Some Aspects of Syntax of 5-6 year old Children

A Descriptive Study in Kannada

PREMA.K.S

A DISSERTATION SUBMITTED IN PART FULFILMENT
FOR THE DEGREE OF MASTER OF
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SOME ASPECTS OF SYNTAX OF 5-6 yr. OLD CHILDREN: A DESCRIPTIVE STUDY IN KANNADA

BY

REG. NO. 7

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1979

IN LOVING MEMORIES
of
MY BELOVED FATHER

C E R T I F I C A T E

This is to certify that the dissertation titled "some Aspects of syntax of 5-6 yr. Old Children: A Descriptive study in Kannad" is the bona fide work in part fulfilment for the Degree of M.Sc. (speech & Hearing), carrying 100 marks, of the student with Register No. 7.

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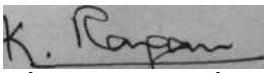
C E R T I F I C A T E

This is to certify that this dissertation titled "some Aspects of syntax of 5-6 yr. old Children: A Descriptive study In Kannda" has bean prepared under ay supervision and guidance.



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D E C L A R A T I O N

This dissertation is the result of my own study undertaken under the guidance of Dr. K. Rangan, Research Officer, Central Institute of Indian Languages, Mysore, and has not bean submitted earlier at any University for any other diploma or degree.

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C O N T E N T S

Chapter I

INTRODUCTION

"A language ia defined aa the infinite set of grammatical sentences in a language. The grammatical sentences of a language are constructed by following syntactic rules of that language." (Chomsky, 1957:3)

'Syntax' refers to the study of the principles and processes by which sentences are constructed in particular languages. It also refers to the body of rules which governs the way in which words are arranged to construct aentences.

Moat of the recent studies that have focused on how a child learns to combine words to form grammatically acceptable sentences have been influenced by Chamsky's theory of transformational generative grammar. This theory hypothesizea that there is an innate rational ability in man which allows him to generate the infinite number of aentences of his language once he has been sufficiently exposed to it.

" A LANGUAGE IS THE WAY PEOPLE TALK,
NOT THE WAY SOMEONE THINKS THEY
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- CARPIENTER C.L,.(1966)

Chapter I

INTRODUCTION

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In the past decades, a common assumption among child language investigators was that a 5 year old child would be "linguistically an adult' i.e., it was thought that the child masters the syntax of his native language by about 5 years. Accordingly, most of the research carried out in the area of acquisition of syntax had concentrated on children under 5 years of age dealing with the rapid progress and more readily observable changes in their language. (Braine, 1963; Brown and Bellugi, 1964; Miller and Erwin, 1964; Shipley, Smith and Gleitman, 1965; Klima and Bellugi, 1966; Bellugi, 1967; Brown, 1968; Menyuk, 1969; Brown and Hanlon, 197O; Me Neill, 197O; Brown, 1973; Chapman and Miller, 1975).

But, in fact, a 5 year old child will not be linguistically an adult. His language resembles that of an adult on the surface but some of the complex rules of language are not fully acquired by 5 years. there will be subtle differences between an adult's and a child's language which can be noted only on deeper analysis.

By 5 years, the rate of acquisition of syntactic structures decreases markedly. Hence diffences between the child's grammar and adult grammar are no longer so readily discernible in the child's spontaneous speech. However, differences can be noted when one begins to explore the child's knowledge of particular syntactic structures. Some of the

studies which have explored the syntax of children above 5 years, both in terms of comprehension and production are - Loban, 1963, 1966; Menyuk, 1963, 1964, 1968; Carpenter, 1966; O' Donnel, Griffin and Norris, 1967; Chomsky, C.1968; olds, 1968; Cromer, 197O; Kessel, 1970; Palermo & Molfese,1972.

Many studies have compared the syntactic abilities of normal and different linguistically deviant children. (Nenyuk, 1964, Lee, 1966; Muma, J.R. 1971; Norehead and Ingram, 1973; Quiqley, Montanelli and Wilbur, 1975; Vogel Susan, 1975). These studies, in summary, 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. Such studies point to the importance of gaining knowledge of normal developmental hierarchy in the acquisition of language in order to place a deviant child on a continuum of language development.

A study by Vogel, S.A (1975) comparing syntactic abilities of normal and dyslexic children found that dyslexic children are dificient in syntax compared to normal children. Evaluation of syntactic abilities of preschool children helps in early identification of dyslexic children which is not

possible by reading tests.

Early identification of dyslexic children has implication for methodology of teaching i.e., to read not only words in isolation, but also in phrases and sentences. Books written in the syntatic style of the child's spoken language and using syntax tnat does not exceed his level of development will help him to become aware of the relationship that exists between spoken and written language and therefore enhances his reading comprehension. Again, this calls for an understanding of normal development of language.

A primary goal of language programs for deaf students is to prepare these students for integration into a hearing society, where participation requires the use of oral communication. So, it is essential that language programmers understand how native speakers use their native language. Traditionally, language programs have been designed by the prescriptive mehod. 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 descriptive studies are being published now-a—days which help speech pathologists and language teachers to plan either for therapy or for second language teaching.

There are many such studies catering to the needs of speech pathologists and language teachers in western countries. Some of the studies have developed norms for aspects of language development. But one can not blindly follow the norms established for a set of population. Here, though the question of universality in language development presents itself for argument, there is necessity to test this question of universality.

To test the above question, studies have to be conducted on different sets of population of children speaking different languages. In India, such studies can be effectively takenup, but at present, there are very few studies aimed at acquisition and development of language. (Thirumalai, 1972; Kumudavalli, 1973; sreedevi, 1976; Taaneam Banu,1977; Suhramanyaiah, 1978; Vijayalakshmi, 1979).

Thirumaial (1972) studied some aspects of acquisition of Tamil phonology in 4 year + old stage. Kumudavaiii (1973) has found out the relationship between articulation and discrimination of Kannada speech sounds in terms of distinctive features in the age group of 4-8 years. Sreedevi (1976) has studied aspects of acquisition of Kannada by 2 year + old children whereas, Vijayalakshmi (1979) has analyzed moat of the aspects of language of children below 5 years, so, these studies are restricted to the acquisition of language

by children below 5 years. The other two studies deal with the aspects of acquisition of articulation (Tasneem Beau, 1977) and morphology (Subramanyaiah, 1978). But none of the research work in Kannada has dealt with th* acquisition of syntax after the age of S years. This information is needed for the purposes of gaining theoretical knowledge arriving at proper diagnosis, and planning therap-y.

In the present study, an attempt is made to describe four syntactic aspects - negation, interrogation, conjuction and pronominalization of 5-6 year old Kannada speaking children, mainly in terms of their production ability.

Four children - two boys and two girls - were selected for the study. A11 the children come from Brahmin families and belong to "middle-class" category with Kannada as their native language. Other variables like order of birth, stimulation at home are fairly satisfactorily controlled.

Speech sample of each child was collected for three days, one hour daily, using a cassette tape recorder. Regarding the interrogative aspect of syntax, the mothers of the children were requested to write down the questions asked by the children everyday. Spontaneous speech and story narration were the major techniques resorted to, while collecting speech sample. Reinforcers were given for the children to keep up their motivation for the subsequent sessions of

recording. The whole data was analyzed in terms of the syntactic patterns of the four aspects under study.

Limitations of the study:

1) Large number of children could not be employed for the study.
2) Children of different age groups were not included in the study.
3) The data do not represent only the spontaneous utterances of children.
4) Only four aspects of syntax are studied.

-:—

Chapter 2

REVIEW OF LITERATURE

The study of child's acquisition of language has engaged the interest and fancy of those who have wanted either to understand better the development of children or the nature of language. A great deal of attention has been focussed upon the language development of children between the ages of one and four years. Recently, studies are emerging regarding the development of language after 5 years.

Many disciplines show interest and concern in the task of describing the processes of language acquisition and development. Each discipline has its own goals, methods of procedures, and particular prejudices.

From linguistic point of view, the parameters important to the use of language can not be found in the physical events occuring in the environment since these parameters are abstract rules of the syntactic, phonological, and semantic aspects of the language. The structure of the grammar of a language is "abstract" in nature and the physical signal is a representation of the underlying structure of an utterance. To understand the utterance, the listener must have knowledge of this underlying structure which can not be derived from

the physical signal per so., and therefore, must have the innate capacity to search for the abstract syntactic, phonological and semantic rules by means of which sentences are produced and understood. The structures and functions of the nervous system necessary to the acquisition of language are present at birth in the intact organism. The only acquisition environmental contribution necessary to the acquisition process is that language be present. The process is ordered and determined by the maturation of the nervous system at various stages of development.

From psychological point of view, the parameters of the physical events used to understand and produce sentences are the stimulus - response — reward conditions that operate during the acquisition of larger and larger segments of the sentence, or longer and longer sentences, or differing types of sentences. The child's general capacity to conceptualize about and perform logical operations with the stimuli in his environment might determine the form of his linguistic behavior during various stages of development.

Relationships of language development with either Neurophysiological maturation or cognitive development are the matters that are not yet fully explored. Further research on the above relationships may throw wane light on the dependency or independency of the above factors.

2.1 Approaches to child language study:

In general, there are three approaches:-

1) Empericist's approach

2) Transformational generative grammarian's approach and

3) Process or strategy analysis

Behavioristic approach has taken a cavalier attitude towards language acquisition. B.F+Skinner (1957) states that "one need not study language learning as such, it is enough to study general principles of behaviour". But as More information accumulated about children's language, it became quite apparent that the child's linguistic behaviour ia such more complex than was supposed to be. Hence, Transformational grammar seens to offer a more powerful approach to the study of child language.

According to Chomsky (1957), the grammar of a language can be thought of as a hierarchy,

- a base component, which produces "All of deep structures; (Kats and Postal, 1964:7 "All semantic information is represented in underlying structure.")

- a set of transformations operate on the deep structure and derive the surface structures (Katz aad Postal, 1964:7,"Santic projection rules operate exclusively on underlying phrase markers; hence transformations do not change meaning).

A transformation may involve any of the four processes; addition, deletion, rearrangement and substitution.

By addition, it is meant that some element ia added in the surface structure that is not present in the deep structure. But, aa the deep structures must contain the full meaning of the sentence, only words which are relatively empty in meaning, such as do, may be added transformationally.

Deletion Process ia 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.
Eg :- Bill could not hear you, but I could hear you =>
Bill could not hear you, but I could.

Rearrangement changes the ordering of the phrase markers. The process ia seen in negative, yes/no and we - question transformations. As with other transformations, rearrangement produces a change in structure and is not just a shifting of words.

Substitution involves replacing an element of the deep structure with another element, as the substitution of where for Adv_p.

The central component of transformational grammar is syntax, which consists of two subcomponents: the base and the transformations. The rules of bases subcomponent generate abstract deep structures such as:

Det + N + Past + be + ing + V + N

1) The rabbit past+be + ing eat grass

phrase structure rules give a structural description of the string of elements.

NP -------> Det + N

The rabbit

AUX-------> Past + be + ing

Vp -------> V + N

eat + grass

(In the present study, transformational grammarian's approach is followed).

Process models: are essentially cognitive models of language. The model attempts to delineate how language is processed cognitively and how it is manifested behaviourally. (Clark and Haviland, 1974). Thus, this model attempts to accommodate both competence and performance stimultaneously.

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.

Learning the grammar of a human language is an extraordinarily complex task, especially considering that it begins

at such an early age. It was this phenomenon that first excited the interest of psychologists and linguists alike, particularly in the early 1960s. Several large scale studies of early child speech were undertaken (Braine, 1963; Brown and Bellugi. 1964; Miller end Erwin, 1964). Several elegant descriptions emerged of particular grammatical structures like the negative (Bellugi, 1967), the interrogative (Klima and Bellugi, 1966; Brown, 1968) and tag questions (Brown and Hanlon, 1970) traced through out the first two years. Brown and Hanlan(l970) and Mc N$_e$ill (197O) were particularly gratified that the insights into grammar provided by the transformational linguists also proved so illuminating for the study of child grammar.

During the past decade, research on language acquisition has focused primarily on the development of syntax. "It appears that the most active period for learning bases syntax is between 18 months and 4 years and that this period reflects distinct levels of linquiatic development" (Mc Neill, 1970; Brown 1973). Most of the investigators working on child language assume that the child completes the acquisition of syntax of xhia native language by the age of 5. Accordingly most of the research carried out in the area of acquisition of syntax concentrated on children under 5 years of age, dealing with the period of rapid progress and more readily observable changes in the children's knowledge of language.

One of the primary tasks of the child in acquiring the language is to determine how eiffering relationships are expressed in the sentences of his language. He must learn the syntactic forms used in hia language to express subject - predicate relationships, affirmative - negative relationships, question - declarative relationships etc. He Must learn the forms used to express reference, tense, number, etc. 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 produced or understood before others?

Recent research in the child's acquisition of syntax has provided the following kinds of data:

Descriptions of the form of the utterances children produce from 18 months to approximately 13 years and, to a much lesser extent, experimental data concerning the child's comprehension of various syntactic structures at certain ages.

At about 18 months, Children are likely to begin constructing two-word utterances. several observations have been mads about the structure of the utterances produced at this stage of development. The first is that these

single-word utterances do not belong to any single grammatical class. They can be classified according to dictionary classifications as, nouns, verbs, adjectives and prepositions. The second observation is that these single-word utterances are not functionally used to name objects. They may be used or interpreted a* imperatives, declaratives or interrogatives. The third observation is that these single-word utterances may be articulated in a standard manner or in a distorted manner, or they may be inventions of the child. The fourth observation is that during this stage the child may be producing long babbled utterances containing no recognizable lexical items but marked by intonation and stress, as well as single, recognizable lexical items. Thus there may be an overlapping usage of the structures observed at an earlier stage together with new structures. This overlapping or simultaneous use of structures used previously and new acqisition can be found throughout all developmental stages (Menyuk, 1969).

In the first two or three word utterances produced by children, it has been observed that articles, copulas, and other so-called function words are omitted. It has bean suggested that the reason for these omissions is the fact that these functions words are not stressed in the utterances children hear (Brown and Bellugi, 1964).

Shipley, Smith and Gleitman (1965) compared the responses of children, aged 15 to 30 months, for comprehending varying types of utterances: N, VN, 'telegraph', imperative, and utterances containing non-sense forma for the N.v. etc. The study population was divided into 2 groups: less advanced (primarily one-word spontaneous productions) and more advanced (primarily two-word spontaneous productions). For the more advanced group, responses were made most often to the grammatical imperative sentence. with the less advanced children relevant responses were obtained most frequently with the word in isolation (necessarily the noun stressed) and to the word separated delivery of the telegraph utterance with each item distinctly stressed,in that order. Similar studies of this kind indicate that stress and intonation are used to further differentiate meaning within sentence types. slobin (in press) cites such an emample. "Chisty room" with stress on the first word in the utterance indicates "Christy's room" or possession. "Chisty room" with stress on the 2nd word in the utterance indicates "Christy's in the room" or some prepositional phrase. Thus, the structural devices used by the children and adults are different. One uses phonetic segments whereas the other uses supraaegmental features.

The data obtained by Shipley, Smith and Gleitman (1965) also indicate that comprehension does not precede production

with the less Advanced group. Although the more linguistically mature group were still primarily producing utterances without articles or object pronouns, they responded most frequently to the completely well formed imperative sentences. On the other hand, the least linguistically mature children, who were producing single-word utterances, also responded most frequently to single-word utterances. The gap between comprehension and production evidenced by the more linguistically mature children was not in evidence with the less advanced group. "There may be stages of development during which comprehension precedes production and other during which oempahanaienr pfecraodea proction and others during which eaayeahansion praeaadas pMd*etien and others during which comprehension and production are closely matched." (Menyuk, 1971).

Chapman, R.S and Miller, J.F (1975) tested the order of emergence of production v/s compression making use of word order in early two and three-word utterances. Three groups of five children each participated in the study with average MVL of 1.8, 2.4 and 2.9 morphemes respectively. Results indicated that grammatical production precedes comprehension as indicated by object-manipulation paradigin. However, Chapman et.al, have not mentioned the age range. There main criterion for selection of subjects was average MVL.

Most investigators have restricted to the age of 4 or 5 years old children assuming that the basic outlines of the syntatic system are universally acquired by this age. Recently, however, psycholinguists and speech pathologists have become interested in syntatic development after 5 years and several studies, (Chomsky, c, 1968; Olds, 1968; Cromer, 197O; Kessel, 197O) have begun to probe the mastery of complex details and special cases which continue through the school years.

A review of the literature indicates that the 5 years old is far from having the equivalent of an adult native speaker's facility with the language. Scattered through the literature is the evidence that at the phonological, syntatic and the semantic levels a good deal more facility needs to be acquired before the adult level is reached. (Palermo, D.S and Molfase, D.L.1972).

Considerably more research is available about syntatic development, a large number of which are conceived within the general transormational - generative framework. Some data suggest that important syntactic advances occur long after the child has passed his fifth year birthday.

The first set of studies mentioned below attempted to evaluate syntactic development by the procedure of collecting a corpus of language from children of various

ages, followed by an analysis of that corpus in terms of a set of grammatical rules that could be used to describe it. The rules that could be used to describe the corpus are, in turn, compared to the rules presumed to account for adult for adult language and evaluations of development are made.

The studies of Loban ((1963, 1966), Menyuk (1963, 1964. 1968) and o'Donnell Griffin and Norris (1967) are particularly extensive examples of this type of approach. Menyuk examined the language of children from 2-7 years of age. Approximately 8O-12O sentences were collected from each child, although no indication is given of how the sentences were selected from the running speech of the child. On the basis of grammar written to describe the sentences of children, Henyuk concluded that nursery school children have completed the phrase structure and morphological levels of grammar. Her analysis focused upon transformational rules in which some developmental tredds were observed. Menyuk suggested that nearly all transormations used in adult language are present in some of the nursery school aged children, but even the first graders, as well as the KG children, in the age range of 5-2 years failed to exhibit full development of the auxiliary have, participal complement interaction, nominalization, pronominallzation and conjunctions with, if and so. In addition, there were some 17

types of restricted transformations used only by children and not apparent in the language of adults. Finally, there ware some structures used by adults that never appered in the children's language at any age level although these were not specified. Little can be said about whether the latter failed to appear because of lack of opportunity during data collection or lack of the competence to produce such structures.

Loban (1963, 1966) conducted a longitudinal study of language development over a 10 year period for a group of 220 children carefully selected in terms of socio-economic level and a number of other variables. The study began when the children were in KG and continued through 9th grade. Each subject was interviewed individually and responses recorded. Results indicate that as children grow, their speech peformance improves, as indicated by decreases in incomplete syntactic structures, increases in the variety of structural patterns used and greater variation in the structures within sentences in terms of vocabulary, positions of phrases (such as adverbial modifiers). nominaiizations, and so on.

In a similar study, o'Donnell et.al., (1967) collected samples of oral and written language from 5—14 year old children. The analyses of the data were similar to those of Loban but baaed on terminal syntactic units (T-units).

Simple or complex sentences were defined as T-units, but a compound sentence was analysed in the smaller T-unita of which it was composed.

The length of $T_v$units increased from about 7 words for KG children to about 10 for the 7th graders. of more interest is the evidence for two periods in which sudden change* in performance appear to occur. Between KG and 1st grade and between 5th and 7th grade are developmental periods when large increases in new grammatical constructions or sudden increases in the use of constructions previously evidenced at low frequencies and high error rates on some kinds of constructions seem to occur. Mean number of sentence embedding transformations in T-units increased significantly at both of these transition periods. Marked increases in nominal, adverbial, and co-ordinate construc-tions also occured at both of these developmental points. Nominals containing adjectives and prepositional phrases particularly increased from 5th to 7th grade.

In summary, the Menyuk (1963, 1964), Loban (1963, 1966) and O'Donnell et.al., (1967) research provides a general over-view of further language development in the child after 5 years. The overall results suggest that there is a general but gradual consolidation of language structures from KG to 7th grade but also abrupt shifts in performance, which occur between KG and 1st grade and between

the 5th and 7th grades. More research focused on these two periods may be of particular interest in revealing what is happening at these ages. It may be that the child is acquiring rules for different syntactic structures at these ages and that these rules affect and disrupt other structures that the child has dealt within a competent manner previously. "Language is an integrated system in which a change in one structure can not help but affect other structures within the system." (Palermo D.S and Molfese, D.L. (1972)).

Carpenter, C.L. (1966) studied the patterns of language used by KG children. 70 children from 4:ll - 5:10 were selected for the study from KG classroom. No information is given on how the language sample was collected. The language sample was grouped into 5 kinds of sentences - questions, statements, requests, exclamations and calls. Carpenter reports of collected 136 sentences in total. He has analyzed the results in terms of the percentage of occurrence of each type of sentence and how they were constructed.

Questions - 23%

Statements - 45%

Requests - 28%

Exclamations and Calls - 2%

He discusses the obtained results on the lines of the structure of each type of sentence. His aim in carrying out

such a study was to plan a curriculum for deaf students by proper understanding of how language is used actually by hearing children. But the drawback of the study is that it is not exhaustively done to program therapy based on the obtained results. In-depth study of this type is necessary to plan curriculum as he claims.

Chomsky, c (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.

1) ask/tell
2) promise/tell
3) easy to see and
4) pronominallzation

Proper experimental situation was constructed to test each aspect, results indicated considerable variation in the ages of children who knew the structures and those who did not.

Structure 1,2 and 3 are strongly subject to individual rate of development structure 1 and 2 are acquired between the ages of 5.6 and 9 and are known by all children of 9 and above. Structure 3 is still imperfectly learned by some children even at the age of 10 and *tructure 4 is acquired

fairly uniformly at about age 5.6.

The significance of these results lies in the late acquisition of syntactic structures that they reveal and in the differences that they bring to light concerning the nature of the linguistic processes studied. Contrary to the commonly held view that a child has mastered the structures of his native language by the time he reaches the age of 5, one finds tnat active syntactic acquisition is taking place upto the age of 9 and perhaps even beyond that age.

Brown,R and Bellugi, (1964) describe 3 processes that take place during the acquisition of syntax by children. They emphasize the role of mother's speech in the acquisition of syntax. The child is supposed to imitate with reduction of certain structures in the initial stage. The mother imitates with expansion and induces latent structures to child's speech during play and other situations which are crucial factors in helping the child to acquire adult patterns. But these 3 processes alone do not account for the acquisition of certain complex structures nor the learning theories as put forth by psychologists. So, the mechanism of acquisition of syntax by children still remains unexplained satisfactorily.

2.3 Development of specific transformations:—

2.3.1 Development of negative transformation:—

"Negative is considered as a formant which combines with parts of the sentence to constitute negation in sentence. (Klima and Bellugi, 1966). In fact, according to Katz and Postal (1964)

> "the morpheme Neg. is immediately dominated by S. If the morpheme Meg. is present in the deep structure, then the surface structure derived by the application of a series of transformations will be a negative sentence. If the morpheme Neg. is not present, then the resultant string will be a possibive sentence."

some of the negative realizations in English are not and its contracted form n't, a small set of negative words including the negative pronouns nobody and nothing, the negative determiner no, the negative adverbs never and no where.

Because negation has linguistic aswell as cognitive implications, it has been one of the more thoroughly studied aspects of children's language acquisition. When rules are written for the grammar of child it is just an attempt to give substance to the general observations, demonstrating the regularity in the syntax of children's speech.

The pioneering work of Klima C.S and Bellugi, U (1966) indicate that the syntactic expression of negation in children's speech passes through three stages.

"Negatives in the early stage (period-!) do not occur in the necleus of the sentence nor there are auxiliary verbs. The element which signals negation is no or not and this element either preceedes or follows the rest of the uttenance.

2) No singing song

3) More ..... no.

These sentences consist largely of nouns and verbs without indications of tense and number. Inflections, prepositions, articles, adjectives, adverbs and auxiliary verbs rarely occur. At this stage, there is no clear evidence that the child even understands the negative embedded in the auxiliary of adult speech without atleast some reinforcement. In this stage, the child employs extremely limited means for negative sentences, but in subsequent periods, there may be an initial sentence adverb no. Which is not a sufficient or necessary part of sentence negation. Negation system at period-i may be represented as, [(no) - Nucleus] or [Nucleus - No] -(1)
not)

In period -2, the basic structure of a negative sentence may be represented as,

s --> NP - (Neg) - VP

where the formant negative has possible lexical representatives as can't, don't, not and occasionally no. The Aux verbs can be thought of as occuring in the speech of the children only when accompanied by a Neg. since it is a fact that the Aux. verbs do not occur in questions or declarative utterances at this stage.

Rule (1) can be related to the shape of sentences at this stage as follows :-

```
      | no        |        |        Canot |
Neg->4   |not|   V  Neg  -->  |  don't  |  -----  (2)
      |V            Neg|       |        |
```

Where the particular selection of the negative is determined by the main verb with don't and can't restricted to occurrences before instances of nonprogressive main verbs. The negative element is also found within the sentence, but not connected to an Aux. verb, as in 'He no bite you*.

In the period-3, the Aux. do and be appear in declarative sentences and questions as well as in negative sentences.

S ---> NP - Aux - VP
AUX -> T -V $^{\text{Aux - (Neg)}}$ -13

V^{Aux}—> | do | where be is restricted to
| can | predicate and progressive and
| be |
| will | is optional, can and do are
restricted to nonprogresaive main
verbs.

Transformations used at this stage are:—

1) Optional be deletion:-

HP - be -—-> NP - Ø

2) Do, deletion

do - v -->V"

These authors have not reported on the use of negative adjectives and it may be because they did not appear in the language of their three children (approximately 2½ years old). The authors have not mentioned the specific ages for their "periods" of acquisition of different aspects of negation. Menyuk (1969) in her study of 4—7 year old children found aspects of negation developing in stages similar to those of Klima et.al.

Bloom (1970) distinguished three aspects of negation 1) Nonexistence refers to the case for which the object referred to no longer exists. Eg:'Ailgone', 'No more',

2) Rejection, where the child refuses some aspect of the environment. Eg: 'No dirty soap' while refusing a worn piece of soap,

3) Denial, in which a child denies that something asserted (usually by the mother) is the case.

Bloom found that the three aspects emerged in children's speech in the order: Noneexistence, rejection and denial.

Quiglly, Mentanelli. and Wilbur (1974) studied negation in the language of deaf and hearing children with tests constructed to parallel, Klima et.al's stages of acquisition of negation. The youngest hearing subjects tested were 8 years old. It was found that the aspects of negation were completely under control by that age, with the errors accounted for unfamiliarity with the test format, or confusion about acceptability in speech v/s writing, than in actual understanding of the syntax of negation system. By the age of 10 years, hearing students were making virtually no errors on the tests.

Gurubasavegowda, K.S (1970) treats negative system in Kannada language as having two types of negative morphames free and bound forms.

Free forms are - 1) alla and illa.

2) be:da

"The free forms alla and illa do not show the distinction of person, number and gender. alla negates equation of two things and also is used only to negate non-verbal sentences whereas, illa negates existence."

The negative of the past forms is formed by adding illa to the infinite form of the verbal root, but the negative form as such does not contain any morpheme to indicate tense.

"The free form be:da negates imperative sentences and also can be used with infinitives to prohibit any action. When be:da is used to prohibit action, it is restricted to only 2nd person singular, whereas be:di, be:dri are used in plural form or in polite singular form.

There are tow other free forms - ba:radu and Ku:dadu which are used with infinitives of the verbs. Again, there is no distinction of person, number and gender when these forms are used."

Bound negative morphemes are - ade and -ada.
-ada, a relative participle with negative may be illustrated as, 4) mugisada kelasa (negative)

'work which is not finished'

5) mugisida kelasa (affirmative)

'work which is finished'

-ade functions as an adverbial participle with negative as in 6) avalu ka:fi kudiyade bandalu

'She came without drinking coffee'

Rangan, K (1972) treats negative as a main verb in the deep structure of south Dravidian Literary languages unlike Agesthialingam (1967) who treats negative as a suffix of the compound verb.

Sreedevi (1976) while studying the aspects of acquisition of Kannada by 2 + year old children found that negative transformations employing mere addition of ll, ill and be:d are acquired earlier than other types of negative morphemes like negative marker with modal auxiliaries. She observed that negative transformations are acquired earlier than the other types of transformations.

Vijayalakshmi (1979) also has studied aspects of language in Kannada in 1-5 year old children as a prerequisite for construction of a language test in Kannada. But her results are not yet published.

No other studies have been reported in the area of the acquisition of negative transformation by children in Kannada.

2.3.2 Development of Questions:

Thre presence of Q in the deep structure signals that the sentence generated is interrogative. There are two types

of interrogative sentences:

1) yes/no type and

2) wh - type

The transformational rule may change the order of constituents (as in English) or may introduce new morpheme (as in Kannada) to derive the yes/no interrogative sentences. In the second type, the element wh - is attached to different constituents depending on the constituents that are to be questioned.

1)	e:	+ NP	e:nu		'what'
2)	ya:	+ Vp	ya:ru		'who'
3)	ya:	+ Adj	Des	ya:vdu	'which'
4)	e	+	adv_p	elli	'where'
5)	he:	+	Adv_M	he:ge	'how'
6)	ya:	+ Conditional clause		ya:ke	'why'
7)	e	+	Adj_N	eatu	'how many'

The full set of standard English question form is highly complex and research shows that its more difficult aspects may not be completely mastered until children are about 9 years of age. (Chomsky, C, 1969).

In adult English, either the whole sentence may be questioned (a yes/no type of question) or one or more parts may be questioned (an interrogative word question). In

both English and Kannada, one mass type - tag question is found, which is actually a question *to test the truth-value of the statement*. (Rajaram, S. 1974).

One of the major studies on the development of the types of questions used by children was that of Smith (1933). She studied 3,095 questions found in language samples from 219 children between the ages of 1:6 and 6:0, She found that overall, questions constituted 13% of the children's total samples which compared closely with 7.14% reported earlier by Mc Carthy (1930). Regarding order of acquisition, smith found that what and where were the most frequent interrogatives for the young children with how, when and why gradually appearing in the older children's samples. WH-words constituted approximately 40% of the total questions used according to her reports. Marked differences in frequency of occurrence of WH — questions were found by her. What and where were the only frequent items with when questions being very infrequent. No information regarding the age at which these types of questions are acquired in available. she has just classified her children as belonging to younger and older group.

Order of acquisition of question types across 5 ages (1:6 to 6:0) as given by Smith is

yes-no	1) normal	2) where
	2) tag	3) how
wh -	1) what	4) why
		5) when
		6) others

Carpenter, C.L (1966) while studying the patterns of language used by 70 KG children in the age range of 4:11 to 5:10, found that out of 136 sentences sampled totally, 31 (23%) were questions. These sentences were classified according to how the question was formed.

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 Aux,
3) 3 questions (10%) by use of a question word,
4) 6 qestions (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 Aux., with the reversal of the subject and Aux.,
6) 25 questions (81%) required a reply in either the noun-verb or noun—verb - noun statement pattern,
7) 6 questions (19%) required a reply in either the noun-verb-adjective or noun - linking verb - noun statement pattern.

This kind of analysis throws light on the frequently used type by normal children. The information may be used in planning therapy programs for deviant children.

Klima E.S and Bellugi,U (1966) give rules for questions in adult English and also in children's speech.

Rules for adult English:

S — — > Q - WH - NP -Aux - Vp

NP --> | wh + Indet (provided that 0, but not Q-WH | introduces S)

VP -->[V (NP)]
Be
have

Transformations::

1) Replacement of 'do'

T - do - (Neg) { M } —-> T { M }
have have (Neg) Ø
Be Be

2) Interrogative Preposing (optional) :-

0 - x^1 - WH + indet - X^2 --> 0 - WH + indet - x1 - x2

3) Interrogative inversion:-

0 - WH (+indet) - NP - Aux, - X —-> 0 - WH (+ indet) -Aux, - NP - X

4) 'Do' deletion:-

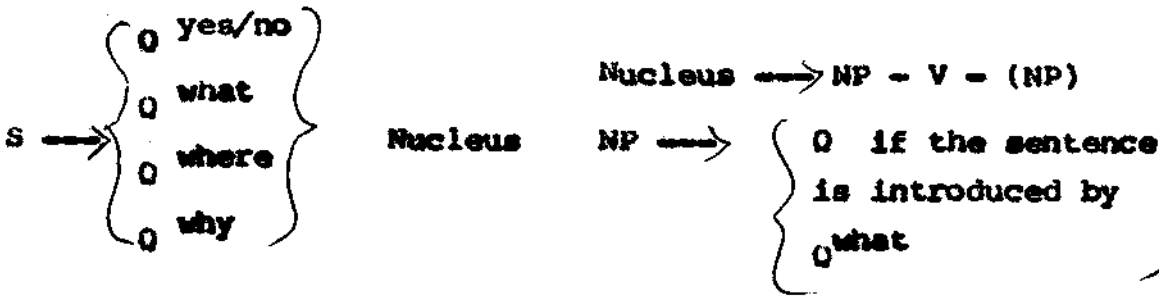
T - do - V --> T - Ø - V

Rules for questions in children's speech:-

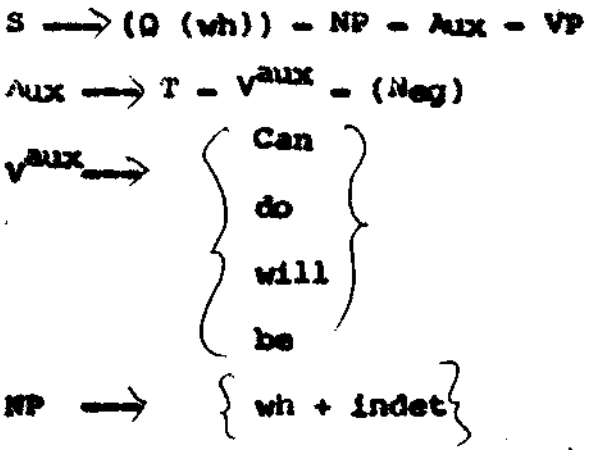
Period - 1

S -—> Q yes/no Nucleus
S --> $Q^{what\_}$ NP - (doing)
S --> $Q^{where\_}$ NP - (go)

Period - 2



Period - 3



Transformations:

1) Interrogative word preposing:

$0 - X^1 - WH + indet - X^2 \text{ ---> } Q - WH + indet - X^1 - X^2$

2) Interrogative inversion (Characterizing only yes/no Questions)

Q - WR - NP - Aux - X —-> Q - WH - Aux - NP - X

3) 'Do' deletion:

do - V --> V

Comparison of rules used by adults and children especially with period - 3 indicates that children are still

in the process of acquisition of adult form. Agreement of tense and number is not presentin children's questions and the illuatrations given by them indicate that the questions are in the simpler form and the whole system is far from complete.

Brown (1968) studied the development of MH - questions in children's speech. He noted that the underlying structure ia not strongly suggested by the surface form of w^H - questions. He suggested that the recurrent discourse patterns in adult's speech that are rich in structural information may constitute the basis for a learning process. An integral aspect of this development according to Brown, is the active use by parents of probes, prompts, and initative expansions.

Manyuk's (1969) findings are in close agreement with those of Khina et.al., (1966). She found that the transformational rules which disturb the order of constituents are not applied in the earliest kind of question. According to Menyuk, "conjunctions of question element to a sentence with no operations on the underlying sentence appears next." "Until the Aux/Modal node of the categorial component of the base structure of the grammar is acquired by the child, completely well formed structures can not be derived and the

transformational rules that have been described for the generation of negative and question sentences can not be applied, when one observes independent use of Aux/modal, one also observes completely well formed questions."

Ervin-Tripp's (1970) study was a major break through in understanding how children comprehend questions. She considered both the order of development in discourse agreement and the nature of the answers children made before agreement was similar to the adult form. she observed the response to questions in two separate groups of children. In the first group, five children were observed for over a year beginning around the age of 2 years and language samples were collected. The 2nd group was consisted of 24 children from 2:6 - 3:9 and the study was specifically designed to study question comprehension.

From the first group, she found that yes-no, what and where questions were the first to be understood which compared well with Smith's (1933) results. The 2nd group's data revealed the following order of comprehension in the later age range

1) Why
2) Who - subject
3) how where from

4) When who - object

The results were, however, not clear with who-subject and who-object and the order shown was true only for the children around 3:9.

The kinds of errors the children made revealed basic strategies in the processing of questions. If a child had not yet acquired the meaning of a particular wH-Q-word, he/she would process as if it were one that was known. For Eg:- a why - question was interpreted as what by giving a nominal answer. "The selection of one acquired WH-word over another appered to depend on the verb and the child's cognitive development." This statement was illustrated by Ervin-Tripp with error responses of children. Before 3:0, a when question with transitive verb was answered as if it was a what question, For a when question with intransitive verb, where meaning was attached. After 3:0, causal responses appeared showing that children were processing when as why.

But Ervin-Tripp has not studied children beyond 3:9 So, further researchers like Tyack, D and Ingram, D (1977) have continued on the same lines with slight modifications in the experimental design to establish a hierarchy in question comprehension.

Tyack, D and Ingran, D (1977) examined children's production and comprehension of questions with the aim of discovering possible patterns in question acquisition.

For the production study, questions were collected from 22 children aged 2:0 - 3,11. The data showed a high frequency of yes/no, what and where questions by the age of 2:0. why and how questions were infrequent but they increased with age. who and when questions were rarely asked by children in this age group. From the frequency data, a rough chronological order of acquisition was inferred;

yes - no 1) normal
2) tag.

WH- 1) what
2) where
3) why
4) how
5) who
$) when
7) others

In the comprehension study, 100 children were tested, in the age range 3:0 - 5:5. The test controlled syntax and vocabulary and varied specific WH-questions words. The frequency of correct answers increased with age of the

children.

Comprehension order:

why and where showed clear advantage over when and how. who - subject was easier than who - subject and what - object was easier than what - subject. This result supports Ervin-Tripp's hypothesis that who through its animacy feature is associated with the subject position whereas inanimate what is more closely identified with the object.

Order of correct responses:

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
12) what - subject

This order differs from Ervin-Tripp's in that when was easier than how, the reverse of her finding. Except for how, the intransitive tended to lead to better comprehension than transitive verb.

Summary of the order of development

of questions in terms of production)

Investigators	Age Group	Order of development
1) Smith (1933)	1:6 to 6:0	yes/no 1) normal 2) tag WH 1) what 2) where 3) how 4) why 5) when 6) others
2) Tyack, D and Ingram, D (1977)	2:0 to 3:11	yes/no 1) normal 2) tag wh 1) what 2) where 3) why 4) how 5) who 6) when 7) others

Megrath C.O and Kunge, L.H (1973) elicited tag questions from normal children ranging in age from 5-11 years. Their errors in generating tag questions established that there is a definite hierarchy of difficulty involved in the acquisition of the four linguistic operations which can account for tag question formation. These operations in the order of increasing complexity are:

1) inversion of the pronoun and the auxiliary verb,
2) pronoun selection,
3) aux. verb selection, and
4) addition or deletion of negation.

This hierarchy remains constant from 5-11 years of age. They conclude that younger children tend to abstract alternate phrase structure rules which are less complex (relative to the number of operations) than the rules which can account for spontaneously generated tag questions.

Quigley, Wilbur and Mantanelli (1975) reported that the hearing children they tested demonstrated virtually 100% correct responses on tests involving the understanding of yes-no, WH- and tag questions, and subject - Aux inversion, by the age of 10 years.

Sreedevi (1976) while studying the aspects of acquisition of language by 2+ year old children observed that

yes/no type and a few wh-type (elli, ya:ke, ya:ru) were present in the spontaneous speech sample of 4 children whose native language was Kannada.

50 children in the age range 3:0-5:6 were asked WH-questions following videotaped sequence in Cairns, H.S and Hsu, J.R (1978) study. The differential difficulty of various forms of who-questions is believed to support a parallel model of information retrieval and processing during discourse. The differential difficulty of why and when questions are, however, attributed to a necessary progression in the ability to encode the relevant concepts linguistically. Responses to how questions are argued to be difficult because they involve a number of unrelated skills.

The foregoing studies indicate that there is developmental hierarchy in learning syntax of questions sentences. Majority of the studies indicate that yes/no and wh-questions are acquired completely by 6 years. But the tag questions, because of its complex nature take time for development tag questions are not at all completely developed by 6 years. The development may continue upto 11 years of age to resemble the adult form. So, syntactic development of questions is stretched over a long period in children's language acquisition process.

2.3.3 Development of co-ordinators:

Co-ordination conjoins 'like' structures which have same privilege of occurrence in their underlying sentences. The semantic relation between the conjoined members or the conjuncts is of combinatory value.

Conjoining is a process by which two or more underlying strings are joined together, without domination, to make a complex sentence or part of a complex sentence, conjunction is one of the devices which ensure that there is no longest sentence in a natural language (Fowler, R 1971).

Conjunctions can occur either in between NP's or Vp's In NP co-ordination, the co-ordinating members occupy the same level of structure i.e., subject in the underlying sentences. In Kannada, verbal participle constructions are also co-ordinations of VP's. However, they vary in terms of their syntactic forms.

NP co-ordinators in Kannada are

a) both u: and mattu occuring together
b) only mattu occuring in a sentence
c) only u: occuring in a sentence
d) only a pause occuring where the conjunctive particle is not overtly present.

Other co-ordinators in Kannada are - athava, a:dare, o:, ildidre.

Studies are scarce regarding the development of co-ordinators because they are considered as function words rather than content ones. A study by Katz and Brent (1968) provided some information about the comprehension and production of connectives because, then, therefore, but, although and and. Their data are based upon a corpus of spontaneous speech. The subjects were 1st and 6th grade children and a group of college students. Some of the data clearly suggested that the meaning of because, then and therefore changes between lst and 6th grade. While the first grader may use these words in his spontaneous speech, it appeared that the temporal relations of because are better understood than the casual ones, and the younger children did not seem to have more than a sequential, as apposed to causal, meaning for because. All the 3 words (because, then and therefore) were used as if they ware marked semantically as than, with no causal relations implied. In addition, when the connectives like but and although were used, children in the first grade showed little evidence of comprehending such constructions and the 6th graders, while better in the identification of sentences correctly using the words, showed little ability to account for their choice. Finally, 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 affect events. These results reflect a general cognitive developmental awareness of cause and effect by the older children and, at a somewhat more abstract level, may reflect the same kind of perceptual linguistic interrelation.

In an extensive study, Menyuk (1969) reported that the technique of conjuction had been well accomplished for most children by 3 years of age. Nursery children were using (42% of the total group) correctly all aspects of conjuction. 81% of grade-1 students were using correct conjuctions, although some errors in tense sequencing were still made by 35% of them. Conjoining with and was produced by all members of the nursery group.

Bloom (1970) reported that the earliest forms of conjunction seem to occur merely by juxtaposing the words together around 2 years. This seems to be the primal base upon which conjunction is built.

Nelmark and Slotmick (1970) studied connectives and and or. Children from 3rd to 9th grader and college students were selected and experiment was specifically designed to study and end or. Only college students achieved success

on majority of the items. Children in grade 9 were better compared to 3rd grade children. Analysis of the errors revealed that most of the children interpreted or as and.

Wilbur, Quigley and Mentanelli (1975) found that bearing subjects had all of the tested aspects of the con-joining process well under control by the age 7-8. Almost no errors ware made in deleting constituents: sentences containing incorrect deletions ware rejected about 90% of the time and no deletion errors were found in a sample of written compositions elicited by a picture sequence stimules. Tense sequencing in conjoined sentences was also well under control by age 8.

Sreedevi (1976) reported that co-ordinate construc-tions were not present in the spontaneous speech sample of 2 + year old children whose native language was Kannada.

The above studies on the development of conjuctions indicate that the acquisition process may go well beyond 5 years. The appearance itself is quite late compared to other kinds of transformations. The acquisition of complex related skills to construct co-ordinated sentences goes alsong with maturation of children.

2.3.4 Development of pronominalization:

The process of substituing a pronoun for an NP in sentences where an antecedent NP is a co—referrential of the

NP is pronominalization.

Eg: of pronominalized sentence.

7) 'The builder said that he would do the job.'

This sentence is ambiguous in the surface structure because he may refer either to builder or it may refer to someother person by means of the pronoun 'he'. So, acquisition of pronominalization required a complex sill on the part of the child.

It is necessary to make a distinction between pro-nominalization within sentences and pronominailzation across sentences. Pronominalizatlon across sentences can be illustrated in the following example:

8) 'Bill is my friend. He lost the money'

Where the antecedent 'he' occurs in a previous sentence. Pronominalization across sentences (also called an textual pronominalization) always applies in a forward direction; that is, the pronoun always follows its antecedent usually, once the antecedent has appeared, pronominalization in the following text can apply an indefinite number of times, as long as ambiguity can be avoided.

9) 'Bill is my friend and Bill lost money' can be pronominalized as -

l0)'Bill is my friend and he lost money' since in sentence (9) there are two coreferent nouns, if no restrictions were placed on pronominalization, either one of the two could be pronominalized. Forward, or left-to—right, pronominalization results in (10), backward, or right-to-left pronominalization gives (11) 'He is my friend and Bill lost money.' But sentence (11) is ambiguous. Here 'Me' refers to someother person and not Bill and ao this type of backward pronominalization can not be applied to such sentences.

But for some structural types, backward pronominalization is applicable, as in

(12) The man who loved her murdered Mary

(13) The man who loved Mary murdered her

Sentence (12) is ambiguous because 'her' might refer to one other than Mary. So in such cases backward pronominalization as in (13) seems to be well applied.

Thus, forward pronominalization can always apply, but backward pronominalization is much more restricted, and the conditions for its application depend on embedding.

Regarding the development of pronominalization Loban (1963) found that difficulties with pronominal forms persists into the junior high school level. He found a

marked increase in errors of pronominalization at the 7th grade which did not decrease to the performance level of the 6th graders until after 9 years. This review presents an unusually complex picture in which the child seems to grasp pronominal constructions at one age only to lose them and reacquire them, with final errorless performance coming late in language acquisition. The child acquires the concept of the pronoun as a noun substitute rather early, but the erroneous linguistic structures that occur at later stages result either from attempts to express more complex cognitive relations in which the pronoun and its noun substitute become confused in the form of linguistic expression, or from the development of new cognitive structures to which pronominalization is differently related.

Chai (1967) in a controlled experimental procedure reported that difficulty in comprehending pronominal referents in compound sentences extends into the junior high school range.

Chomsky, C (1969) reports that out of the four syntactic aspects that she tested for comprehension, pronominalized sentences could be comprehended by children fairly uniformly at about age 5:6.

It seems that development of structures involving pronominalization are far from complete by five years of age, as evidenced in both production and comprehension capacities of Children well beyond that age.

The results of the studies of syntactic development point to a "close interrelation between general cognitive development and the comprehension and production of syntactic forms* (Slobin, 1971). Particular linguistic forms are not comprehended nor produced until the underlying cognitive aspects are developed. Once such cognitive development has occured, the child will look to the language for means to express the new cognitive structures which ability, of course does not seem to be acquired completely by five years of age.

3. Some aspects of syntactic development in deviant children:

Menyuk'a (1964) work represents the first systematic attempt to compare normal and deviant children using descriptive techniques based on Chomsky's early transformation Grammar. She matched the two groups of normal and linguistically deviant children in terms of age, 10, SE status. She found that the utterances of 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 (1966) while designing a method for comparing syntactic development of normal and linguistically deviant children sampled a group of normal 3 year old and deviant 4½ year old children. On comparison of samples, she found that there were qualitative differences between the two groups.

While comparing aspects of syntax of preschool fluent and disfluent children. Muma, J.R. (1971) found that disfluent children make use of simple transformations in their speech compared to a matched group of fluent children.

All the above three studies tress on the presence of qualitative differences between normal and deviant children's use of syntax.

Morehead, D.M. and Ingram, D (1973) compared the development of base syntax in normal and deviant children. 15 children in each group were sampled. Mean number of morphemea/utterance was ued to determine linguistic level. Five aspects of syntax were used for comparison -

1) phrase structure rules

2) transformations

3) construction (or sentence) types

4) inflectional mosphology, and

5) minor lxical categories.

They found few significant differences for more general aspects of syntax such as 1), 2), 4) and 5) but significant difference in terms of construction types. Moreover, significant differences were also found in the onset and acquisition time necessary for learning base syntax.

Q Quigley, Mantanell, and Wilbur (1975) compared aspects of acquisition of syntax by normal and deaf children. Their extensive study, indicated that the process of acquisition and the order of acquisition of aspects of syntax are quite similar to that of hearing children but the rate of development is very much retarded in case of deaf children. So, significant differences were found on the onset of acquisition and rate of development rather than in terms of quality.

Vogel Susan A (1975) studied the syntactic abilities in oral language of to normal and 20 dyslexic 2nd graders. Group membership was determined on the basis of performance on two silent reading comprehension tests. 9 measures were used to assess syntactic abilites out of which none required reading or writing results indicated that the dyslexies were different from the normal children at high level of

significance on 7 of the 9 measures, all favoring the normals. The dyslexic children were significantly deficient in oral syntax.

The review on syntactic development in deviant children point to the importance of thorough understanding of syntax of normal children. No studies have been done in any of the Indian languages, especially in Kannada, regarding the syntactic aspects of normal children. The present study is aimed at contributing its mite to a better understanding of normal children which will help speech pathologists to understand language processes of deviant children.

Chapter 3

METHODOLOGY

To describe some aspects of syntactic patterns of 5-6 year old children, four normal children - two boys and two girls - were studied.

3.1 Selection of children:

The children were selected on the bases of the following three criteria:

1) The children should be native speakers of Kannada. They should not be exposed to any other language at home.

This criterion was selected to control the effect of biiingualism on the acquisition of language.

2) The children should be from Brahmin families. This criterion was selected to control the affect of dialect variation on the acquisition of language.

3) The children should be from "middle-class" families. (In this study, arbitrarily, "middle-class" family is defined as "parents whose educational level is above L.-S and whose income lies, between 500-1500 rupees per month.) Thus, the effect of socio-economic status on the acquisition of language, if present, would be kept constant for all the four children.

Table showing the details of children

Names Details	Jyothi	Bhaskar	Chandrika	Anil
1) Caste	Brahamin (Smartha)	Brahmin (Smartha)	Brahmin (Madhva)	Brahmin (Madhva)
2) Native language	Kannada	Kannada	Kannada	Kannada
3) S.E.Status	'Middle Class'	'Middle Class''	'Middle Class'	'Middle Class'

The children selected on the basis of the above criteria could be further categorized in the following manner!-

Table showing the categorization of children

Names Details	Jyothi	Bhaskar	Chandrika	Anil
1) order-of-hirth	first	first	third	first
2) whether mother employed or not	No	yes (teacher)	No	No
3) individual/ joint family	indi.	indi.	indi. (along with grand mother)	joint

Age of the children under study

Name	Date of birth	Exact age at the time of data collection
		Year : Month : Days*
1) Jyothi	1.5.1973	5 : 11 : 20
2) Bhaskar	4.11.1973	5 : 4 : 20
3) Chandrika	15.5.1974	4 : 11 : 20
4) Anil	19.5.1974	4 : 11 : 16

Days counted by taking the mean date of the period of data collection as April 25, 1979.

To make sure that the children were normal, they were screened for hearing and intelligence.

Hearing screening was done informally and also by considering history of ear dischanrge, ear ache, or heredi-tary deafness, if any, in the family.

Normal intelligence was presumed if the mile-stones of development such as - the age of gaining control, sitting alone, standing without support, walking without support, onset of first word - as informed by parents were normal.

3.2 Procedure:-

The speech staples of the children were collected in their home setting, always surrounded by the family members.

The speech sample was recorded using a portable philips cassette tape recorder.

Speech sample of each child was recorded for three consecutive days for about a period of one hour. The period of the day during which the child would be very active (as per parents feeling) was selected for recording. The children were given tangible reinforcers like painting box, ball, stickers, etc., after each session to keep up their motivation for the subsequent recordings,

3.3 Techniques used for collecting speech sample:-

Spontaneous speech and story narration techniques were the ones mainly resorted to. However, some clues by using cloze method,showing pictures, asking qestions had to be given in between to elicit the response.

While collecting speech sample, the investigator had kept in mind the four aspects of syntax that were under study. If she thought that something more could be probed regarding certain aspects, elicitation technique was used.

In order to collect sample for interrogative aspect, mothers of the children were asked to write down the questions asked by the children everyday for about a period of 15 days. Only one of the mothers responded well for the request. Others did not respond in the beginning. When forced to write

down the questions, an average of 10-15 questions were written and given to the investigator. So, representative data regarding interrogation could not be obtained for all children.

The obtained speech samples were transcribed using broad phonetic transcription, on the same day. The transcription also included some of the semantic clues so that further analysis would become easier.

3.4 Analysis of data:

The method of transformational generative grammars developed by Chomsky and his followers was followed to analyse the data.

The data obtained were analyzed in four ways:-

1) The speech samples of all the four children were combined. The whole data was classified into different sentence types — declarative, negative, interrogative and imperative. Also, two additional types of sentences co-ordinated and pronominalized — were analyzed. Lescriptions of each type of sentences are given in the next chapter.

2) Developmental order among the four aspects of syntax chosen, in the age ranges 5:0, 5:5 and 6:0 are presented.

3) The deviant utterances of each child are described and discussed separately.

4) Utterances of children are compared bo adult form - in terms of production of the four aspects of syntax under study.

Statistical analysis was not undertaken as it is a descriptive study. Results and discussion part of the study is presented in the next chapter.

— :o:—

Chapter 4

Results and Discussion

Four children - two boys and two girls in the age range 5-6 years ware studied. Samples of spontaneous speech were collected from all the four children. The samples were analyzed by classifying the whole data (i.e., speech samples of all the four children combined) into different types of sentences – declarative, negative, interrogative, imperative, and in addition, co-ordinated and pronominalized types - deviant sentences and also with regard to the acquisition of the four aspects of syntax - negation, interrogation, conjunction and pronominalization.

Results of the study are presented under the following four categories-

4.1 Structure of sentences

4.2 Developmental order among the four aspects

4.3 Characteristics of deviant utterances and

4.4. Comparison to adult forms

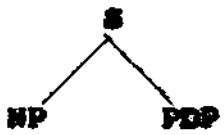
4.1 structure of sentences :-

Structure of sentences with regard to the different types of sentences used by children are presented here.

A sentence is a set of words occuring in a linear sequence but hierarchically structured. It is composed of two major constituents namely NP (Noun Phrase) and POP (Predicate Phrase). It may be shown as,

S —-> NP + PSP

In a branching diagram, a declarative sentence may be represented as



1) Eg:- hud gi pait ha o:dtida:l e

'girl' 'lesson' 'read' - PNG

'Girl is reading lesson'

In the above sentence, hud ai is NP and pa:tha o:dtida:la is a PLP.

The phrase structure rules that derive various types of sentences may be represented as follows:

Rule - I S — — > ({Imp/Q}) + (Meg) + NP + POP

Rule - I is an abbreviation of the following rules to derive different sentence types:—

A) s —> NP + PDP (declarative sentence)

B) s —-> Neg + NP + PDP (negative sentence)

C) S —-> Q + NP + PDP (Interrogative sentence)

D) S ——> Imp + NP + PDP (Imperative sentence)

Bach sentence type is illustrated from the utterances of the four children in the following pages.

Rule A - Declarative sentence

The various constituents of NP in the speech sample of the four children may be shown as:

$$NP \longrightarrow \begin{Bmatrix} (Det) + N \\ Pronoun \end{Bmatrix}$$

$$Det \longrightarrow (Demon) + (Gen)^{1} + (Adj)$$

$$Adj \longrightarrow (Adj_{N}) + (Adj_{Dem})$$

The constituentsof NP are illustrated below (Illustrations are taken from the speech sample),

a) Demon + N

2) i: hud gatnu: malgida:ne

'this' 'boy' 'also' 'sleep' - PNG

'Thisboy is also sleeping'

b) Gen + N

3) na:ge:s ma:ma barta:re

'our' *Nagesh mama' 'come' - PNG

'Our Nagash mama comes'

1 Generally, genitive is derived from embedded sentences. But here, it is derived from phrase structure rules. As this type of derivation does not have any serious consequences, it will be retained as such in the present study.

C) AdjN + N

4) ond cycle a:va:ga bantu

'one' 'cycle' 'then' 'came'

'One cycle then came

d) Adj_{Des} + N

5) dappa ball hi:g-hi:g kun i:ta: ittu

'big' 'ball' 'like this' 'jump' - PNG

'Big ball was jumping like this'

e) Noun

6) ka:ge ni:r kudi:ta:ide

'crow' 'water' 'drink' - PNG

'Crow is drinking water'

f) Pronoun

7) avru kusti ma:dta: ida:re

'they' 'wrestle' 'do' - PNG

'They are wrestling'

In the speech sample obtained, combination of more than two NP constituents were not observed. This indicates the simplicity of NP in children's speech.

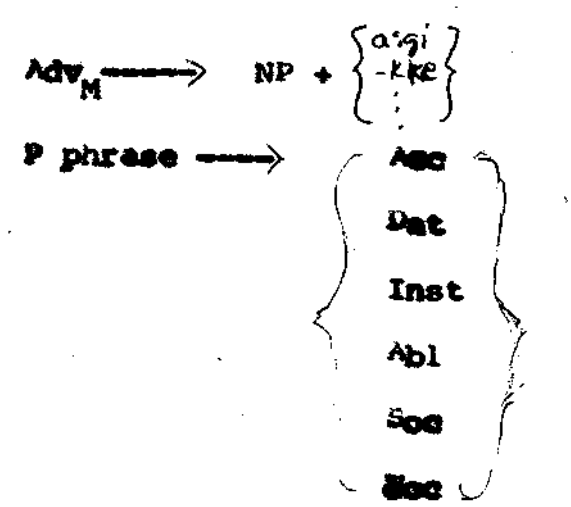
The constituents of PDP may be rewritten as:-

PDP —--> (Adv_T) + (AdV_p) + VP + Aux.

Adv_T---> NP

AdV_p ---> NP + {all}

VP ----> (Adv_M) + (P phrase) + NP + V



Acc --> NP + annu/na

Dat --> MP + ke/ge

Inst/Abl --> NP + inda/linda

loc --> MP + alli/li

Doc --> NP + jote / ku:de

The constituents of PDP are illustrated below from the obtained speech sampl:

a) vp + Aux

8) ha:d baratte

'song' 'comes

This utterance ia derived from the sentence

nanage ha*d baratte

"I know to sing'

where the child has deleted the object - NP nanage.

b) VP + isu + Aux

9) ad barasta:re

'that' 'makes to write' - PMS

This utterance is derived from the sentence

Teacher ad barasta:re

'teacher makes to write that'

but the child has omitted the subject - NP

c) Vp —-> NP+V+Aux

10) tinnista: ida:re, hulna

'eat' (causative) PNG 'grass'

'are feeding grass'

Again here, the subject - NP avru (they) has been omitted.

d) Vp —-> Pron + V + - isu

11) 'ad barasta:re

'makes to write that'

As mentioned above, subj - NP 'teacher is omitted.

a) P Phrase + VP + Aux

12) aval jote ho:gtitni

'with her' go - PNG

In the above utterance, again subj - NP na:nu (I) has been omitted which should agree with 'PNG'.

*) AdV_M, + VP + Aux

13) na:nu bari: kyal hadi:ti:ni

X beat only in hand'

9) AdV_p + VP + Aux

14) illi sku:lge o:d ta:ida:re

'here, 'to school' 'run' - PNG

In this utterance, again subj - NP is omitted which whould have been hudugru (boys)(according to the context) to agree with PNG.

h) AdV_T + VP + Aux

15) a:va:ga ond cycle bantu

'then' one cycle came'

i) AdV_T + AdV_P + VP + Aux

VP —->, AdV_M + NP + V

16) a:va:ga a:me first o:datte, nari hatra

'then, 'tortoise' runs first towards foxs

The above illustrations indicate that the structure of PDP used by children is not as simple as that of NP. Most of the combinations of PDP constituents were observed. This indicates the complexity of PDP in children's speech.

While analyzing the speech samples, the following additional observations were made regarding NP and PDP in children's sentence structure.

NP

a) Most often, the subject - NP gets deleted.

17) Eg: aval jote ho:gti:ni

'har' 'with' 'go' - PNC

Here, subj-NP na:nu (I) la deleted, which agrees with PNG. The utterance should have been

na:nu aval jote ho:gti:ni

'I' go with her'

b) Locative phrase is shifted to front position as in:-

18) Eg: bi:ru:li tumba ball ide

'in cupboard' 'more' 'ball' - PNG

'There are many balls in cupboard'

c) When subj-NP is a pronoun, it may be shifted to end of s

19) eis-bais ma:dbidta:l e, ivl u

'eis-bais' 'do' - PNG, 'she'

'She does "eis-bais"

d) Object-NP may be delted

20) nam na:ges ma:mange

'to our' Nagesh mama'

This sentence may be said to have been derived from;

nam Na:ge:s ma:mange shirt kot t e

Where obj-NP (shirt) and also main verb (kot t e) ('gave') are deleted.

e) Obj - NP may be shifted to end of 'S'

21) tinnista: ida:re , hulna

'are feeding grass'

PDP

a) Main verb may be deleted

22) nam na:ge:s ma:mange

'to our Na:gesh mama'

As mentioned above, this sentence may be said to have been derived from:

nam na:ge:s matmang kot t e

Here, kot t e - 'gave', the main verb is deleted. But, deletion of the main verb usually depends on the previous sentence uttered by the child or the question asked by others.

Eg: ya'rig kot t e? (investigator)

'to whom you gave'?

nam na:ge:s ma:mange (child)

'to our na:gesh mama'

b} P Phrase may be deleted

23) aval jote ho:ti:ni

'with her' '90' - PNG

The above sentence is derived from:

aval jote sku:lg ho:gti:ni

'with her, I go to school'

Where, the P Phrase sku:lge (to school) is deleted, again, depending on the context of speech, as in main verb deletion.

a) $\underline{Adv_T}$ is usually shifted to beginning of 's'

24) a:va:ga ond cycle bantu

'Then one cycle came'

d) ADVp may be shifted to end of 's'

25) kallella etti ba:kka: ide, ol ge

'It is dropping stones inside'

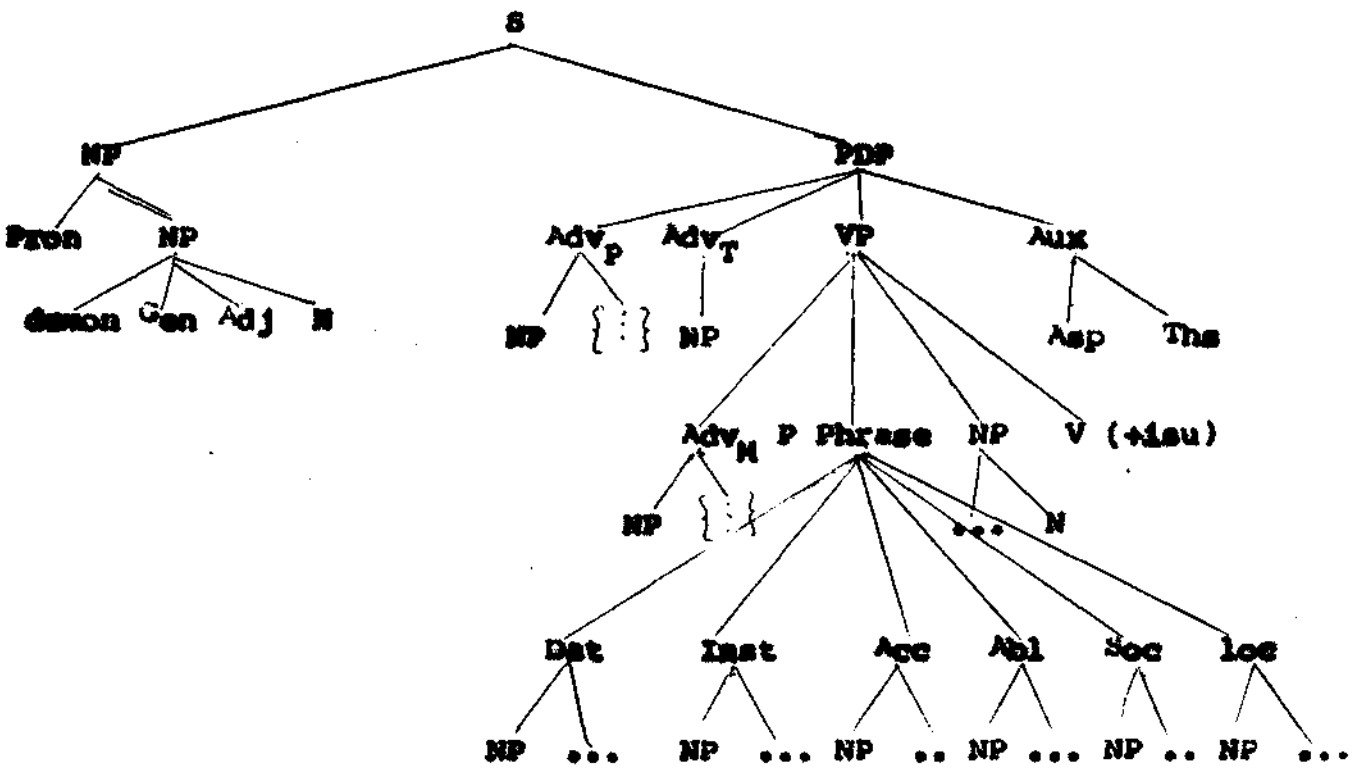
e) Loc. may be shifted to end of 's'

26) kallella etti ha:kta: ide, hm:yi:li

'It is dropping stones in the jar'

The shifting of certain conatituents of either NP or PDP is not only restricted to children's speech but also seen in adults. Generally, the loc. and time adverbs may be shifted either to front position or final position. This shifting is not considered as a deviant form of sentence structure but it is a stylistic variant. Also, as there is no strict word order in Kannada, the rules which shift certain constituents are optional.

Declarative sentence structure of children's speech may be represented by the following branching diagram:

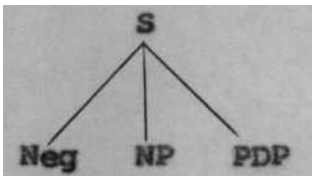


4.1.2 Negative sentence:

Rule - B S ---> Neg + NP + PDP

The structure of negative sentence used by the four children is similar to that of declarative sentence except for the addition of a negative morpheme between verb and Aux. in the POP with corresponding changes in the verb.

In the deep structure, negative sentence is represented as:



The negative morphemes used by the four children were illa, alla and be:da verbally, but most of the times, non-verbal response was given for negating. (Nonverbal response consisted of nodding head horizontally or saying 'mmm' (no)).

To derive the negative sentence, the verb is changed into infinitive form and the negative morpheme is added to the verb.

27) Eg; e:nu: a:t a a:d illa

'emphatic' 'play' 'play-past - Neg'

NP NP VP

'Did not play anything'

In the above sentence, the verb a:du is changed into a:d al

(infinitive) and the negative morpheme illa is added.

Neg. may be realized either as a free form or as a bound form i.e., suffix. In sentences such as the following, negative is realized as a suffix.

28) nang ad be:d a

'tome' 'that' 'don't want'

'I don't want that'

Structure of such sentences may be represented as,

S . NP + V + Meg

29) Classnalli ma:ta:d ba:rdu

'in class' 'should not talk'

'Should not talk in the class'

ba:radu is a modal negative suffix.

30) ammange baiba:rdu

'to mother' 'should not scold'

'should not scold mother'

Bound negative with verbal participle (- ade)

31) avl u ma:d de iro:d gottilla

'she' 'which is not done' 'don't know'

'I don't know the thing which is not done by her'

'Sentences such as 29, 30 and 31 are very few and also they were not spontaneously uttered,clues had to be given to elicit them.

The emphatic markers like e:nu, va:ru. va:vdu:, ellu:, ya:rigu: which can go only with negatives were also seen in these children's speech.

32) ya:ru illa

'emphatic' 'Neg'

NP

This is derived from;

hod iyo: teacher ya:ru: illa

'There is no teacher who beats'

33) va:vdu illa

It is derived from,

'kud i:de irod ya:vdu: illa'

'nothing is there which is not to be drunk '

34) e:nu: illa

'nothing is there'

35) adakke ellu: algalla

'It did not get anywhere'

36) 'ya:rigu: gottilla'

'nobody knows'

The structure of negative sentences cf these children indicate that it is similar to adult form. But, the frequency of occurrence of the bound forms ba:radu, -ade are very few. Negative suffix ku:d adu was not at all found in the speech sample (Any how, the occurrence of ku:d adu in

adult speech is also quite rare). Also, relative participle with negative -ada was not found in children's speech, other negative markers illa, alla and be:da and the emphatic markers for negation are used in a similar manner like adults.

4.1.3 Interrogative sentence:

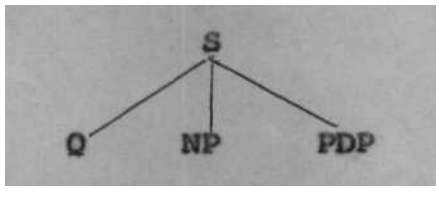
Rule-C S —-> 0 + NP + PDP

In the speech sample obtained, simple declarative sentence is converted to an interrogative sentence either:-

1) by adding a: marker to NP or UP (yes/no type question) or,

3) by replacing the interrogative pronouns like e:nu, elli, ya:ru, ya:vdu, he:ge, ya:va:ga, ya:ke, estu to the corresponding constituents of a declarative sentence (wh-type questions).

The deep structure of the interrogative sentence is represented as:



1) Illustrative sentences for yes/no type questions from the speech sample of children

1) Addition of a: question marker

37) amma, na:n pant ha:kkond re udda ka:n ti:na:?
'mother' I' 'pant' 'if wear' 'tal' 'look' a:?
'Mother, do I look tall if I wear pants?'

a: question marker changes to e: and o: depending on whether it is a female or male addressee

38) ade:no: na:yi tara:ne ittalle:?
'something' 'gog' 'like' past - e: ?
'something was like dog?' (female addressee)

39) ni:n tandkodti:ye:no:?
'you' 'get' - PNG o:?
'Do you get it?' (male addressee)

2) Illustrations for wh - questions-

a) Subj-NP questioning:

40) id e:namma?
'this' 'what' 'mother'
'what is this mother?'

b) Demon, or Ad: questioning :-

41) ya:v gombe?
'which' 'doll'?
'which doll'?

c) Adv_p questioning :-

42) avar mane elli?
'their' 'house' 'where'
'where is their house'?

d) Obj - NP Questioning:-

43) nan ma:t record ma:d kond e:n ma:d ta: re?
'my' 'speech' 'record' 'do'- 'what' 'do' - PNG
'What do they do having my speech recorded?

e) AdV_T questioning:-

44) a) ya:vu:g ho:go:du? b) eat gant e:gamma ho:giddu?

'when''to 90'? 'what' 'time' 'mother' 'did go'?

'when to go'? 'at what time did we go mother?'

%) Adv_M questioning:-

45) telephone he:g ma:d ta:re?

'telephone' 'how' do'- PNG

'how do they make telephone'?

g) Conditional clause questioning:—

46) pa:ya ya:k to:d ta:re?

'foundation' 'why' 'dig' - PNG

'why foundation is put?

All the basic interrogative pronouns used by adults are also seen in children's speech. only, some of the question markers with case suffixes are seen in these children's speech, but not all the case suffixes used by adults.

47) elli: ho:giddi?

'where to' 'go' - PNG?

'where had you been'?

43) go:d e:na ya:vudrinda ma:d t:ra?

'wall' 'by which' 'do' - PNG

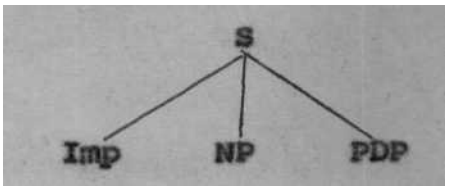
'By what material wall is built'?

Presence of tag questions was not noticed in children's speech one of the reasons could be due to inadequacy of the sample regarding interrogative aspect, or that acquisition of tag questions is yet to take place.

4.1.4 Imperative sentences-

Rule - D 3 —> Imp + NP + PDP

In the deep structure, imperative sentence is represented as—



The speech sample of children consisted only two imperative sentences.

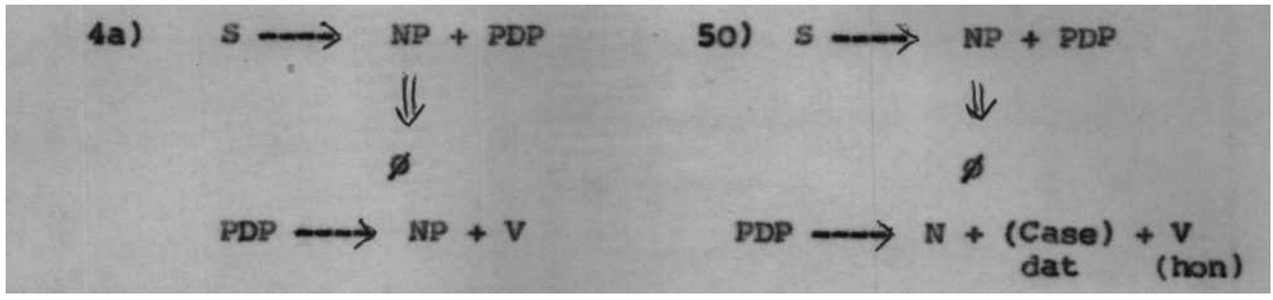
4 a) he:l amma

'tell mother'

SO) 'aval ug kod i

give her'

The above sentences have the following structure



No generalization will be made regarding imperative sentence structure due to lack of adequate data.

Transformations:

By applying transformational rules like addition, deletion, shifting and replacement to deep structures the surface structures of related sentences are generated.

Illustration:-

To derive negative sentence transformational operations like deletion, shifting and addition have to be applied.

51) avl u pa:t ha o:dtilla - Rule - B
'she is not reading lesson'

Sentence 5½ is derived by shifting the negative illa from the beginning of Rule-B to the end, deleting PNG, changing the root verb to infinitive form and adding negative morpheme illa to that infinitive form.

Transformational operation for deriving negative

sentence may be represented as:

s ——> Neg + NP + PDP (Rule-B)

To derive surface structure of negative sentence,

S -—-> Neg + NP + VP + Neg + Aux

|>_____>_____>_____|.

Interrogative sentence (wh-type) can be generated as follows:

52) avl u e:n o:d:tidal e?

'what is she reading'?

The question marker e:nu questions obj-NP in the above question.

The above illustration indicates that to generate surface structure of an interrogative sentence having P.S Rule - C, one has to carry out the transformational operations of replacement of the constituent to be questioned by appropriate question marker.

S -----> Q + NP + PDP (Rule-c)

The presence of 'Q' triggers the transformational operations of replacement of respective question markers for the constituent to be questiond. (in wh — type questions).

The transformational operation for yes/no questions is simply adding a marker to the Aux. instead of the

usual e: marker attached to the statement.

Eg:

53) ma:ma barta:re

mama comes'

54) 'mama barta:rǎ?

'Does mama come'?

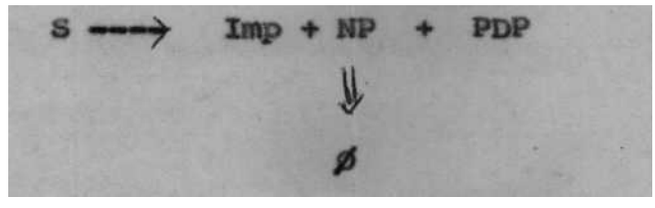
Derivation of surface structure of yes/no question may be represented as:

S —--> Q + NP + PDP (Rule-C)

On applying T-rules

S —---> NP + PDP + a: ?

Imprative sentences are generated by deletion of Subj-NP in a declarative sentence of second person, future tense sentences.



4.1.5 Coordination

Co-ordinated sentence is the one where two more sentences are connected together by means of conjunctions.

Conjuctions can occur either between two NP's or between two VPs.

NP conjunctions seen in children's speech:—

1) Mere pause between two NP'a acted as conjunction in some of the Sentence.

***Eg:

53) akka / doddappa / D.p/ C.p ida:re

'sister, uncle, D.P. C.P are there'

2) Only one child has used mattu as NP conjuction.

54) mola matta a:me eradu: running race o:dbe:ku

'Both rabbit and tortoise should run for a race'

3) a:me:le which ia a time adverb is used as NP conjunction.

55) na:nu, Sridhara a:me:le Kamala a:me:le Madhu

'me', 'sridhara' 'then' Mamala 'then' Madhu

a:ta a'd ta: idvu

were playing'

However, the children know that a:me:le is an adv_T, as can be illustrated by the following exmaple:-

56) ha:l Kud adbit u, sna:na ma:d ti:ni a:me:l

'milk' 'drink'-conj, 'bath' 'do'-PNG; then

sku:lg ho:gti:ni

'to school' go-PNG

drinking milk, taking bath, then, I go to school'

Above 3 types of NP conjunctions are not deviant from that of adults' speech. Pause ie used by adults, mattu, though not frequently used by adults, is used in variant from matte which is found in only one child and only once. a:me:le (which in English is and then'} is used as a conjunction of two NP'a both by adults and children though it is an adv_T. But, its frequency is much more in children than in adults. However, children have used a:me:le as an adv_T also in some of the sentences.

Some sentences were conjoined differently from that of an adult.

Eg:

57) ja:rguppe ittu . a:me:l simha ittu ....
'slide' 'be'-past conj. 'lion' 'be' - past
'slide was there and then lion was there.'

An adult would have conjoined as —

ja:rguppe matte simha ittu

or

ja:rguppenu, simha:nu ittu

53) ni:r pakka a:me ide . a:me:le, ni:r pakka
'water' 'beside' 'tortoise' be-PNG 'and then' 'water' 'beside
mola ide.
'rabbit' 'be'- PNG
'tortoise is there beside water and then rabbit is

there beside water'

An adult would have conjoined the above sentence as:

ni:r pakka a:me matte mola ive

or

ni:r pakka a:me:nu, mola:nu: ive

Examples 57 and 58 indicate that deletion rule is absent in the process of conjoining by children.

-u as NP conjunctions as seen in adult forms were not seen in children's speech. a:me:le and pause were the most frequent NP conjunction seen in children's speech.

VP conjunction in children's speech:-

VP conjunction used by children was -u, which is a verbal participle in Dravidian languages but used as a conjunction.

a) - u conjunction:-

59) i: mola mai murdu, ella: ma:d kond u, o:d ho:gatte

'This' 'rabbit' 'relaxing', 'doing everything','run'-

PNG

'This rabbit, after relaxing, doing everything ran away'

60) bussalle malkondu., bussaalle hol e:gho:gi

'in the bus' 'sleep' conj 'in the bus' 'river' 'go'

ana:na ma:d kond u, makha tol kond u, han ag:git kond u,

'bath' 'do' conj 'face' 'wash' 'putting 'bindi'

tale ba:ččkond u, tirga: ho:gti:vi

'combing hair' . 'again' 'go' - PNG

'sleeping in the bus itself, going to river in the bus itself, taking bath, washing face putting 'bindi', combing hair, again we go'.

b) Somwrimwa 'u' is deleted as shown in the following example:

61) ond gombe ma:dbit adak ji:va Kodta:l e
(ma:d bittu)

'one 'doll' 'do' conj. 'for that', 'life' 'give'-PNh

'making a doll, she gives life to that'

62) ci:la togond , nadkond ho:gta:ida:re

'bag' 'take'-conj 'walk'-conj, 'go' - PNG

'taking bag, by walk, they are going'

c) ildidre as a conjunction:-

One child has used it only once.

63) ond gida hidkonda . ildidre, makha - gikha

'one' 'plant' 'grasped' if not 'face'

eila: od kontidda conjn.

everything

'grasped one plant, if not, would have injured face, everything'

In summary VP conjunctions used by children were only -& and ildidre, a:dare and athva were not seen in any

child's speech sample being used as conjunction.

d) Some sentences which could be easily conjoined by an adult were not conjoined by children.

64) ka:ge marad me:l hattiratte; ku:tkond iratte;
'crow' 'tree''above' 'cllmb'PNG; 'sit' 'reflew'-PNG
tinta:iratte.
'eat'-PNG
'Crow had climbed tree; was sitting; was eating'.

In these sentences the subject is the 'crow' for all the 3 sentences. So, an adult would have conjoined the 3 sentences into one as:

'marad me:l hattku:tkond tinta:iratte*

We don't see the separate sentences as 64 in adult's speech because adults follow deletion rule while conjoining.

4.1.6 Pronominalization:

The process of substituting a pronoun for an NP in sentences where an antecedant NP is a coreferential of the NP is pronominalization.

Pronominalizatioa is both forward and backward in children's speech also.

In forward pronominalized sentences, 2 types are noticed.

1) 1st subject ia a noun and 2nd a pronoun.

2) Both the subjects are pronouns, (which is seen when pronominalization is taking place across sentences). In backward pronominalization, first subject is a pronoun and co-referential subject is a noun.

Illustrations

I Forward Pronominalization

Type I —— Noun with co—referential pronoun.

65) ond gombe ma:d bit adak ji:va . kodta:le ....
'one' 'doll' 'do'-conj 'for that' 'life' 'give-PNG
'preparing one doll, she gives life to that'

'gombe' is the subject of the sentence and adakke is a pronoun which refers to 'gombe' itself.

Only one sentence for forward pronominalization is available from the whole corpus.

Type II: Both the NP's are pronouns.

66) va:r illi'g band se:rta:ro, avarq he:lu ...
'tell me the one who comes here'

Here, ya:r and avarge refer to the same person.

67) ya:ru kad e:g ho:gta:ro, avre: out ...
'the one who goes last will be out'

ya:ru, and avre: again refer to the same person

63) be:revo:r e:na:dru če:st e ma:d ta:idre, avre:
hoduiskollo:du

'the ones who do mischief will be beaten;

berevo:r & avre refer to same boys but this sentence indicates that the child who uttered this sentence intends to say that, he is not the one who gets beatings but it is some other boys who do mischief and get beatings.

69) avaravar mane:g avravar ho:dru

'They went to their respective houses'

Backward pronominalization:

Pronoun is referred by a noun later is the sentence.

70) tanag be:ka:dast ni:r kud kond nari ho:ytu

'to self' 'required' 'water' 'drink'-feflex,'fox' 'go'-
amount PNG

'After drinking the required amount of water, the fox went'

Here, tanage refers to nari itself.

71) kalru ade:no pet t ige:l ha:kkond bandbit t ida:re,
cinna, bell i, ella.

'Robbers have taken something in a box, gold, silver etc.'

ade:no (indefinite NP) is referred later to be cinna, bell i after a little thought.

72) kivl:g id ha:kkondida:re, machine ...

'to ear, 'this they have put, machine'

id in thebeginning is later referred to a machine

73) ivnu ade:no, bread tintida:ne ...

'he is eating something, bread'

The pronominalization phenomenon, especially the backward pronominalization indicates that like adults, children do not get the correct word at once. They think for a while as to what word to use and later come out with the exact noun.

The number of pronominalized sentences ware very few (ranging from 1-3 sentences) in 3 children's speech and about 8 in one child. So, the frequency of occurrence is not the same in all the children.

4.2 Developmental order among the four syntactic aspects in the age range of 5:0, 5:5 and 6:0.

No clearcut differences are noticed among the four children in terms of their ability to use the four syntactic aspects under study. In fact, the two youngest children in the age group of 5 years (Chandrika ano Anil) seem to be better in terms of the use of syntax than the two older children in the age group 5:5 and 6:0 (Bhaskar and Jyothi respectively). One of the reasons for this could be that

they are brought up in a joint family situation and probably may get more language stimulation than the other two.

But vhn the deviant utterances of the four children are analyzed (as given under section 4.3), it is seen that causative suffix is properly used by the 6:0 year old child, and all the rest had difficulty in its correct uaage sometimes. Also the modal auxiliary usage is incorrect in case of a 5 year old boy, but all the other children could use them properly.

In general, the younger children had more deviant utterances than the older ones, excepting Chandrika (5:0 year old). The frequency of deviant utterances indicates the instability of children in their language and. points to the need for further acquisition.

Tables shoiwng the syntactic ability of children FOR THE FOUR ASPECTS

Name	Age	Negation			
		Free	Bound	Modal Compn.	Prodn.
1) Anil	5:0		-		-
2) Chandrika	5:0		-		-
3) Bhaskar	5:5		-		-
4) Jyothi	6:0		for both comprehension and production		-

Interrogation

Name	Age	Y/N	WH	Tag
i) Anil	5:0			-
2) Chandrika	5:0			-
3) Bhaskar	5:5			-
4) Jyothi	6:0			may be due to inadequate data about interrogative aspect.

Conjunction

Name	Age	NP a:me:le	Pause	Vp both long & short form of -u:
i) Anil	5:0			
2) Chandrika	5:0			
3) Bhaskar	5:5			
4) Jyothi	6 :0			

Other types of conjunctions not found in any of the children's speech sample.

Pronominalization

Name	Age	Backward	Forward
1) Anil	5.0		
2) Chandrika	5.0		-
3) Bhaakar	5.5		-
4) Jyothl	6:0		-

As only four children were taken for the study, and developmental order for only four syntactic aspects was evaluated, no clearcut differences in terms of development in the age range 5:0-5:5-6:0 waa noticed. The main reason for absence of differences in syntactic ability could be due to the fact that the children were selected in such a way that there may not be much difference among them (by following the criteria for selecting children as mentioned under section 3.1). A* all the children come from Brahmin middle-class families with Kannada as native language, it is assumed that they are brought up in a similar way and hence, their language ability would also be very much alike.

Also, it is a known fact that the acquisition of syntax is very rapid below 5 years. After 5 years, acquisition will be there, but not as rapid as that below 5 years

and the changes are very subtle. The age range taken here for comparison is in terms of months (average of 5½ months). So, in the present study, the developmental order of the four syntactic aspects among the four children in the age range 5:0-5:5-6:0 is not very well reflected.

4.3 Characteristics of deviant utterances of children:

Each child's deviant utterances are described separately.

Bhaskar, P.K:

a) Gender differentiation was not done by him in a few sentences though he gives evidence of different gender markers in other sentences. In other words, the use of gender marker is inconsistent.

Illustrations:

74) illi, hud ga e:no nakkond eddide

'here' 'boy' 'indet' '*mile'(pl) 'wake-past-N'

'here, boy has woken up, smiling'

75) illi hud ga hall kari:ta: ide.

'here, boy is milking'

76) illi hud gi o:dta:-o:dta: nagta:ide

'here, girl is smiling while running'

These sentences ware uttered while describing the pictures. So, it is possible that whan pictures are presented, the child changed human into non-human form. But, whan talking about his sister, he used sentences as:

77) Pammu ello: ho:gida:l e

'Pammu has gone somewhere'

78) Chandri idatl e

'Chandri is there'

which indicate that he has the concept of gender while addressing a humanbeing.

b) Causative suffix was added to a verb which seems to be incorrect semantically.

79) avru illi, Ganpathi ku:d iskond ello: ho:gista: ida:re

'they' 'here' 'Ganpathi' keep' causa reflex, indef.
go+caus-iPNG' Advp

'Here, keeping Ganpathi, they are going somwhere'

An adult form of the above sentence would be:

'Avru illi Gan pathi kutdiakond ello: ho:gta:idare

'Here, keeping Ganpathi, they are going somewhere'.

One can say that it is a wrong selection of causative verb.

80) a:ne at t iskond bandu ettisbisa:kbid atte

'elephant, running after him, picking, up, throws away'

Elephant itself picks up and throws him, but it does not make someone else to pick up. So, again wrong selection of causative verb.

c) He did not use a pronoun 'na:nu' when asked (whose photo is it Bhaskar?) instead he said 'Bhaskara' for na:nu.

By 5 years, it is expected that, a child would use a personal pronoun as na:nu. So, in this child, naming his photo, Instead of using a pronoun is considered as a deviant form.

d) 81) Pedd bra:hman a ye:lda

'fool man woke up'

The past tense marker is not correct. It should have been edda. It seems that he has generalized this form from words such as he:lda, ke:lda, etc.

e) 82) biddo:yta:l e

666

for biddho:gtale —— she will fall down'

Though the form is correct, such forms are not seen in a Brahmin dialect. A Brahmin would have said as:

biddho:gta:l e

This could be because he will be with the house-maid most of the times (because both of his parents are working) and could be the influence of her dialect on him.

f) 83) bha:ra ettara

'too tall'

Here, it is a peculiar misarticulation. The correct form of the above sentence would be:

'bha:la ettara

Usually, we do not see a r/l substitution. But in this case, the reverse is seen which can not be explained by any means.

g) The reflexive pronoun is not used, but a causative suffix is added to root verb in the following sentance which changes the whole meaning of the sentence.

84) illi, hud ga Ade:no injection kod ista: ide

'here' 'boy' 'something''injection' 'causing to give'-PNG

'hereboy is causing someone to give injection'

A correct form of the above sentence relevant to the context would be:

illi hud ga ade:no injection kod iakonta: ide

'here boy is taking injection.

The above sentences indicate the deviant forms but, they are not consistently used and are seen only in a few instances which indicate that the child is still in the process of acquisition.

II- Anil

a) Number: Plural marker is not added to auxilitary in one sentence.

85) i:swara pa:rvathi kaila:sadal ide

iswara paravathi are in kailasa

Instead of the plural marker idare he has used ide. This is the only instance where such a deviation is noticed.

b) use of causative suffix

66) sumne a:t a a:dista:idde

'simply I was causing them to play'

while uttering this sentence, he himself had played and come for recording. So, relevant to the context, the following sentence would have been appropriate:

sumne a:t a a:d ta:idde

'simply I was playing'

This indicates the wrong selection of causative verb.

c) Selection of accusative cause siffix

Acc. suffix is mixed with the noun and extra stress was added.

87) Brahman n a atte manli kardiru

'Brahmana was being called by in-law people

Correct form would be:

'Bra:hmananna atte manli kardidru

He has made the word short, may be for easier articulation purposes.

d) Tense:

83) na:nu gelde

'me to won'

Similar to Bhaskar, he has generalized the pest tease marker for qellu from he:l u, ke:l u. The correct past tense front for gellu is gedde (1st person). This sentence shows incorrect generalization.

e) Improper use of pronoun /modal verb/ reuse

89) ya:ra:dru geldru

Tense : Similar to 88, for geddru. he has used geldru. If it were ellnu:, then geldru (i.e geddru) would have bean alright. If pronoun selection is correct, then modal verb is incorrectly used i.e., if va:ra:dru is correct then qelbahaudu should have been used.

While describing a game played in Bangalore, this sentence was uttered. After uttering 88, he has continued 89.

na:nu: gelde; ya:ra:dru: geldru

If pronoun is wrongly selected then the sentence would be:

na:nu: gedde; ellru: geddru.

The sentence was uttered while describing the game 'snake-and ladder' played by him. In this game only 2 persons are involved. So, it can't be ellru: (all). So, the pronoun selection of va:ra:dru (any one) seems to be appropriate. The selection of modal verb gelbahaudu (any one can win) for correct utterance is not found, instead, the child has tried to bring this meaning by selecting the correct pronoun va:ra:dru.

III Chandrika:

a) Causative suffix and verb are wrongly selected.

90) ratha meravanige ho:gista:ida:re

'chariot' 'procession' 'causing to go' PNG

'are causing the chariot to go for a procession'

Correct form would be:

'avru ratha meravan ige ma:dta:idare

'they are doing procession for the chariot.

2) Application of T-Rules is different

91) sigle: iralla

'Did'nt get'

Instead of sig;e :illa, the root verb 'be' is retained even after transforming to negative type for the declarative sentence —— sigatte or sikke: iratte.

3) Used the word nenne (yesterday) for na:le (tomorrow) when asked, matt ya:va:g barli, Chandu?'. (When shall I come again Chandu?). Later when probed, corrected herself.

IV Jvothi

92) adiyinda suttme:le, na:vella ha:d he:l lti:vi

'from below' 'after turning', 'we' 'sing a song'

'After turning from below, we sing a slong.'

Here, instead of suttud me:le (which indicates past tense (after having turning), sutt me:le is used.

b) 93) gandsisru (Men)

Addition misarticulation which is very rare 93 should have been gandasru. (men)

c) Splitting up of compound verb:

Whan asked 'husa:ragidya?' - she responded as 'a:gidi:ni' instead of 'husa:ra:gidi:ni' as used by adults.

The other two types of interrogative sentence types seem to resemble adult form in many respects. But still, interrogative pronouns with case suffixes found in adults were not observed in children's speech as frequently as in adults speech. The observation of interrogative aspect is in agreement with Menyuk (1971) and Megrath c.o (1973) that questions, especially tap-type develops beyond 5 years and may continue upto 11 years with increasing complexity.

The conjunctions used by children are very few comp ared to adults. NP and VP conjunctions are used in their proper places, but all the conjunctions are not developed by this age. As NP conjunctions, mere pause, a:me:le and matte (only once by one child, however) were used. -u:, an NP conjunction was not used by any childr But, it was used as a VP conjunction, both in its long and short forms. Some of the conjunctions like a:dare, athava, o: (for athava) were not at all found in children's speech. Regarding the frequency of use of conjunctions, one can say that sometimes. Children instead of conjoining the sentences, which would have been done easily by adults, try to simplify their speech by making them into simple, separate declarative utterances. As many studies like Katz and Brent (1968), Neimark and Slotmick (1970) reveal that development of

connectives extend well beyond 6th grade, observations in this study also collaborates closely with their results.

However, in cases of properly derived conjoind sentences, the processes of transformational operations are similar to those of adult.

The frequency of pronominalized sentences in the obtained data varies widely from child to child. In one child's speech sample, not even a single pronominalized form is Round (Chandrika's) and in another (Anil's) about 8-10 pronominalized forms are seen. Both forward and backward pronominalization are seen in children's speech.

What Chomsky, C (1969) found out that pronominalization is acquired by 5.6 years may be partially correct, because, even in this study, pronominalization was seen by 5 years but not in its entirety. Chomsky, C tested only comprehension aspect, but only in one form. She has not tested comprehension of all the different types by which a sentence could be pronominalized. Regarding production aspect of it, some forms of such constructions are still to be acquired even after 6 years.

Table showing the presence of the four syntactic aspects in the age range 2-3, 5-6 and in adults

Aspects / Age	Negation	Interrogation	Conjunction	Pronominalization
2-3 years (Sreedevi,1976)	Earlier acquired transformation, employing only ll, ill & be:d	Not mentioned in detail. What and where illustrated	Not acquired	Presence is in a "doubtful State"
5-6 years (Present study)	Not well developed With free markers present but modal negatives not spontaneously used but can comprehend bound negatives could not be comprehended unless simplified.	Yes/no & WH-type present. Tag-question in a doubtful state. WM-type c̀ case markers very few. Still in the process of acquisition, T-rules for yes/no & WH-type are fully /acquired	Not all forms, but used as NP & vp conjunctions separately, -u: as NP conjunction, -o:, athva, a:dare, mattu are all to be thoroughly acquired still. T-rules(to derive co-ordinated sentences) are in the process of acquisition	Present both in forward and backward forms. But frequency of usage varies widely. Pronominalization of NP which is absent in the surface structure not done. Still to be acquired in its entirety.
Adults (Shankara Bhatta)	Completely developed with all the complexities			

The results of the present study do not support the idea that a child of 5 years will be "linguistically an adult". Rather it is in favour of many studies (Loban,1973) 1966; Menyuk, 1963, 1964, 1968; Carpenter, 1966; O'Donnel, Griffin and Morris, 1967; Chomsky, C. 1968; Olds, 1968; Cramer, 1970; Xessel, 1970; Palermo and Molfex, 1972) that have already indicated that acquisition of syntax continues well beyond 5 years in relation to the cognitive development that is taking place. But, as can be seen from the present study, a depth analysis is essential to point out that the syntactic development is not complete by 5 years rather than a surface scanning Which may prove a 5 year old to resemble an adult in terms of his language ability. further research carried out on this line nay focus on the subtle processes of acquisition of syntax in Kannada and other Indian languages.

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Chapter 5

Summary and Conclusions

An attempt was made in this study to describe some of the syntactic patterns of 5-6 year old children. four children were selected for the study in the age range of 5-6 years. All the children were from Brahmin families, with Kannada as their native language and they were from "middle-class" group.

Speech sample was collected from each child for three successive days, for about one hour every day. Technique of spontaneous speech conjoined with story narration was the main method usad. Elicitation technique was used wherever investigator found it necessary. The obtained speech sample was transcribed using broad phonetic script on the same day including some of the semantic clues.

The speech samples of all the four children were combined. The sentences of children were classified into the four basic types - declarative, negative, interrogative and imperative - and also into co-ordinated and pronominalized types.

The results were analysed on the following lines:

I. Structure of different types of sentences used by children

II. Developmental order among the four syntactic aspects in the age range 5:0, 5:5 and 6:0

III. Characteristics of deviant utterances

IV. Some aspects of syntax were compared with adult forms.

5.1 The following inferences can be drawn from the present study of 5-6 year old children:-

1) The structure of basix sentences resemble that of adult syntax.
2) a) The complexities of PDP are present in children's speech
   b) NP of Children is simplified.

3) Free Negative markers like alla, illa, be:da are found in children's speech but negative suffixes that occur with modal auxiliaries and other main verbs are not yet acquired.
4) Comprehension of negative suffixes is not developed but when the same meaning is interpreted in simplified manner children comprehend them.
5) Transformational rules to derive negative sentences are still in the process of acquisition.
6) All the basic interrogative markers in yes/no and Wh-type questions are found in children's speech.

7) Interrogative words with case suffixes in Wh-type questions are not found as in adults' speech. Interrogative words are simple without depending for cases.

8) Transformational rules to derive interrogative sentences of yes/no, and wh-type are acquired by 5-6 years.

9) Tag questions were not observed in the obtained data. Presence of tag questions is in a doubtful state because representative data were not obtained for interrogative aspect of syntax.

10) All the NP and VP conjunctions are not acquired by 5-6 year old children.

11) matte and pause are the NP conjunctions used by these children.

12) -u, o, and athava as NP conjunctions are not used by these children.

13) -u, is used as Vp conjunction

14) a:dare as conjunction is not used by these children

15) a:me:le which is an adV_T is used as NP conjunction (which is, of course, used by adults also.)

16) Operations like identical verb deletion, etc. to derive co-ordinated sentences are not always used by these children. Instead of conjoining, the simple declarative sentences are uttered sometimes.

17) Rules to derive co-ordinated sentences are still in the process of acquisition.

10) Pronominalized sentences are used by children of 5-6 year old. But, the frequency of usage varies widely from child to child.

19) Both forward and backward pronominalizations are used by children.

20) Pronouns were used to indicate both antecedent and precedant NPs in Pronominalized sentences as in adults.

21) Gender and number markers are erred sometimes indicating their instability in the speech of the children.

22) Causative suffix is not used properly by these children. Sometimes, the causative suffix is used to refer to object-NP thus producing an ungrammatical sentence.

23) Acquisition of articulatory processes is not complete by 6 years. (Supports Tasneem Banu's (1977) study).

24) No developmental order among the four syntactic aspects was noticed in the age range 5:0, 5:5 and 6:0.

25) No obvious sex difference in the ability to use the four syntactic aspects was noticed.

5.2 Implications of the study;-

1) This kind of descriptive study helps to understand better the language used by normal children.

2) Knowledge of normal development of language processes helps in the identification and proper diagnosis of linguistically retarded children.

3) Such descriptions of language used by normal children helps in planning therapy for deviant children of equivalant ages.

4) Knowledge of transformational rules used by normal children may be adopted in therapy sessions for teaching different types of sentences in simplified way.

5) Understanding of normal development of language is important in understanding repression and recovery processes of language in aphasic patients.

6) Evaluation of syntactic abilities of dyslexic children and comparison to normal development helps in early identification of dyslexic children which may not be possible by reading tests because, reading tests have to be given only for school-aged children. Early identification through syntactic abilites helps in taking up early remedial measures.

5.3 Recommendations for further study:

1) A longitudinal study from one year onwards regarding all

the aspects of development of syntax would be very helpful for speech pathologists.

2) Such studies should be undertaken in different Indian languages to help plan therapy for children from different linguistic background.

3) Comparison of syntactic development in normal and different linguistically deviant children would be helpful for evaluation and diagnostic purposes.

4) A test may be constructed in Kannada to evaluate syntactic development of children.

5) The usefulness of syntactic tests in early identification of dyslexic children may be investigated.

6) A comparison can be made between the structure of language used (especially the mother tongue) in the text books of 1-Standard and the structure acquired by the children around 5 years. This will enable one to understand the gap (if present) between the school language and the language of children.

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A P P E N D I X

SYMBOLS

------>	=	Rewritten as
{ }	=	Suffixes choose one from list
------>	=	Transformed into
Ø	=	zero
+	=	incorporated with
( )	=	enclosed constituent is optional

ABBREVIATIONS

S - Sentence

NP - Noun Phrase

PDP - Predicate Phrase

VP - Verb Phrase

N - Noun

V - Verb

Aux - Auxiliary

Det - Determiner

Demon - Demonstrative

Gen - Genitive

Adj - Adjective

Adj_{N} - $Adjective_{Numerical}$

Adj_{DES} - $Adjective_{Descriptive}$

Adv_{T} - $Adverb_{Time}$

Adv_{p} - $Adverb_{Place}$

Adv_{M} - $Adverb_{Manner}$

P Phrase - Post Positional Phrase

PNG - Person-number-gender

ASP - Aspect

Tns - Tense

Acc - Accusative

Dat - Dative

Inst - Instrumental

Abl - Ablative

Soc - Sociative

loc - locative

imp - Imperative

Neg - Negative

Q - Interrogative

Subj - Subject

Obj - Object

hon - honorific

P.S.Rules - Phrase structure rules

T—Rules - Transformational rules

X - Variable

Indet - Indeterminate

Indef - Indefinite

T - Tense marker

M - Modal Aux. Verbs

Wh - Interrogative word
