of personal ending would be the underlined segment 'anga' as in the following.

117.a.unga viitle yaaru irukkaanga?

'you' 'house' (in) 'who' 'are there' PNG

Who are all there in your house?

Similarly she uses inappropriate personal endings for inanimate objects.

118. unga viidu enge irukkringo

'your' 'house' 'where' 'is' PNG

Where is your house?

'unga viidu enge irukku?' is the correct form.

Deviant PNG markers in 5 year old Kannada speaking children are also observed by Prema (1979).

b. Pronoun-verb agreement: There is a disagreement between the pronoun and verb in one sentence, when she intended to say ' peesuveen naan' (I will talk).

119. peesuveen naanga

'talk will' 'we'

We will talk.

The correct form would be ' Naan peesuveen'

c. Deviant post positional phrase: She shows considerable number of sentences with deviant PP phrases.

120. adu enga viitle vandirukku

'that' 'our' 'house'(in) 'has come' PNG

That has come in our house.

Instead of using a dative case -ku(to) the child is using object case-le. 'adu enga viittukku vandirukku' is the correct PP.

While she was describing picture stories, she also substituted dative case 'meele' for an object case-le as in following sentence.

121. ivan aafiis meele padikraan

'he' 'office' 'over' 'reads' PNG

He reads over the office.

The appropriate form would be ' ivan aafiisle padikraan' (He reads in the office).

d. Interrogation: This child rarelyuses inappropriate wh- type interrogative marker.

122. unga burtdey enge?

'your' 'birthday' 'where'

Where is your birth day.

Here, by 'enge' she means ' enna'.

e. Infinitive utterances: While narrating stories this child often uses the following infinitive utterances, which are normally not found in adult's speech. This kind of function expression are considered to be normal phenomenon of children's speech. Even during spontaneous speech these utterances were noticed.

123. epdi teriyumaa puli kadiccudum,ipdi.

'how' 'know' 'do you' 'tiger' 'would bite' 'likethis'

How do you know? tiger would bite, like this.

124. enna teriyumaa, tiiviile paattu varum.

'what' 'know' 'do you' 'TV'(in) 'songs' 'will come'

What do you know? songs will come in TV.

(C) BHASKAR: Age 6 years.

a. Among the three children, this child shows less number of deviant utterances;there was a disagreement between pronoun and verb only once in his speech, This is due to the rapidity with which the child spoke.

125. un peeru ennaanga?

'your'(-honorific) 'name' 'what'PNG(+honorific)

What is your name?

The pronoun -un (-honorific) does not agree with personal ending -inga,(+honorific). When this error is corrected the sentence would be 'un peeru enna?'

b. He also uttered a sentence, showing disagreement between noun and ordinal.

126. oru uurle korangu oruttan irukkudaam

'one' 'village(in) 'monkey' 'one person' 'is then?

In a village, there is one person monkey.

Instead of using an ordinal 'onnu' the child has used a pronoun 'oruttan'.

This sentence is the deviant form of:

126.a.oru uurle korangu onnu irukkudaam

'one' 'village'(in) 'monkey' 'one' 'is there'

In a village, there is one monkey.

Here, the underlined segment -aam at the sentence ending indicates that it is a sentence form of reported speech.

c. Self Questioning during continous discourse

127. saapittuttu ennaa pannuveen, tuunguveen

'after eating' 'what''do' 'would'PNG'sleep"would'PNG

After eating what would I do? (I) would sleep.

After deleting the interrogative VP 'ennaa pannuveen' the correct form 'saapittuttu tuunguveen' (after eating I would sleep) is achieved. He has added the interrogative VP 'ennaa pannuveen' to recall the events.

In summary, deviant utterances are not found in one of the six year old child owing to the reasons mentioned earlier in this section. The other three children do not

share any commonalities in their deviant form of speech. Each child produce his/her own type of deviant utterances. The 5 year old female child makes more number of erratic utterances of interrogation, personal endings of noun and pronoun, agreement between pronoun and verb, pronoun and post positional phrase. The male child of same age group produces idiosyncratic interrogatives. The older child does not show much consistent deviantion. Thus all the deviant utterances are idiosyncratic. Deviant form - of intonation in speech is noticed with one 5 year old child.

4.4 Comparison of syntactic aspects to adult forms:

The basic sentence structure used by the children is similar to that of adult sentences. However children displace NP constitutents after the verb which is not usually done in adult speech. Children tend to substitute Kannada and English words at times; owing to theexposure to those languages. During continuous discourse, children use typical sentences to mark or denote the function expressed. Though this is not found in adults, it is considered to be normal in children. Not all the children's speech intonation resemble to that of intonation that adults use during speech.

Children negate the sentences spoken using the marker ille. and the affixes -aa-, maatt, -aad and-le in a way

similar to that done in adult's speech. Negative sentences with thrid person plural (avanga)and second person honorific (niinga) as subject NPs are very rarely found in the corpus. Children do often show nonverbal mode of negative expression by moving their head from side to side which is often normal in adults. The negative marker 'kedayaadu' (no) which adults use sometimes is absent in this sample of speech.

All the three types of interrogation, yes/no, wh- type and tag type are used by children in the same way as adults use them. However they show deviancies such as disagreement between the negative marker and interrogative marker in negative interrogative sentences. Not all types of wh- type interrogation are consistently used as in adult's speech. These include eppa. edukku, yaarukku and enda. Interrogative pronouns edu and edai are not used by children. These forms may be still in the process of acquisition. The presence of tag questions in the 5 year old children contradict the results reported by Menyuk (1971) and Magreth and Kunze (1973) that children may not acquire tag questions by the age of five. This is in agreement with Roopa's(l080) findings.

Affirmative imperative sentences are used by all children and it resembles to that of adult's sentence. Negative imperative sentences are found only in older

children. One older child does not use imperative forms with second person honorific like 'poonga' It is evident that the acquisition of imperative forms is not complete by the age of five.

The coordinated sentences are less in obtained sample. All the children use NP coordination more often. Sentential coordination, vp coordination, alternative coordination and adversative coordination are incosistent and rarely used by these children. These children do not use all the adult forms of alternative coordination and adversative coordination. Compared to the younger children, older children more often produced coordinated sentences. These observations support the findings reported by Katz and Brent (1968), Neimark and Stolmick (1970), Prema(1979) and Roopa (1980) that coordination acquisition may not be complete by the age of five.

Pronominalized sentences are very rare in the speech of the four children. An older child did not have any pronominalized sentences, which may be due to methodological restrictions. Pronominalization across sentences are more in number than pronominalization within sentence. Backward pronominalized sentences are typical of children's speech and they are not reported to be found normally in adult's speech. Pronominalized sentences of children do not fully resemble the sentences of adults. This supports

Chomskian (1969) hypothesis that acquisition of pronominalization may occur even after the age of 5 years.

Only five relative clause sentences are obtained from the whole corpus of speech sample, and they resemble to the adult forms. Children are yet to acquire these structures. Quigley et.al (1974) hypothesized that the relative clause acquisition begins after the age of 6 years in normal children.

A superficial examination of structures present in these two age groups of this study would suggest that language acquisition is more or less complete in these children. However, as the children of 6 years are yet to acquire/produce certain syntactic structures, one would not agree with the above statement. The results of this study are in contradiction with the common assumption prevailing in the past decade that a five year old child will be linguistically an adult (Braine,1963; Miller and Erwin,1964; Shipley,Smith and Gleitman,1965; Menyuk,1969 and McNeill,1970). Rather the results favor the findings of many studies (Chomsky,1969; Carpenter, 1966; Prema,1979 and Roopa.,1980) that acquisition of syntax continues well beyond 5 years. More research in this area would be able to explain the subtle process that occur in the acquisition of language.

Chapter V

SUMMARY AND CONCLUSIONS

In this study an attempt was made to investigate the development of some aspects of syntactic patterns in 5-6 year old children. Four children- one boy and one girl in each age group- whose mother tongue is Tamil and belong to middle class families residing in Mysore were selected for the study. All the four are from Non-Brahmin families. The age range of the children was from 4 years 8 months to 6 year 1 month.

A total of 3 hours speech sample was recorded with each child at his/her home using a portable cassette tape recorder. This sample consisted of four separate 45 minutes recordings. All the four recordings were completed within a duration of 6 days.

Techniques adopted to elicit speech from the children included: elicitation of spontaneous speech, interviewing, story telling, describing pictures, describing or explaining the Children Appreception Test plates, describing the view master slides. Even some family members were involved in data collection. The recorded speech samples were transcribed in broad phonetic transcription.

All the four children's transcribed speech sample was combined together for the final analysis. The sentences of children were classified into four major

types of sentences: 1. Declarative 2. Negative 3. Interrogative and 4. Imperative. In addition, coordinated, pronominalized and relativized sentences were also extracted from the obtained speech sample.

These sentences were then subjected to analysis on the following lines:

1. Structure of the sentences used by children.
2. Developmental order of aspects of syntax under study.
3. Characteristics of the deviant sentences uttered by each child, and
4. Comparison of forms used by children to the forms used by adults.

The following tentative conclusions could be drawn from the results of the study.

Sentence Structure

Children's sentence structure are similar to that of adult's sentence structure. They shift and delete certain constitutents of NP and PDP which are considered as stylistic variation. Deviant form of sentences are idiosyncratic in nature. The 5 year old female and rarely 6 year old male child show disagreement between noun and verb, pronoun and verb in their sentences. The female child of 6 year age does not show any deviant utterances owing to the reasons mentioned in the section 4.3.

Negation

The form and the context in which specific negative marker/affix are used resembles to that of adult's speech. As adults do, children use the negative marker ille, and negative affixes -aa-,maatt-, -le and -aad in a similar fashion. Children do not use consistently the negative affix -aad as compared to other affixes. Only 5 year male child shows few deviant negative sentences.

Interrogation

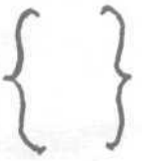
All the four children have shown the three major categories of interrogation - yes/no type, wh- type and tag type - in their corpus. This group of children have used the tag type question inconsistently when compared with other two types. The frequently used wh- type questions have the markers enge, enna. epdi.een.yaar and evvalavu. These children produce less number of sentences having markers eppa. ettanai. and enda. The transformational rules for deriving interrogative sentences have been acquired by the children. While forms like edukku and vaarukku are absent in the younger children's speech, enda is not found in older children's speech. These forms may still be in the process of acquisition.

Imperatives

These two group of children use positive imperative sentences. Negative imperative sentences using the negative marker -aad are used only by the older children in their speech. Children maintain the agreement between subject NP (+ honorific) and the personal endings.

APPENDIX

APPENDIX I SYMBOLS

	:	Rewritten as
	:	Suffixes, choose one from list
	:	Transformed into
ø	:	Zero
+	:	Incorporated with
( )	:	Enclosed constituent is optional

APPENDIX II

Abbreviations

S	:	Sentence
Q	:	Interrogative word
Imp	:	Imperative
Neg	:	Negative
NP	:	Noun Phrase
PDP	:	Predicate Phrase
Det(D)	:	Determiner
Pro/PRO	:	Pronoun
N	:	Noun
Indef.det	:	Indefinite determiner
Def.det	:	Definite determiner
Quan.	:	Quantifier
Demon.	:	Demonstrative
Aggre/agg.	:	Aggregate
Enurn	:	Enumerative
Emph	:	Emphatic
Num	:	Numeral
Ord	:	Ordinal
Card	:	Cardinal
(S)	:	Embedded sentence
VP	:	Verb Phrase
Adv_T	:	Time Adverb
Adv_P	:	Place Adverb

Adv_m	:	Manner Adverb
PP	:	Post positional Phrase
V	:	Verb
Obj	:	Objective
Inst	:	Instrumental
Soc	:	Sociative
Dat	:	Dative
Tense	:	Tense
Asp	:	Aspect
Mod	:	Modal
Perf	:	Perfective
Prog	:	Progressive
Comp	:	Completive
Fut	:	Future
Non-Fut	:	Non-Future
Pres	:	Present tense
Past	:	Past tense
e-	:	Interrogative
PNG	:	Person Number Gender
Adj	:	Adjective
Adv_{reason}	:	Reason Adverb
Conj	:	Conjunction/coordination