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Development : A Guide
Vol. 1**

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Cantonese Pre-School Language Development: A Guide

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DEPARTMENT OF SPEECH AND HEARING SCIENCES

THE UNIVERSITY OF HONG KONG

VOLUME 1: VOCABULARY AND GRAMMAR FROM TWO TO FIVE

VOLUME 2: APPENDICES

CD: THE DATA
1. LONGITUDINAL DATA
2. CROSS-SECTIONAL DATA



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Preface

This Guide and its appendices, and the compact disc that accompanies the volumes, are intended for use by Cantonese-speaking professionals with an interest in the normal and non-normal language development of children: speech therapists, pre-school and kindergarten teachers, teachers in special schools, educational psychologists etc. These individuals come from a variety of backgrounds, and only for some of them will the technicalities of modern linguistics have been unveiled in their training. In order to make this Guide maximally useful, we have assumed the absolute minimum of linguistic background in laying out the information. For those readers whose education includes linguistics, we apologize for what may seem like unnecessary background information, and occasional over-simplification. For those readers with no linguistic training (the majority, we would assume), we trust we have provided clear explanations of terminology which may be new. The Guide divides into three parts:

Volume I: Following a background section which gives a general description of modern child language study and explains the

framework used for analysis, this volume provides a summary, at ages two, three, four and five, of the most significant lexical and grammatical information, amply illustrated by extracts from the children's vocabulary lists and conversations.

Volume II: This volume of annexes provides a description of the databases we used, the methodology for data transcription and exploration, and extensive information on vocabulary.

The compact disc: For readers who would like to pursue their own investigations of the data, a compact disc with the two databases on which our summary information is based is included with the volumes.

The authors listed alphabetically on the title page (to indicate an equal contribution from each) would like to acknowledge influences and contributions from others. Dr Thomas Hun-tak Lee has encouraged the project from the outset, and the longitudinal database which he and his colleagues collected formed the starting-point for our work (Lee et al. 1996). We are grateful to them, and to the children and adults who took part in their data-collection. We would also like to thank those involved in the cross-sectional

data-collection: the children, and Ms. Doris Leung, the principal of the 'Wisely Kindergarten and Nursery' from which they came.

We would also like to acknowledge the contribution of the students from the Department of Speech and Hearing Sciences, University of Hong Kong, who collected and transcribed this data.

And finally, we could not have completed the work without the dedication of our research assistants. One in particular, Emily Ma, was with us throughout the project. And Andrew Kong and Richard Kwok-shing Wong made their own significant contributions to the linguistic descriptions in the latter stages.

Finally, this Guide has been made possible by the generous financial contribution of the Hong Kong Government Language Fund, which we gratefully acknowledge.

CHAPTER 1 INTRODUCTION

This report provides a description of language development in typically developing Cantonese-speaking pre-school children at 2, 3, 4 and 5 years of age. In common with what are referred to as *profiling* approaches constructed for English-speaking children (e.g. Crystal, Fletcher and Garman 1989), the descriptions of the vocabulary and grammar of children of different ages are derived from language samples in which the children converse with adults. Details of the subjects and procedure for the elicitation of these language samples, and the descriptive framework we use, appear in Chapter 4. In many respects the methodology adopted in this project follows from, and builds on, well-tried procedures applied to English-speaking children. While methods and procedures can be applied across different languages, descriptions of developmental milestones must be specific to the language of interest. Our Guide represents the first attempt at a systematic account of the development of vocabulary AND grammar in Cantonese-speaking children through the pre-school years.

Profiling language development

Crystal (1992) defines a linguistic profile as follows: 'a principled description of just those features of a person's (or group's) use of language which will enable him to be identified for a specific purpose'. The specific contexts Crystal had in mind for such profiles were remedial or clinical. The professional groups we would expect to be most interested in using our descriptions of the language of normally developing children are speech

therapists, teachers of the deaf, and teachers in special schools. They have a specific interest in comparing the language of the children they are responsible for with that of typically developing children of similar age, in order to identify points of similarity and difference. They need to know what to expect, linguistically, from children of different ages, in order to pinpoint the stage of development their client is at, and to set linguistic goals for remediation and improvement.

Grammar and examples of children's utterances

In previous approaches to the profiling of language development, the major focus was the child's grammar. The learning of grammatical constructions – the ability to form the phrases and clauses that a particular language allows – is a central part of the child's maturing language faculty. Noun phrases allow children to describe referents with ever-increasing precision. Modifying verbs with auxiliaries and aspect markers permits children to convey to their listeners' subtle modal and temporal meanings. In addition to developing the phrasal potential of their language, children need to learn clause patterns, in order to make statements and to negate them, to ask questions, to make requests, to give instructions, and to link clauses into sequences. Organizing the various dimensions of grammar that enable the child to do all this with language takes time. Children begin their linguistic career with single words some time early in their second year. By the age of five they have the basic grammatical infrastructure of their language in place.

Since tracing the course of grammatical development during the preschool years is just as important for Cantonese as it is for English, we will provide this information here. Previous profiling approaches have provided

information on grammatical patterns available to children of different ages, with limited exemplification of actual utterances, and virtually no information on vocabulary. Here we take a different approach, which we believe will be of more practical help to readers. First of all, we provide extensive exemplification of utterances the children used, organized according to grammatical patterns.

Vocabulary

We also provide exhaustive information on the vocabulary used by Cantonese-speaking children, at each stage of their development. The growth of vocabulary during the pre-school period is no less remarkable than that of grammar. The English-speaking child entering school in the USA is estimated to have a vocabulary of 6000 words. A little simple arithmetic will indicate that if children move from zero to 6000 words between their first and sixth birthdays, they will have to learn on average between three and four new words a day. This suggests that the mechanism for recognizing words and storing them in long-term memory is an extremely efficient one. Data from Cantonese-speaking children supports this: there are over 3000 different words used by 8 children between 18 months and 3 years in one of the databases we discuss later in the report.

Recent advances in computer software developed for linguistic analysis means that in this report we are able to go beyond previous studies, which concentrate almost exclusively on grammar, and provide extensive data on vocabulary. We provide information on words available at different ages, on vocabulary growth over time, and on the frequency with which vocabulary

items are used. This will allow those working with children with language problems to integrate the appropriate vocabulary into their programs of grammatical remediation, by selecting vocabulary that is in general use by children of a particular age to instantiate grammatical patterns.

Profiling and tests

This report aims to provide information on the normal course of Cantonese development for professionals with or without any previous linguistic background to use for the evaluation, and if relevant, remediation, of children with language problems. In relation to the purposes of the report, it is important to emphasize at the outset that the chapters summarizing children's language development do not provide norms, in the sense in which this would be understood relative to a test such as the Reynell Developmental Language Scales (Cantonese Version 1987). It is assumed that the results of such a test would already be available, and that the information made available here, which is multi-dimensional, could be used to provide a detailed picture of the areas of the impaired child's language which have limitations, and subsequently to guide a program of remediation. Standardized tests have psychometric properties that enable us to make reliable inferences about percentile ranks, or age-equivalence. But they sample a very limited range of linguistic behavior, relative to the complexity of the system the child is rapidly learning. The more comprehensive grammatical and lexical information provided via what are effectively multiple case studies in this Guide, permits a much more comprehensive qualitative assessment of the child's linguistic abilities. This in turn is more viable as a platform from which to identify goals for a remediation program.

The remainder of the Guide is organized as follows:

VOLUME I: Vocabulary and Grammar from Two to Five

CHAPTER 1:

- As a context for the descriptive sections, there is first a general discussion of important issues in language development studies.
- Then follows a brief description of the databases used for this report, an explanation of quantitative measures which are used in the profiles, and an outline description of the grammar of Cantonese, explaining the terminology to be used in describing children's language.

CHAPTER 2 – 6:

- The vocabulary and grammar of two year olds
- The vocabulary and grammar of three year olds
- The vocabulary and grammar of four year olds
- The vocabulary and grammar of five year olds
- Growth points in the pre-school years

1.1 STUDYING LANGUAGE DEVELOPMENT

The modern history of language development begins with the publication of 'A First Language' in the early 1970s (Brown, 1973). This was a detailed account of the development over time of the grammatical abilities of three English-speaking children in the USA. Despite the small sample size, the detailed information on each child laid out in this book has provided a model for future child language studies. There are three main findings that we should bear in mind, and that subsequent studies on English have tended to support. There is no reason to suppose that the situation for Cantonese language learning will be any different:

- Children tend to pass through the major milestones of language development in the same order.
- Nevertheless, children differ in the rate at which they develop their grammar: there are individual differences in language development, with some children developing faster than others.
- En route to mastering the grammatical patterns of their language, children produce, for a period of time, what are referred to as 'non-adult forms'. They produce utterances which adults would regard as ungrammatical.

We will examine each of these points in more detail.

1.1.1 Milestones of language development

The first stage in the child's development of language is the appearance of the first words. Although recognizable words do not appear until around the first birthday, during the first year of life the child has made linguistic progress on two fronts. He has learned to recognize the sounds of his own language, and has also been practicing the production of these sounds in what is referred to as 'babbling' – meaningless syllables which increasingly, as the first year progresses, sound like words in the language the child is beginning to learn. After the appearance of the first words, progress in compiling a vocabulary is initially gradual. It may take six months for a vocabulary of 50 words to be amassed, and during this period the child may continue to produce meaningless syllables. The child will also understand many more words than he produces. Towards the end of the second year, vocabulary acquisition speeds up, and progress in the pre-school years is dramatic, as we will see in the next chapters.

The second stage on the path to linguistic maturity, in the second half of the second year, is the appearance of combinations of words. Initially these are short, consisting of two or three words only. This step is a significant one, as it signals the beginning of the development of grammar. Early word combinations reflect, in the order of elements they contain, the prevalent order in the adult language. In English, as in Cantonese, the dominant order is subject (S), followed by verb (V), followed by object (O): SVO. As we shall see later, Cantonese does allow more variation in this order than English does, but SVO order is the one the child hears most. Languages use the order of elements in sentences to map actions and events, and a

significant milestone is when the child's word combinations show evidence that he has grasped this. So for example if the child can say both 'me chase dog' and 'dog chase me' he is using the same words, but by using a different order of words he is signaling two different events. Similarly, in Cantonese, if a child were able to produce both.

ngo5 zeoi1 gau2 Me chased dog	and	gau2 zeoi1 ngo5 Dog chased me
----------------------------------	-----	----------------------------------

he would be using the potential offered by his grammar to convey two distinct events.

In the next stage of development, which accelerates through the third year of life, the child continues to extend the word combinations, and to use negation, and A-not A questions. He also begins to display knowledge of various grammatical systems that operate in the language being learned. In Cantonese-speaking children we now begin to see the following: determiners and classifiers in noun phrases; pronouns; and auxiliary verbs, aspect markers and clitics in verb phrases. The child uses an increasing variety of utterance final particles. Question words and locative expressions begin to be used. The development of these systems continues, as we shall see, through the pre-school period.

1.1.2 Individual differences

An early demonstration of individual differences in rate of language development came in Brown (1973). Figure 1.1 is a well-known graph, which plots the changing average length of his subjects' utterances against age. The children were named Adam, Eve and Sarah. The graph plots age in months against the average length of the utterances the children produced.

Figure 1.1. Mean utterance length and chronological age for three English-speaking children (From Brown 1973)

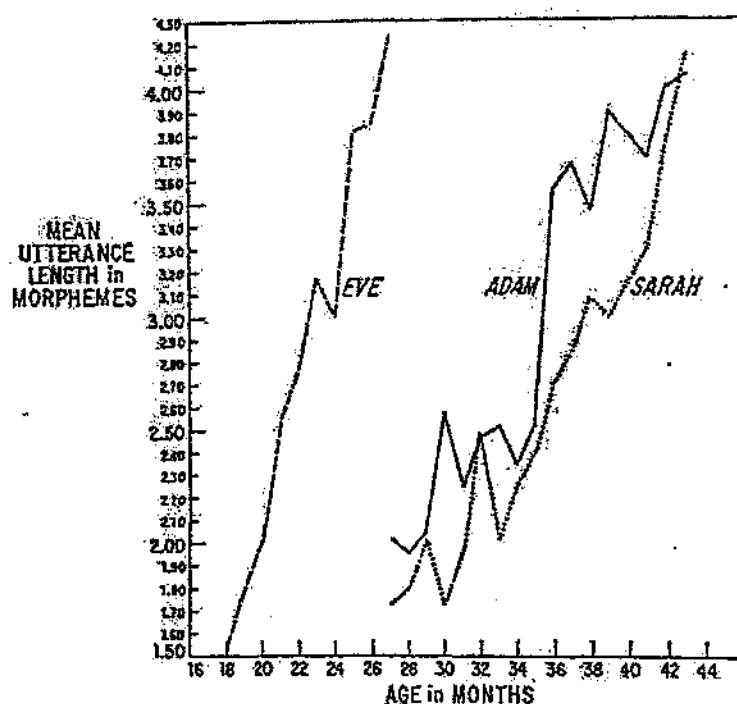


Figure 1. Mean utterance length and chronological age for three children

As you can see from the figure, all three children reach roughly the same endpoint. However if we take as a starting point the value of 2.00 morphemes, which is common to all three children, we can see that first of all the child called Eve reaches this point rather earlier than the other two children -- around 20 months instead of around 28 months. And while Eve takes only about another seven months to reach an MLU value of 4.00 (by 27 months) the other two children take 15 months to make the same amount of progress.

We will see from measures of vocabulary and grammar, in chapters 2-5 that focus on the language development from two to five, that individual differences can also be found in Cantonese.

1.1.3 Non-adult forms

In the course of their advance to linguistic maturity, children behave linguistically in ways which adults do not. This is most obvious in their immature pronunciations. However both in vocabulary and grammar we can identify non-adult usage. In the early stages of vocabulary development, a well-attested phenomenon is that of *over-extension*. The child uses a word in his vocabulary to refer to something, which is perceptually similar, for which he does not yet have the word.

Two examples are:

1. ball

Used first of all for a blue beach ball; then for oranges, pumpkins, peas, round beads on a necklace, pompoms on a sweater, beads on a chain, polkadots on the child's dress, round earrings. (Anglin 1977)

2. moon

Used for the moon (in various phases); for a slice of lemon, a shiny green leaf, cow horns, pictures of yellow and green vegetables displayed in a shop. (Bowerman 1980)

The examples show how the child will use perceptual similarities to over-extend. In the first example, all the examples including the correct one, share

the feature of roundness. In the second case, the child uses both the crescent shape of the moon in a particular phase, and its colour, to make analogical extensions. These examples are taken from English, but all languages studied to date show children in the early stages of vocabulary development (into the early part of the third year) making overextensions.

Once grammatical development gathers pace, later in the third year and into the fourth, we find non-adult forms here also. A commonly found example in English is the over-regularization of past tense: instead of using the correct form for an irregular verb, the child applies the regular past. So the three year old, instead of saying 'came' as the past tense of 'come', says 'camed'. In Cantonese, we find the child over-extending the classifier *go3*, applying it to nouns which should have more specific classifier forms. The following example is from a three- year-olds, substituting *go3* where adults may use *gin6*:

*CHI:	wai3 li1 go3 hau2seoi2gin1 lei4 gaa4?
-------	---------------------------------------

In Section Two we will reflect all three aspects of language development, with reference to Cantonese-speaking children. Their progression over time will be reflected in separate accounts of the vocabulary and grammar of groups of two, three, four and five-year-old children. Then major change-points over the pre-school period will be highlighted in a summary chapter. Within each age group we provide data on a number of children, to demonstrate the range of individual differences that can be expected. And we will also draw attention within each chapter to non-adult forms that children use.

1.2 THE FRAMEWORK FOR ANALYSIS

Full details of the databases on which this Guide rests are provided in Appendix A. In this section we draw attention to the major summary measures used for vocabulary and grammar, and also provide an outline description of Cantonese grammar. This introduces, with examples, the terminology which is used in subsequent chapters. The section concludes with a discussion of the descriptive framework used in chapters 2-6, which deal with children at year intervals from two to five.

1.2.1 Vocabulary

A range of information is provided on vocabulary both in this volume, and in Appendices D and F in Volume II. The frequency measures provided in lists are the most obvious quantitative measures. One measure we provide which requires some explanation is the way in which we measure lexical diversity.

VOCD. This measure is used here in place of the Type-Token ratio (TTR). 'Token' here refers to the total number of words that a child produces in a language sample, and 'Type' refers to the number of *different* words. So a particular word type (e.g. go3) may occur a number of times in a sample – there will be a number of *tokens* of *type* go3. On the widely-held assumption that the number of different types used in a sample of language is a reflection of both the child's knowledge of vocabulary and her ability to deploy it under the on-line processing demands of conversation, the TTR has been used extensively as a measure of lexical diversity in the literature on

language development and language impairment. Unfortunately it has proved to be an unreliable measure for discriminating between children of different ages, or between normal and language impaired children. The reason for this is conclusively demonstrated by the developers of VOCD: the TTR value is sensitive to the size of the sample of words over which it is computed (Richards and Malvern 1997). VOCD is a new measure of lexical diversity, which can be computed reliably on language samples of any size, and avoids the problems of TTR. Figures 1.2 and 1.3 plots both VOCD and TTR against age for two children from our longitudinal database, and shows the developmental change in the former as opposed to the latter. Details of the computation of VOCD are provided in Appendix C of Vol. II.

Figure 1.2. Plot VOCD and TTR against age for CCC.

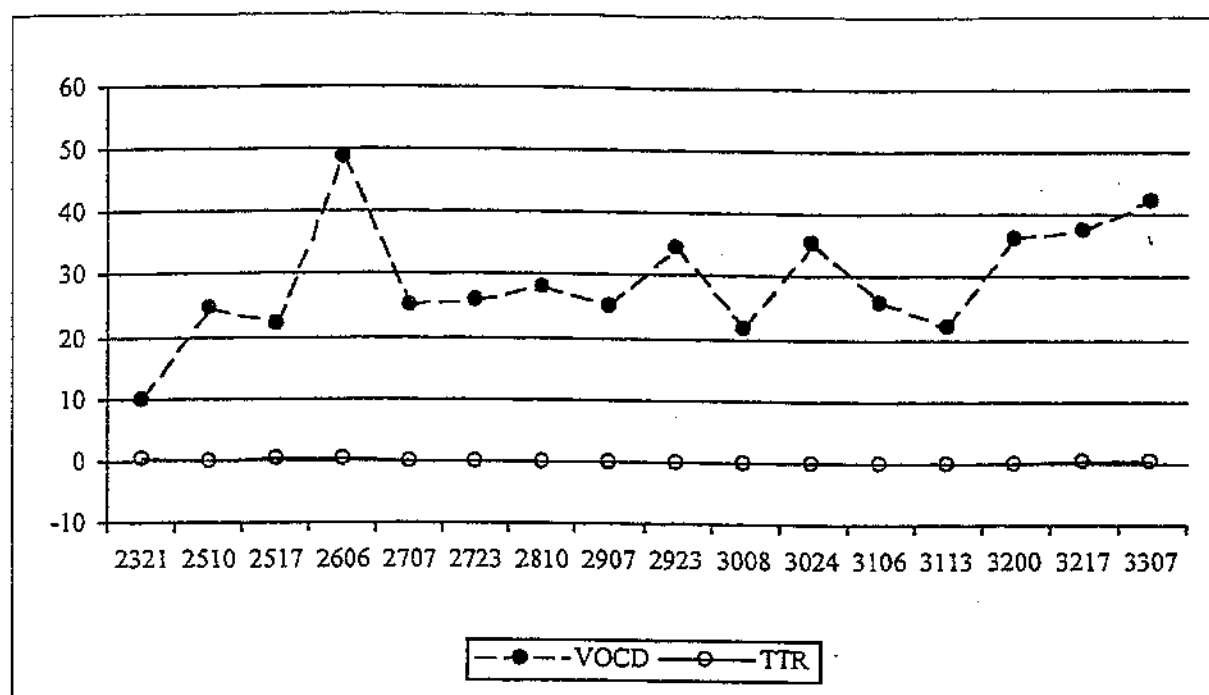
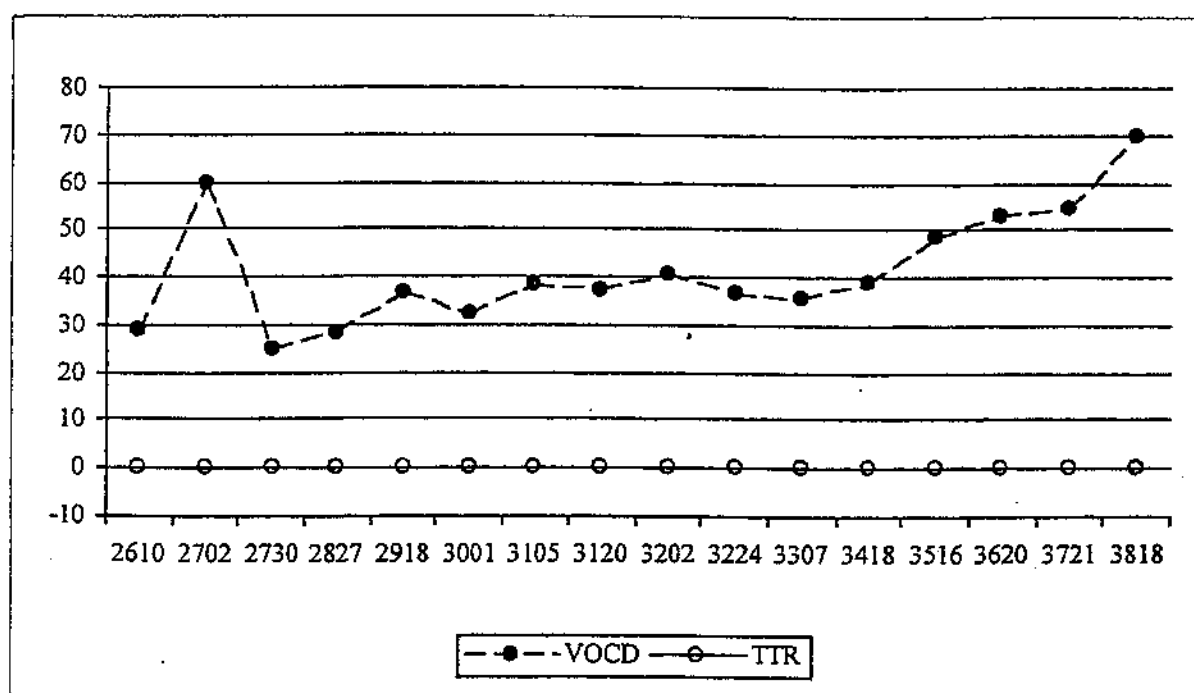


Figure 1.3. Plot VOCD and TTR against age for LTF.



1.2.2 MLU and Grammar

A brief grammatical description of Cantonese is provided in the next section. In the chapters dealing with each age level, we make use of this terminology to provide detail on specific features of grammatical development. At this point, we introduce Mean Length of Utterance (MLU), which has been used in child language studies as an overall developmental measure for grammar.

MLU. Since the study by Brown (1973) demonstrated that children develop language at different rates, especially at younger ages, researchers have used MLU as an overall measure of 'language growth'. MLU stands for 'mean length of utterance'. The number of words in a sample of a child's utterances (usually, for convenience, 100 utterances), is summed and divided by the total number of utterances in the sample. (Details of our computation method for MLU is provided in Appendix A, Vol. II.) MLU is assumed to be a valid measure of language growth since it will reflect the child's developing ability to deploy increasingly complex syntactic forms. Although MLU is a global measure it will directly reflect expanding grammatical ability in the child.

Finally, for the children from the cross-sectional sample only, age-equivalent scores on the receptive form of the Reynell Developmental Language Scales (Cantonese Version 1987) are available for all the children. This will allow comparison between a standardized measure of comprehension and VOCD and MLU, which are based on production.

1.2.3 A brief grammatical description of Cantonese

The following sections provide a brief sketch of Cantonese grammar. It does not mean to be exhaustive and comprehensive. Its purpose is to enable you to have a better understanding of the analysis and discussion of Cantonese child language development below. For fuller treatment of Cantonese grammar, please see Cheung (1972), Kwok (1971), and Matthews and Yip (1994).

Grammatical units

One common way of looking at the structure of sentences is by breaking down them down into different levels of analysis. For example, morphemes, words, phrases, and sentences.

Morphemes

A morpheme is the smallest meaningful unit.. There are 2 types of morphemes: lexical and grammatical morphemes.

Lexical morpheme:

syu1

'book'

Grammatical morpheme:

dei6

as in *keoi5dei6*

plural'

'they'

Words

Words may be made up of one morpheme or more than one morpheme. For example, *syu* is made up of one morpheme, whereas the following example *tou4waa2* is made up of two morphemes:

tou4waa2
'picture'

Phrases

A phrase is made up of more than one word. Common phrases include noun phrase and verb phrase. In Cantonese, the noun phrase is made up of a classifier *zi1* and a noun *bat6* 'pen'.

zi1 *bat1*
CLASS pen

Sentences

The next level of analysis is the clause or sentence. Usually a sentence contains a verb in Cantonese. For example,

Ngo5 sik6 beng2beng2
I eat cookie

Here the sentence contains a verb *sik6* 'eat' and a noun *beng2beng2* 'cookie'

Word classes

One method to analyze words is to classify them into different word classes or parts of speech. In the child language literature, researchers have been interested in knowing about whether children produce more nouns or verbs in the early years of development.

The following are common word classes found in Cantonese.

Noun

Nouns are usually words that refer to things or people. For example,

toi2

table

Pronoun

Pronoun is always used to replace nouns in certain context. Personal pronouns are:

ngo5 I

nei5 you

keoi5 he/she/it

ngo5dei6 we

nei5dei6 you

keoi5dei6 they

Classifiers

Classifier is a distinctive feature in Chinese. There are quite a large number of classifiers in Cantonese. Some examples are:

go3

zi1

tiu4

zek3

One characteristic of classifiers is that it is obligatory when it follows a numeral in describing a noun, as shown in the example below:

saam1 go3 jan4

three CLASS men

'Three men'

Also, classifier can be reduplicated to mean 'every'. For example,

zoeng1 zoeng1 toi5 dou1 gam3 gon1 zeng6

'Every table is so clean'

Here, the classifier *zeong1* is reduplicated to mean 'every'.

Verbs

There are two types of verbs: main verb and auxiliary verb.

Main Verbs

Some examples of main verbs are:

sik6 'eat'

jam2 'drink'

One major distinction between Cantonese and English verbs is that there is no tense inflection in the verb stem of Cantonese verb.

bi4bi1 gam1 ziu1 jam2 naailnaail

'Bibi drank milk this morning'

Here, the main verb *jam2* remains the same and does not need to be inflected to refer to the past time.

The Cantonese verb is also different from English in that it can be reduplicated. In that case, it has a restrictive meaning, including a limit on the action referred to in the verb.

Ngo5 jam2 jam2 sin1

'I drink a bit first'

Auxiliary verbs

Auxiliary verb in Cantonese is used before the main verb. For example,

Keoi5 nang4gau3 kei2 hei2 san1

'He/she can stand up'

The auxiliary verb *nang4gau3* 'can' is used to modify the main verb *kei2* 'stand'.

Common auxiliary verbs are:

nang4gau3 'can'

soeng2 'want'

wui5 'will'

Adjectives

Adjectives are words that describe the quality of an object or the state of a person. For example, the adjective *san1* 'new' in

San1 saam1

'New clothes'

modifies the noun 'clothes'.

Adjectives can also be reduplicated in Cantonese. For example,

San1 san1 dei2
 new new PARTICLE
 'a little new'

Reduplication of *san1* 'new' means 'a little bit new' instead of 'very new'.

Adverbs

Adverbs are used to modify verbs or adjectives in terms of scope, quantity or degree. Some common Cantonese adverbs are:

dou1	'also'
ngaam1ngaam1	'at this moment'
ji5cin4	'before'
tung1soeng4	'usually'

Prepositions (co-verbs)

Prepositions refer to words that are placed before nouns to indicate location, direction or place. Common prepositions in Cantonese are *hai5* 'at', *jau4* 'from'. For Example,

hai5	'at/in'
keoi5 hai5 fong2 waan2	
's/he plays in the room'	

Conjunctions

Conjunctions are used to link up words, phrases or sentences. Common conjunctions are:

tung4mai4 'and'

waak6ze2 'or'

Sentence final particles

Cantonese has a rich set of sentence final particles (or utterance final particles) that express a speaker's intention and mood. They usually occur at the end of an utterance. These particles can also be combined together. Some common Cantonese sentence final particles are:

laa1

lo1

wo3

Structural particles (aspect markers, postverbal particles)

In Cantonese, there is another type of particle known as structural particles. These include aspect markers and postverbal particles. The major aspect markers are:

zo2 'perfective'

gan2 'progressive'

zyu6 'continuous in a state'

gwo3 'experiential'

The aspect marker *zo2* is usually used to indicate an event that has been viewed as completed or as a whole. The progressive aspect marker *gan2* is used to indicate action that is in progress.

Bi4bi1 jam2 zo2 naai1 naai1

'Baby has had milk'

Keoi5 waan2 gan2 cel1cel1

'He's playing with the (toy) car'.

zyu6 indicates the continuous state of the action. For example,

Keoi5 zaal zyu6 zi1 bat1

'He is holding a pen'

Locatives

Locatives (or localizers) refer to words particularly used to express location.

Usually these words are used with the preposition, *hai2*, 'at'. Examples,

Hai2 toi2 soeng6 min6

'on the table'

Hai2 cel1 leoi5min6

'inside the car'

Open class and closed class

In the discussion of word classes (parts of speech), we can identify two types of words. One type is called an **open** class and the other type is called **closed** class. (Other terms used to contrast the two types are **lexical** and **grammatical**. More recently, closed or grammatical classes/categories have been referred to as **functional** categories.) The distinction reflects a major division: an open class of words is typically very large and readily accepts (and sometime loses) new members: nouns, verbs, adjectives and (to a lesser extent) adverbs, fall into this category. The word classes that are referred to as closed, by contrast, do not readily accept new members. Over historical time, change in the membership of these categories is very slow. The distinction also reflects a division of labor between the two types of word. Many open class words, particularly nouns and verbs, have a referential function – they relate to objects and events in the real world. Closed class words, on the other hand, do not generally stand for objects or events: they tend to derive their meaning from their grammatical function, which may be relational (as in place words, which describe the locative relation between two objects), or temporal (for example modal auxiliaries can describe the speaker's attitude towards an event or action).

Major Phrase Structures

Noun Phrase

A noun phrase in Cantonese can be simply made up of a noun. For example,

syu1
'book'

This is known as a bare noun phrase.

A noun phrase can be modified by other elements, for example, by determiners, numerals etc.

Go2 bun2 syu1
'that CLASS book'

saam1 bun2 syu1
3 CLASS book

Here, we have the determiner *go2* 'that' before the noun *syu1* 'book'. You may have noticed that one needs to add the classifier *bun2* between the determiner and the noun. The same situation applies in the second example when the numeral *saam1* 'three' precedes the noun *syu1* 'book'.

Another way of modifying the noun in a noun phrase is by putting an adjective before the noun.

Hung4 saam1

'red clothes'

Here, the adjective *hung4* 'red' modifies the noun 'clothes'.

Verb phrase

In Cantonese, the verb phrase can simply be a verb. For example,

Sik6

'eat'

The verb phrase can also be expanded to include the aspect markers. Usually only one aspect marker will be selected.

Sik6zo2

eat+ASP

'have eaten'

The verb phrase can also include post-verbal particles as shown below.

Keoi5 sik6 jyun4 zo2 laak3.

S/he eat PART ASP SFP

'S/he has finished eating'.

Here, the whole verb phrase consists of a main verb, a postverbal particle and an aspect marker. In the example below, we have an object noun phrase after the verb.

keoi5 sik6 jyun4 zo2 naai1naai1 laak

S/he eat PART ASP milk SFP

'S/he has finished taking the milk'

The main verb can also be modified by an auxiliary verb. For example,

Bi4bi1 neng4gau3 kei2 gou1

Baby can stand up

Here, the auxiliary verb *neng4gau3* 'can' precedes the main verb *kei2* 'stand'.

Prepositional phrase

In Cantonese, a prepositional phrase is made up of a preposition followed by a place word or locative. For example,

Bi4bi1 fan3 hai2 cong4 dou6

Baby is sleeping on the bed.

Here, *hai2 cong4 dou4* is the prepositional phrase with *hai2* as the preposition, followed by *cong4 dou6* 'the bed'.

Major sentence types

There are many ways to analyze a sentence. One way to analyze sentences is to classify them into different sentence types, for example, declarative sentences, interrogative sentences, and negative sentences.

Declarative sentences

Declarative sentences refer to sentences that make statements about a situation, an event or a person.

The typical word order of a declarative sentence in Cantonese is as follows:

Subject + verb + object (SVO),

Bi4bi1 sik6zo2 naai1naai1

'Baby has had milk'

Here, *bi4bi1* is the subject, the verb is *sik6zo2* (a verb + an aspect marker) and *naai1naai1* is the object.

It is very common in Cantonese speech to omit the subject. For example, in response to the question,

Bi4bil zou6gan2 mat1je5

‘What is the baby doing?’

one might answer:

Sik6gan2 naai1naai1 (VO)

‘drinking milk’

In fact, VO sentences are commonly found in adult as well as in children’s language.

It is also possible for Cantonese to drop the object. For example, in answering a question.

Bi4bi1 sik6zo2 mei6 aa3

‘Has baby had milk yet?’

one may answer,

Sik6zo2 laak3

eat+ASP SFP

‘Has had (milk)’

Above, the object noun phrase *naai1naai1* ‘milk’ is omitted.

Some sentences, however, may have only the subject and the verb. For example,

Bi4bi1 haam3 (SV)

'baby cries'

there are only 2 constituents, the subject *bi4bi1* 'baby' and the verb *haam3* 'cry' in the sentence. The object is not necessary. The reason why there is no object is that some verbs do not allow the occurrence of an object after it.

Similarly, the subject *bi4bi1* can also be dropped in certain context without making the sentence ungrammatical. When asked what the baby is doing, one may answer,

Haam3 lo1 (V)

'cry SFP'

This sentence only contains a verb and a sentence-final particle.

Some verbs in Cantonese, however, takes two objects. An example of these verbs is *bei* 'give'.

Ngo5 bei2 gung1zai2 bi4bi1, (SVOO)

'I give a doll to baby'

Here, there are two objects *gung1zai2* 'doll' and *bi4bi1* 'baby'.

Another sentence pattern (SVC) does not have an object but instead contains a complement. A complement is an obligatory element that the verb needs in order to complete the sentence. For example,

Bi4bi1 hai6 sau3 (SVC)

'baby is thin'

S V C

Here, the copula verb *hai6* takes an adjective *sau* 'thin'. The slot occupied by *sau* is known as the complement position.

Serial verb construction

Another common sentence pattern in Cantonese is the so-called serial verb construction. This means that the verb phrase consists of 2 verbs in sequence. For example,

Ngo5 heoi3 ceoi4 fong2 zam4 seoi2

'I go to kitchen to pour water'

S V N V O

Here, you have two verbs, *heoi3* 'go' and *zam1* 'pour'. Different from English, there is no infinitive marking for the second verb, *zam1* 'pour'.

Topicalization

Apart from the SVO pattern exemplified above, we may find the following pattern.

naailnaail bi4bil sik6zo2

'milk baby has taken'

Top S V

Here, the object *naailnaail* 'milk' has been moved to the sentence initial position. We call this process topicalization, i.e., moving the object to become the topic of the sentence.

Interrogative sentences

Intonation question

Another major type of sentences is usually referred to as question or interrogative sentences. A declarative sentence can be changed into a question simply by intonation.

Bi4bil sik6zo2 naailnaail?

'Baby has taken milk?'

Here, the word order is the same as that of a declarative sentence. The only difference is the use of a rising intonation to signal that this is a question.

Other questions, however, are formed by other means.

Particle question

One can add a sentence final particle to a statement to change it into a question.

Bi4bi1 sik6zo2 naailnaail laa4?

‘Baby has taken milk SFP?’

A-not-A question

Another way to form a question in Cantonese is to use the A-not-A pattern.

Bi4bi1 sik6-m4-sik6 naailnaail?

‘Baby eat-not-eat milk?’

Wh-questions

Another important means to make questions is to make use of question words such as

dim2gaai2 ‘why’

bin1go3 ‘who’ (‘which + classifier’)

Negative sentences

There are a number of negative words in Cantonese, which help to change a sentence into a negative sentence. They are:

m4	'not'
m4hai6	'not be'
mou5	'not exist'
mei6	'not yet'
m4hou2	'don't'

In terms of word order, the negative word is usually placed before the adjective or verb it modifies. For example,

Bi4bi1 m4 sik6 naailnaail
 'Baby not drink milk'

Here, the negative word in is placed before the verb *sik6*.

Imperative sentences

Another sentence type commonly found in the data is imperative sentences. These sentences are used to make requests or give commands. In these sentences, the subject is usually omitted. For example, the subject noun phrase *nei3* 'you' is omitted below:

Jam2zo2 keoi5
 'Drink it'

as compared with,

Nei3 jam2zo2 keoi5
 'you drink it'

1.2.4 Organization of age level descriptions

In the chapters that follow, we make use of general quantitative language measures, measures based on aspects of the grammatical description, and qualitative information, to give a picture or profile of Cantonese-speaking children's language from two to five years. The descriptions are based on samples of the children's language from two databases, the **longitudinal** database and the **cross-sectional** database, both of which are described in detail in Appendix A, Vol. II. A longitudinal database is one in which an individual child or children is followed across a period of time. Longitudinal databases allow us to observe the organic growth of a child's language over time. While ideally we would like to always rely on longitudinal data for scrutinizing development within and across children, practical considerations constrain us. Longitudinal projects are costly in resources, and of their nature involve lengthy time periods for the collection and analysis of the data. Cross-sectional studies simulate development by collecting data from a number of different children, at distinct age levels, simultaneously. While this is still costly in terms of human and financial resources, it does mean that the project can be completed in a limited timeframe, with the pace of the project no longer controlled by the developmental chronology of the child being studied.

Some idea of the resources required for an ethnologically valid study of children's language – using naturalistic conversational data in familiar surroundings such as home or school – can be derived from the following estimates for the time required for the collection and transcription into a

computer database of a single sample one hour in length (i.e. simply to provide an error-free data file which is then ready for analysis):

- initial data collection and recording: 4 hours
- rough transcription into computer file: 16 hours
- checking correcting and formatting of file: 4 hours

The longitudinal database consists of 128 files, 16 from each of 8 children, over the age range 23 to 40 months. For the description of two years old in Chapter 2, we have selected just five children from this set. However, Appendix A provides a summary information on the totality of these files, and Appendix D includes a vocabulary list of all the words produced by the eight children across the time period.

The cross-sectional database consists of 70 children, 10 at each six month age level from 2 years 6 months to 5 years and 6 months. From this data we have again been selective in the following chapters, providing information on the ten three, four and five year olds, to maximize differences across age and to show the developmental route more clearly. Again, more detailed information is provided on all the children in the cross-sectional database in Vol. II in Appendix A and Appendix E contains the vocabulary list of all the words used by the seventy children.

In the remainder of Vol. I, information on children at two, three, four and five years of age is presented in Chapters 2 - 5, while Chapter 6 summarizes the major features of grammatical development over this time span.

In chapters two to five, the information is presented as follows, with appropriate commentary:

1. Overall measures on vocabulary, utterance length and comprehension (the latter is not available for two year olds) for each child in the group.
2. In each chapter, a 'typical' child is selected from the group, on the basis of median scores, and aspects of his/her use of closed and open class words are explored.
3. We then look at open and closed class use by all children.
4. Finally, using the syntactic framework outlined in this chapter, we provide selected examples of syntactic structures which are typical of the age group.

Finally, Chapter 6 identifies and discusses 'growth points' in the children's development of syntax and vocabulary over the period between two and five years.

Chapter 2. Language characteristics of two-year-old children

2.1 General language measures

Table 2.1 provides general quantitative data on the five two year olds selected from the longitudinal database. (We do not have Reynell developmental Language Scale scores available for the two-year-olds.)

Table 2.1. General language measures for two-year-old children.

Name	Sex	Age	Language Measures				
			MLU	MLU#5	Type	Token	VOCD
1. CCC	M	2;01.17	1.79	4.6	120	541	21.84
2. CGK	F	2;00.08	2.49	5.4	191	563	58.86
3. CKT	M	2;01.08	2.22	9.6	255	1535	41.35
4. LTF	F	2;02.10	2.32	6.8	200	1196	29.04
5. MHZ	M	2;01.01	1.86	5.00	187	624	58.41
Median			2.22	5.4			41.35

'Two years old' for our purposes means between 24 and 26 months of age. In Table 2.1, in addition to age, we provide information on MLU (based on 100 utterances); MLU5, which is the mean length of utterance of the 5 longest utterances the child produces; and VOCD, which as we indicated earlier is based on repeated sampling of 50 tokens, and does not depend on sample size. In fact the samples on which these VOCD values are based vary quite considerably in length. For the MLU scores and VOCD, the table also identifies the score that is located at the median. With a small number of subjects, and

considerable individual variation on each of the general measures, means would be suspect as measures of typicality. The median scores suggest that a typical two year old will have a mean length of utterance of 2.22 words, and a lexical diversity score (VOCD) 41.35. The MLU scores remind us (as we shall see from examples later in this section) that the child's utterances at this point in development are relatively short, and many of them will still consist of single words. In the main then, children of this age will restrict themselves to short, simple sentences. The MLU5 values do indicate however that longer utterances are possible for these children.

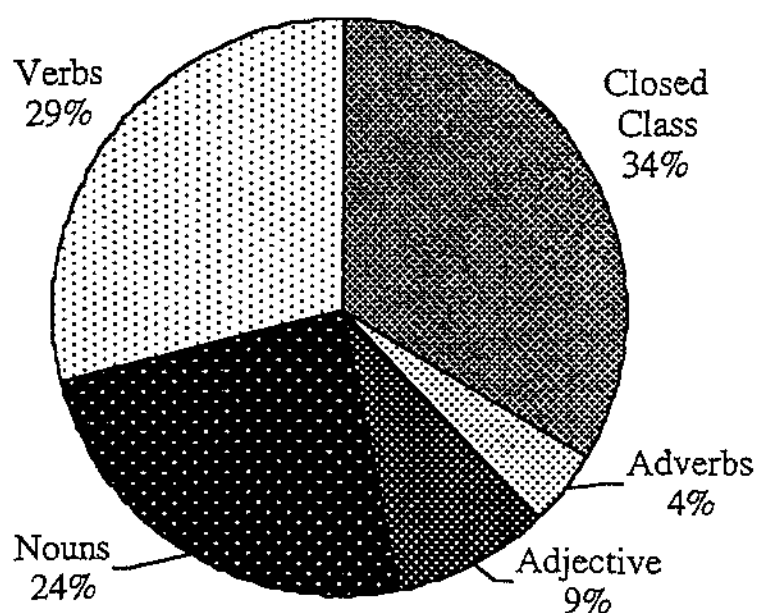
If we take the two general measures, VOCD and MLU as somewhat independent measures of expressive language, the one of grammar and the other of vocabulary, and look for the typical child in this group, then Child 3, CKT, emerges as the child with the median score on both measures. We can now look at this child's language performance in more detail, as a way of characterizing 'two year old language'.

2.2 Vocabulary—Open class and Closed class

The 'Typical' Child: Open and Closed Class. Since there are obvious individual differences between the children, we first of all examine the performance of the child we have labeled 'typical' before turning to the group as a whole. The chart in Figure 2.1 shows the distribution of closed class types against the four lexical categories (noun, verb, adjective and adverb) that fall under the heading 'open class'. One-third of the types are closed class (a total of 30), while two-thirds (a total of 60) are open class. (To facilitate comparison with older children, the figures reported here are based on a sub-sample of the complete conversation.) The percentages of individual open class types are shown in the chart. It is noteworthy that there are slightly more verb types than noun types at this point in the child's

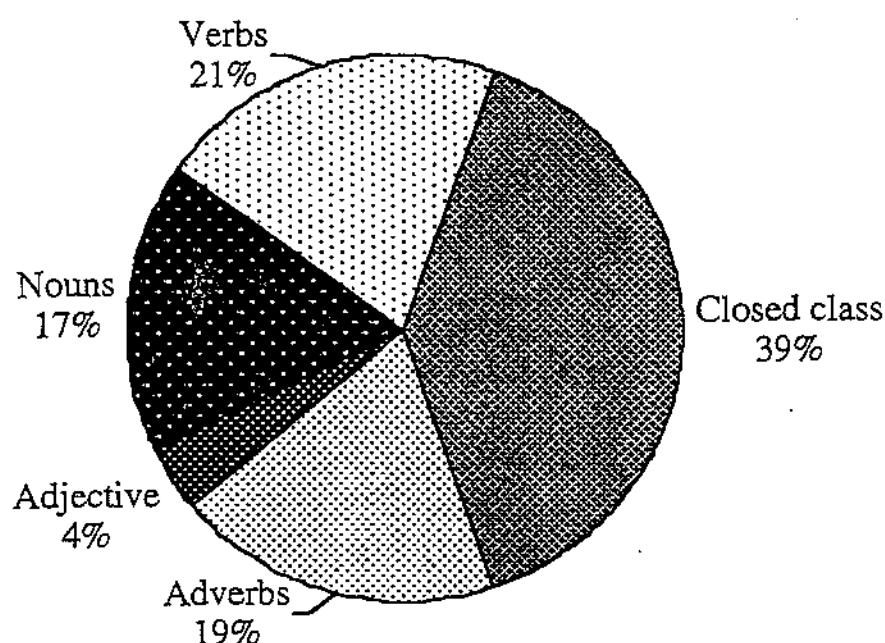
development. The majority of these are transitive verbs. The two year old Cantonese speaker already has a repertoire of verbs.

Figure 2.1. The 'Typical' child: Frequencies of word-types open and closed class categories.



When we look at the same set of categories, but this time for tokens, the frequency distribution presents a quite similar picture (Figure 2.2):

Figure 2.2. The 'Typical' child: Frequencies of word-tokens open and closed class categories.



Open class items account this time for just a little under two-thirds, while closed class tokens are somewhat higher than one-third. Within the open class tokens there are fewer nouns than verbs. In other languages, such as English, we would not expect this. Rather, we would anticipate rather more nouns than verbs as tokens, since a sentence containing a transitive verb, the most common type, can have a noun in both subject and object position (e.g. 'mummy make dinner'). The more equal frequencies of noun and verb in Cantonese reflect the greater potential the language allows for deleting subject and/or object arguments of the verb when linguistic or non-linguistic context allows.

When we look behind the totals for closed class, and examine individual categories, we find a patterning, which as we shall see, is specific to

two-year olds. Nearly half of all closed class tokens are utterance final particles, and another 25% are 'expressive morphemes', such as waa2. The two year old is reflecting in his speech these items, that are pervasive in the language she hears around her, which are rich in pragmatic meaning but do not play any major grammatical role in the structure of phrases via the modification of nouns and verbs. This is strikingly apparent if we now look at the type and token values for the 8 closed class categories to which we are paying particular attention.

Table 2.2. Grammatical categories: types and tokens.

Category	Type	Token
Aspect marker	2	4
Auxiliary/Modal verb	0	0
Classifier	2	3
Connective	0	0
Locative	0	0
Negative	1	4
Post-verbal particle	1	1
Question word	3	3

These categories, which as we saw in Chapter 1 expand phrases by modifying nouns or verbs, or (in the case of connectives) link clauses, account for only about a third of closed class types at 2 years, and a mere 11% of closed class tokens. The development of these grammatical systems is still ahead of the child. We now turn from the 'typical' child to observations on the group of two-year-olds.

All Children: Frequencies of Open Class words. The conversations from which the two-year old sample is drawn took place in the home, and covered a variety of topics. The tables that follow provide lists of the most frequent open class items, which appear in the conversations of all five children. A complete frequency list of all the vocabulary used by the five two year old children is listed at the end of the chapter, along with separate lists for nouns, verbs, adjectives and adverbs, and the relevant categories from the set of eight closed classes. (A frequency listing of the complete set of vocabulary, over 3000 word-types, used by the children in our longitudinal database is at Appendix D.)

Before turning to the tables of most frequent items, it is worth pointing out that of the 332 different word-types that appear in the composite list of Spoken Words at the end of the chapter, only the first 83 (25% of the total) are used by all the children who make up our small sample of two year olds. This means that there is considerable individual variation in the two-year old vocabulary even among these five children.

Table 2.3. The most frequent nouns used by two-year-old children.

No.	Frequency	Character	Word-types
1.	45		nn dou6=place
2.	23		nn ze4ze1=sister
3.	21		nn ce1ce1=car
4.	18		nn syu1=book
5.	11		nn maai4=mother
6.	8		nn bo1bo1=ball
7.	8		nn de1di4=father
8.	7		nn maai4=mother
9.	6		nn cin1cau1=swing
10.	6		nn haai4=shoes

It is notable but not surprising that four of the ten most frequently used nouns are labels for family members. The other nouns also label very familiar features of the child's environment at this point in his development. The word dou6 appears as the most frequent item because in the grammatical labeling system used in our database compounds like nildou6 and go2dou6, 'here' and 'there', are categorized as sequences of two elements, with the first item as a determiner and dou6 as a noun.

Table 2.4. The most frequent verbs used by two-year-old children.

No.	Frequency	Character	Word-types
1.	43		vf hai6=is
2.	31		vf jau5=have
3.	16		vt hoi1=open
4.	15		vt daai3=to_bring
5.	13		vt lo2=to_take
6.	10		vt sik6=to_eat
7.	10		vt zing2=to_make
8.	8		verg dit3=to_fall_down
9.	8		vt coi5=compete-for
10.	8		vt tai2=to_look

Table 2.4 shows the ten most frequent verbs. Aside from the two function verbs, hai6 and jau5, which are very frequent in the language, all bar one of the remaining verbs are transitive. In common with children learning other languages, children learn relatively early to code salient agent-action-object events, especially when they themselves are the agent. Even though in Cantonese, as we have indicated, it is not always the case that both participants in the event are coded (the relevant nouns can be omitted if they can be supplied from context), the verb always is.

Table 2.5. The most frequent adjectives used by two-year-old children.

No.	Frequency	Character	Word-types
1.	23		adj hou2=good
2.	21		adj ging6=super
3.	12		adj ngaam1=correct
4.	12		adj waai6=out_of_order
5.	8		adj daai6=big
6.	8		adj laan5=lazy
7.	7		adj dak1ji3=cute
8.	7		adj do1=many
9.	7		adj geng1=afriad_of
10.	6		adj faai3=quick

There are 35 types of adjectives, which are used by the five children (the complete list appears at the end of the chapter). Again there is considerable individual variation. One point to draw attention to is the non-appearance of color words in Table 2.5. In fact three colour words do appear in the list, but with low frequencies: laam4sik1 and wong4sik1 (both with a corresponding frequency of 3) and hung4sik1 (a corresponding frequency of 2). This fits with the evidence from other languages, which suggest that only some two-year olds will use a small number of color terms.

Only a restricted set of adverbs is used at age two Table 2.6 lists all seven forms.

Table 2.6. The most frequent adverbs used by two-year-old children.

No.	Frequency	Character	Word-types
1.	36		adv _m maan6=slow
2.	30		adv _i Hou2=very
3.	17		adv _m maan2=slow
4.	11		adv _f zung6=still
5.	2		adv _i gam3=so
6.	1		adv _f sin1=first
7.	1		adv _f zoi3=again

It would seem that as a category, adverbs play a relatively marginal role in the child's language at this point, with only two or three isolated examples appearing with any frequency. Notice however that some items are very frequent. In one case, *maan6maan2*, this came about because the child repeated the word a number of times in a play situation. The following extract shows this clearly:

@Situation: The child looks for the traffic light .

*INV: nei5 wan2 mat1je5 &aa3 ?

*CHI: xxx &aa3 , maan6maan2 .

*INV: hung4luk6dang1 .

*CHI: maan6maan2 .

*INV: hai6 &aa4 ?

*INV: jiu3 maan6maan2 &aa4 ?

*INV: &ei1 , neildou6 &lo1 .

%@Situation: The investigator turns to the page with the traffic light .

*INV: &hai1 .

*CHI: maan6maan2 ## .

@Situation: The child slowly moves the traffic light .

*CHI: maan6maan2 maan6maan2 !

*CHI: maan6 , maan6 .

@Situation: The traffic light is taken out of the book .

*INV: ailjo1 ## .

@Situation: The investigator puts it back to position .

*CHI: maan6 ## !

*INV: faai3 ding6 maan6 &aa3 ?

*INV: nei5 jiu3 faai3 ding6 maan6 &aa3 ?

All Children: Frequencies of Closed Class words. The 'typical' child from this group, as we have seen, uses a limited range of closed class words. Table 2.7 list the complete set of closed class words used by any of the children in our sample, in the eight highlighted categories.

Table 2.7. List of closed class word-types used by two-year-old children¹.

<u>Aspect</u>	<u>Locative</u>	<u>Negative</u>	<u>Connective</u>	<u>Pronouns</u>	<u>Question</u>	<u>Classifier</u>	<u>Post-verbal</u>
<u>Marker</u>					<u>words</u>		<u>particles</u>
zo2	zO2	mou5	(none)	ngo5	matlje5	bun2	dou2
zyu6				nei5	me1	go3	faan1
Haa5				keoi5	bin1	di1	jyun4
						gaan1	Laan6
						zek3	haa5
						gAa3	maai4
						baa2	
						hou6	
						go3go3	
						kap1	

¹ Readers will note that while Haa5 appears in this table as an aspect marker, it is designated 'post-verbal particle' in the lists at the end of

the chapter. The end-of-chapter lists were derived automatically by CLAN procedures from our longitudinal database, which had grammatical category labels assigned when it was originally constructed. Table 2.7 is based on an analysis of the transcriptions by hand. In this and the later tables we have used grammatical category labels from Matthews and Yip (1994).

While in general the profile across the sample resembles what we have seen so far of the 'typical' child, if we look across the group as a whole, we do see a wider range of classifiers and post verbal particles. At the beginning of the third year, these elements are just beginning to appear in children's language, perhaps tied to particular nouns (in the case of classifiers) or verbs (in the case of the particles).

2.3 Syntax

Now that we have reviewed open and closed classes in the two year old child, we turn to the issue of how elements of these categories are combined in sentences the children are able to produce. For these examples we have provided structures used by the typical child. The examples are organized according to the list below, in this and subsequent chapters. Note that not all of the structures are exemplified for two-year-olds, which is in itself informative. It is also apparent in the two year old sample that the child makes frequent use of a strategy of repetition of what the adult has said. For this chapter only, examples of this behavior are given under a separate heading under 'other features'.

Phrase structure

- Noun phrases
 - Nn – Noun only
 - Pr – Pronoun
 - D.cl – determiner + classifier



- Adj.n – adjective + noun
- D.n – determiner + noun
- D.cl.n – determiner + classifier + noun
- Q.cl.n – quantifier + classifier + noun
- Verb phrase
 - Cop – copula verb
 - V.asp – main verb + aspect marker
 - A.v – adverb + verb
 - V.prt – verb + particle
 - V.asp.prt – verb + aspect marker + particle
 - Aux. – auxiliary verb
 - Aux.v – auxiliary verb + main verb
 - V...V -- verb1 + verb2
- Prepositional phrase
 - Prep.n – preposition + noun phrase

Major sentence structures

- Declaratives -- affirmative
 - V – main verb appearing without noun arguments
(although often with a sentence final particle)
 - VO – verb + object
 - VC – verb + complement
 - SV – subject + verb
 - SC – subject + complement (no copula verb)
 - SVO – subject + verb + object
 - SVC – subject + verb + complement
 - SVOO – subject + verb + indirect object + direct object
- Declaratives – negative
- Interrogative
 - Intonation question

- Particle question
- A-not-A question
- Wh question
- Imperative

Other features

Non-adult form (developmental error)

Examples of structures used by two-year-old children

Phrase structures

Noun Phrase

n

*CHI: < ze4ze1 > [<] # sik1 aa3 ## .

*CHI: ce1 .

pr

*INV: ai1jaa3 , dam2 zo2 keoi5 aa4 ?

*CHI: dam2 zo2 keoi5 o3 .

d.cl

*CHI: tai2 nei1 go3 .

*CHI: go2 di1 aa3 .

adj.n

*INV: sai3 jyu5 ding6 daai6 jyu5 aa3 ?

*CHI: daai6 jyu5 o3 .

d.n

*CHI: co5 go2 dou6 aa3 .

d.cl.n

no example found

q.cl.n

no example found

adj.n

no example found

Verb Phrase

cop

*INV: < lo2 neil di1 aa4 > [>] ?

*CHI: < hai6 aa3 ## > [<] .

v.asp

*CHI: lo2 zyu6 .

*CHI: tyun5 zo2 .

a.v

*CHI: zung6 jau5 aa3 .

v.prt

no example found

v.asp.prt

no example found

aux.v

no example found

aux

*CHI: < ze4ze1 > [<] # sik1 aa3 ## .

V...V

*INV: waa3 , mang1 zo2 ceot1 lei4 Laa4 ?

*CHI: mang1 zo2 ceot1 lei4 aa3 .

Prepositional Phrase**prep.n**

no example found

Sentence Structures**Declaratives – affirmative****SVO**

no example found

VO

*CHI: lo2 je5 aa3 .

*CHI: tai2 nei1 go3 .

SV

*INV: nei5 zi6gei2 # < sik1 m4 sik1 > [>] # ?

*CHI: < ze4ze1 > [<] # sik1 aa3 ## .

*CHI: nei5 zing2 .

SC

*CHI: &m4&m1 cau3 .

VC

*CHI: co5 go2 dou6 aa3 .

V

*CHI: waan2waan2 aa3 .

*CHI: lo2 je5 aa3 .

*CHI: jau5 aa3 .

SVOO

no example found

SVC

no example found

Declaratives – negative**m4**

*CHI: m4 hoil dou2 o3 .

*CHI: m4 gin3 aa3 ## .

*CHI: m4 Oi3 go2 go3 aa3 .

m4hai6

no example found

mou5

*CHI: mou5 aa3 .

mei6

no example found

m4hou2

no example found

Interrogatives

Intonation question

no example found

Particle question

no example found

A-not-A question

no example found

Wh question

no example found

Imperatives

no example found

Other Features

Serial Verb Construction

no example found

Topicalisation

no example found

Frequent Imitation of Adult's Speech

*INV: jau5 .

*CHI: jau5 aa3 .

*INV: laa4 , nei5 zing2 laa1 .

*CHI: nei5 zing2 .

*INV: waa3 , mang1 zo2 ceot1 lei4 Laa4 ?

*CHI: mang1 zo2 ceot1 lei4 aa3 .

*INV: ailjaa3 , dam2 zo2 keoi5 aa4 ?

*CHI: dam2 zo2 keoi5 o3 .

Developmental Error / Non-adult Form

Word Order (negative)

*CHI: m4 hoil dou2 o3 .

Noun reduplication

*CHI: < &waa1 , ce1ce1 > [=! pointing at the car on the page] .

Verb reduplication

*CHI: lo2lo2 aa3 .

*CHI: Dou2 aa3 , dou2dou2 aa3 .

Self-expansion

*CHI: Dou2 aa3 , dou2dou2 aa3 .

*CHI: m4 Oi3 aa3 , m4 Oi3 go2 go3 aa3 .

*CHI: co5 aa3 , co5 go2 dou6 aa3 .

Unusual negative (usually m4 followed by a verb)

*INV: me1 lei4 ge3 &dzek1 ?

*CHI: m4 me1 lei4 .

*INV: din6si6 lo1 .

*CHI: m4 din6si6 .

(the child was not cooperative and actually protesting)

Wrong answer/response to a suggestion

*INV: ngo5 bong1 nei5 zing2 aa1 .

*CHI: m4 zing2 .

Vocabulary used by two-year-old children

332 Total number of different word types used

1581 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	155		sfp aa3=SFP
2.	66		ex m4=EX
3.	51		det nei1=this
4.	45		nn dou6=place
5.	43		vf hai6=is
6.	36		advn maan6=slow
7.	31		vf jau5=have
8.	30		adv Hou2=very
9.	23		adj hau2=good
10.	23		nn ze4ze1=sister
11.	21		adj ging6=super
12.	21		nn ce1ce1=car
13.	20		asp zo2=ASP
14.	20		ex o3=EX
15.	20		neg mou5=nothing
16.	18		nn syu1=book
17.	17		advn maan2=slow
18.	17		cl bun2=CL
19.	16		vt hoi1=open
20.	15		nnpr ngo5=I_me
21.	15		vt daai3=to_bring
22.	14		det go2=that

No.	Frequency	Character	Word-types
23.	13		nnpr nei5=you
24.	13		sfp aal=SFP
25.	13		sfp lei4=SFP
26.	13		vt lo2=to_take
27.	12		adj ngaaml=correct
28.	12		adj waai6=out_of_order
29.	11		advf zung6=still
30.	11		ctc dak1=CTC
31.	11		nnpp hou6zeon1=NNPP
32.	11		nn maalmi4=mother
33.	10		ENG Alice
34.	10		vt sik6=to_eat
35.	10		vt zing2=to_make
36.	9		cl go3=CL
37.	9		sfp e3=SFP
38.	8		adj daai6=big
39.	8		adj laan5=lazy
40.	8		ex waal=EX
41.	8		nn bolbol=ball
42.	8		nn delidi4=father
43.	8		verg dit3=to_fall_down
44.	8		vt coi5=compete-for
45.	8		vt tai2=to_look
46.	7		adj dak1ji3=cute
47.	7		adj dol=many
48.	7		adj geng1=afriad_of
49.	7		nn maalmaal=mother

No.	Frequency	Character	Word-types
50.	7		prt ngok6ngok6=fierce
51.	7		q ji6=two
52.	7		q sei3=four
53.	7		vt baai2=place
54.	7		vt maai5=to_buy
55.	7		vt waan2=to_play
56.	6		adj faai3=quick
57.	6		cl di1=CL
58.	6		cl gaan1=CL
59.	6		nnpp zeon3zeon3=NNPP
60.	6		nn cin1cau1=swing
61.	6		nn haai4=shoes
62.	6		nn uk1=house
63.	6		prt dou2=PRT
64.	6		q jat1=one
65.	6		q saam1=three
66.	6		vt zung1ji3=love
67.	5		cl zek3=CL
68.	5		ex waa3=EX
69.	5		nn Zyu2=the_Lord
70.	5		nn baa1baa1=father
71.	5		nn bin6bin6=excrements
72.	5		nn ci3so2=toilet
73.	5		nn jyu5=rain
74.	5		nn lou5syu2=mouse
75.	5		q loeng5=two
76.	5		sfp laa3=SFP

No.	Frequency	Character	Word-types
77.	5		sfp lo3=SFP
78.	5		vi hai2=present
79.	5		vt Zyun3=rotate
80.	5		vt daap6=put_into_a_pile
81.	5		vt jam2=to_drink
82.	5		vt jiu3=want
83.	5		vt sik1=to_know
84.	4		ENG Garfield
85.	4		adj goulgoul=high
86.	4		adj naulnaul=to_get_angry
87.	4		adj so4=silly
88.	4		asp zyu6=ASP
89.	4		cl gAa3=CL
90.	4		com Di1=COM
91.	4		dir lok6=down
92.	4		nnpp laam4laam4=NNPP
93.	4		nn goek3=foot
94.	4		nn je5=thing
95.	4		nn se4=snake
96.	4		q luk6=six
97.	4		vi zi1=know
98.	4		vt Oi3=love
99.	4		vt cai3=to_build_up
100.	4		vt daa2=hit
101.	4		vt gin3=see
102.	3		ENG Kitty
103.	3		adj laam4sik1=blue_colour

No.	Frequency	Character	Word-types
104.	3		adj luk6sik1=green_colour
105.	3		adj saai3=dry_in_the_sun
106.	3		adj wong4sik1=yellow_color
107.	3		cl baa2=CL
108.	3		ex ailjo1=EX
109.	3		ex m2=EX
110.	3		ex m3=EX
111.	3		nnloc zO2=left
112.	3		nn ce1=car
113.	3		nn mui4mui2=yonger_sister
114.	3		nn ngau4ngau4=cow
115.	3		nn ping4gwo2=apple
116.	3		nn seng1=sound
117.	3		nn tau4=head
118.	3		nn zyulzyul=pig
119.	3		sfp aa4=SFP
120.	3		vi sei2=to_die
121.	3		vt co5=sit
122.	3		vt sai2=to_wash
123.	3		vt waan2waan2=to_play
124.	3		vt zildou6=to_know
125.	2		ENG a
126.	2		ENG c
127.	2		adj Gou1=tall
128.	2		adj goul=high
129.	2		adj hung4sik1=red_color
130.	2		adj jail=naughty

No.	Frequency	Character	Word-types
131.	2		adj leng3=pretty
132.	2		adv gam3=so
133.	2		aux wui5=would
134.	2		cl hou6=CL
135.	2		ex ailjaak3=EX
136.	2		ex jaa3=EX
137.	2		nnpp gaalkei4=NNPP
138.	2		nnpp tin1faan4=NNPP
139.	2		nnpp zeon3=NNPP
140.	2		nn baal si2=bus
141.	2		nn baan1maa5=zebra
142.	2		nn bat1=pen
143.	2		nn beng6beng6=sick
144.	2		nn bol=ball
145.	2		nn caang2zap1=orange_juice
146.	2		nn cung4=worm
147.	2		nn daan6goul=cake
148.	2		nn fo2ce1=train
149.	2		nn gOul=cake
150.	2		nn gaalze1=elder_sister
151.	2		nn gaat6zaat2=cockroach
152.	2		nn gailgail=chicken
153.	2		nn gau2gau2=dog
154.	2		nn goek3goek3=foot
155.	2		nn gung1jyun2=graden
156.	2		nn maaulmaaul=cat
157.	2		nn naai5naai5=milk

No.	Frequency	Character	Word-types
158.	2		nn ngaan5geng2=spectacles
159.	2		nn syulsyul=book
160.	2		nn syut3goul=ice_cream
161.	2		nn taai3joeng4=sun
162.	2		nn zI2=paper
163.	2		nn ze1ze1=umbrella
164.	2		nn zi6=word
165.	2		prep Hai2=at
166.	2		prep bong1=help
167.	2		prep tung4=with
168.	2		prt faan1=PRT
169.	2		prt jyun4=PRT
170.	2		q gau2=nine
171.	2		q m5=five
172.	2		q ng5=five
173.	2		sfp e1=SFP
174.	2		sfp e2=SFP
175.	2		sfp lo1=SFP
176.	2		vd bei2=give
177.	2		verg laan6=rot
178.	2		vt Dou2=pour
179.	2		vt cyun1=broken_through
180.	2		vt daap3=to_take
181.	2		vt duk6=read
182.	2		vt heoi3=to_go
183.	2		vt naau6=to_scold
184.	2		wh bin1=which

No.	Frequency	Character	Word-types
185.	2		wh mat1je5=what
186.	2		wh me1=what
187.	1		ENG apple
188.	1		ENG b
189.	1		adj cau3=smelly
190.	1		adj coeng4=long
191.	1		adj cung5=heavy
192.	1		adj faat3wan1=crazy
193.	1		adj hak1sik1=black
194.	1		adj hoeng1=giving_good_smell
195.	1		adj hoi1sam1=happy
196.	1		adj hou2sik6=tastful
197.	1		adj hou2waan2=interesting
198.	1		adj leng3leng3=pretty
199.	1		adj loeng4=cool
200.	1		adj sai3=small
201.	1		adj tyun5=broken
202.	1		advf sin1=first
203.	1		advf zoi3=again
204.	1		cl go3go3=CL
205.	1		cl kap1=CL
206.	1		ctc dou3=CTC
207.	1		dir ceot1=out
208.	1		ex aa6=EX
209.	1		ex aak1=EX
210.	1		ex haa1=EX
211.	1		ex haa2=EX

No.	Frequency	Character	Word-types
212.	1		ex haa3=EX
213.	1		ex m4goi1=EX
214.	1		ex o4=EX
215.	1		nnpp maK6=NNPP
216.	1		nnpr keoi5=he_or_she
217.	1		nn Goulgoul=cake
218.	1		nn Jip6=leaf
219.	1		nn Mei6=taste
220.	1		nn biul=watch
221.	1		nn bo1zai2=ball
222.	1		nn bou3zi2=newspaper
223.	1		nn cai3tou4=puzzle
224.	1		nn celluk1=wheel
225.	1		nn cin2=money
226.	1		nn daai6hok6=university
227.	1		nn din6si6=television
228.	1		nn din6waa2=telephone
229.	1		nn faa1faa1=flower
230.	1		nn faan6=rice
231.	1		nn faan6faan6=rice
232.	1		nn feilgeil=plane
233.	1		nn fo2=fire
234.	1		nn fong2=room
235.	1		nn gai1bei2=chicken_thigh
236.	1		nn gam1jyu2=golden_fish
237.	1		nn go4gol=elder_brother
238.	1		nn gulmaal=aunt

No.	Frequency	Character	Word-types
239.	1		nn gung1sil=office
240.	1		nn gung1zai2=doll
241.	1		nn hap2hap2=box
242.	1		nn hung4zai2=bear
243.	1		nn hyun1hyun1=circle
244.	1		nn jil1jil1=aunt
245.	1		nn jyu2jyu2=fish
246.	1		nn kaat1zi2=paper_card
247.	1		nn lung1=hole
248.	1		nn ml1=faece
249.	1		nn min6baaul=bread
250.	1		nn mou2mou2=hat
251.	1		nn mou5mou5=dance
252.	1		nn mun4=door
253.	1		nn naai5=milk
254.	1		nn naam4haai4zi2=boy
255.	1		nn ngaan5zing1=eye
256.	1		nn slk1=color
257.	1		nn sailgwaa1=water_melon
258.	1		nn sau2=hand
259.	1		nn sau2sau2=hand
260.	1		nn seoi3=age
261.	1		nn sin3sin3=a_line
262.	1		nn sing1sing1=star
263.	1		nn sing2sing2=string
264.	1		nn siu2baa1=mini_bus
265.	1		nn sol1faa2=sofa

No.	Frequency	Character	Word-types
266.	1		nn so2si4=key
267.	1		nn syun4syun4=ship
268.	1		nn tai4zi2=grape
269.	1		nn to1haai2=slipper
270.	1		nn tong2tong2=candy
271.	1		nn tou3zai2=rabbit
272.	1		nn uk1kei2=home
273.	1		nn waat6tai1=slide
274.	1		nn ze1=umbrella
275.	1		prep Bei2=to
276.	1		prt Laan6=PR T
277.	1		prt haa5=PR T
278.	1		prt maai4=PR T
279.	1		q baat3=eight
280.	1		q cat1=seven
281.	1		q sap6=ten
282.	1		q sap6ji6=twelve
283.	1		q sap6saam1=thirteen
284.	1		rfl zi6gei2=self
285.	1		sfp aak4=SFP
286.	1		sfp ei1jaak3=SFP
287.	1		sfp gaa3=SFP
288.	1		sfp ge3=SFP
289.	1		sfp ho2=SFP
290.	1		sfp lok1=SFP
291.	1		sfp n2=SFP
292.	1		sfp n4=SFP

No.	Frequency	Character	Word-types
293.	1		sfp waa2=SFP
294.	1		vi Co5=sit
295.	1		vi Zyu6=live
296.	1		vi haam3=cry
297.	1		vi juk1=move
298.	1		vi kei5=stand
299.	1		vi siu3=to-smile
300.	1		vi tiu3=to_jump
301.	1		vt Bong1=help
302.	1		vt Sik1=to_switch_off
303.	1		vt caak3=to_break_open
304.	1		vt cung1=flush
305.	1		vt daam1=to_carry_up
306.	1		vt daan6=jump
307.	1		vt dam2=to_throw_away
308.	1		vt dang2=wait
309.	1		vt diu6=interchange
310.	1		vt dou2dou2=pour
311.	1		vt gei3dak1=remember
312.	1		vt gong2=say
313.	1		vt hok6=to_learn
314.	1		vt kam2=cover
315.	1		vt kam4=to_climb
316.	1		vt laai1=to_pull
317.	1		vt lo2lo2=to_take
318.	1		vt maat3=to_wipe
319.	1		vt mang1=to_push_out

No.	Frequency	Character	Word-types
320.	1		vt mo4=grind
321.	1		vt ol=to_go_for_excretments
322.	1		vt saan1=close
323.	1		vt sai2sai2=to_wash
324.	1		vt saul=to_hide
325.	1		vt se2=to_write
326.	1		vt sik6sik6=to_eat
327.	1		vt tek3=to_kick
328.	1		vt waak6=to_draw
329.	1		vt wan2=find
330.	1		vt wat1=to_bend
331.	1		vt zyUn3=change
332.	1		vt zyu2=cook

Nouns used by two-year-old children

110 Total number of different word types used

330 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	45		nn dou6=place
2.	23		nn ze4ze1=sister
3.	21		nn ce1ce1=car
4.	18		nn syu1=book
5.	11		nn maai4=mother
6.	8		nn bo1bo1=ball
7.	8		nn de1di4=father
8.	7		nn maai4=mother
9.	6		nn cin1caul=swing
10.	6		nn haai4=shoes
11.	6		nn uk1=house
12.	5		nn Zyu2=the_Lord
13.	5		nn baai4=father
14.	5		nn bin6bin6=excrements
15.	5		nn ci3so2=toilet
16.	5		nn jyu5=rain
17.	5		nn lou5syu2=mouse
18.	4		nn goek3=foot
19.	4		nn je5=thing
20.	4		nn se4=snake
21.	3		nn ce1=car

No.	Frequency	Character	Word-types
22.	3		nn mui4mui2=yonger_sister
23.	3		nn ngau4ngau4=cow
24.	3		nn ping4gwo2=apple
25.	3		nn seng1=sound
26.	3		nn tau4=head
27.	3		nn zyu1zyu1=pig
28.	2		nn baa1si2=bus
29.	2		nn baan1maa5=zebra
30.	2		nn bat1=pen
31.	2		nn beng6beng6=sick
32.	2		nn bo1=ball
33.	2		nn caang2zap1=orange_juice
34.	2		nn cung4=worm
35.	2		nn daan6gou1=cake
36.	2		nn fo2ce1=train
37.	2		nn gOu1=cake
38.	2		nn gaalze1=elder_sister
39.	2		nn gaat6zaat2=cockroach
40.	2		nn gailgai1=chicken
41.	2		nn gau2gau2=dog
42.	2		nn goek3goek3=foot
43.	2		nn gung1jyun2=graden
44.	2		nn maau1maau1=cat
45.	2		nn naai5naai5=milk
46.	2		nn ngaan5geng2=spectacles
47.	2		nn syu1syu1=book
48.	2		nn syut3gou1=ice_cream

No.	Frequency	Character	Word-types
49.	2		nn taai3joeng4=sun
50.	2		nn zi2=paper
51.	2		nn ze1ze1=umbrella
52.	2		nn zi6=word
53.	1		nn Goulgoul=cake
54.	1		nn Jip6=leaf
55.	1		nn Mei6=taste
56.	1		nn biu1=watch
57.	1		nn bo1zai2=ball
58.	1		nn bou3zi2=newspaper
59.	1		nn cai3tou4=puzzle
60.	1		nn ce1luk1=wheel
61.	1		nn cin2=money
62.	1		nn daai6hok6=university
63.	1		nn din6si6=television
64.	1		nn din6waa2=telephone
65.	1		nn faal faal=flower
66.	1		nn faan6=rice
67.	1		nn faan6faan6=rice
68.	1		nn feilgeil=plane
69.	1		nn fo2=fire
70.	1		nn fong2=room
71.	1		nn gai1bei2=chicken_thigh
72.	1		nn gam1jyu2=golden_fish
73.	1		nn go4gol=elder_brother
74.	1		nn gulmaal=aunt
75.	1		nn gung1sil=office

No.	Frequency	Character	Word-types
76.	1		nn gung1zai2=doll
77.	1		nn hap2hap2=box
78.	1		nn hung4zai2=bear
79.	1		nn hyun1hyun1=circle
80.	1		nn jil1jil1=aunt
81.	1		nn jyu2jyu2=fish
82.	1		nn kaat1zi2=paper_card
83.	1		nn lung1=hole
84.	1		nn m1=faece
85.	1		nn min6baau1=bread
86.	1		nn mou2mou2=hat
87.	1		nn mou5mou5=dance
88.	1		nn mun4=door
89.	1		nn naai5=milk
90.	1		nn naam4haai4zi2=boy
91.	1		nn ngaan5zing1=eye
92.	1		nn sik1=color
93.	1		nn sail gwaal=water_melon
94.	1		nn sau2=hand
95.	1		nn sau2sau2=hand
96.	1		nn seoi3=age
97.	1		nn sin3sin3=a_line
98.	1		nn sing1sing1=star
99.	1		nn sing2sing2=string
100.	1		nn siu2baa1=mini_bus
101.	1		nn sol faa2=sofa
102.	1		nn so2si4=key

No.	Frequency	Character	Word-types
103.	1		nn syun4syun4=ship
104.	1		nn tai4zi2=grape
105.	1		nn to1haai2=slipper
106.	1		nn tong2tong2=candy
107.	1		nn tou3zai2=rabbit
108.	1		nn uk1kei2=home
109.	1		nn waat6tai1=slide
110.	1		nn zel=umbrella

Verbs used by two-year-old children

79 Total number of different word types used

314 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	43		vf hai6=is
2.	31		vf jau5=have
3.	16		vt hoi1=open
4.	15		vt daai3=to_bring
5.	13		vt lo2=to_take
6.	10		vt sik6=to_eat
7.	10		vt zing2=to_make
8.	8		verg dit3=to_fall_down
9.	8		vt coi5=compete-for
10.	8		vt tai2=to_look
11.	7		vt baai2=place
12.	7		vt maai5=to_buy
13.	7		vt waan2=to_play
14.	6		vt zung1ji3=love
15.	5		vi hai2=present
16.	5		vt Zyun3=rotate
17.	5		vt daap6=put_into_a_pile
18.	5		vt jam2=to_drink
19.	5		vt jiu3=want
20.	5		vt sik1=to_know
21.	4		dir lok6=down
22.	4		vi zil=know

No.	Frequency	Character	Word-types
23.	4		vt Oi3=love
24.	4		vt cai3=to_build_up
25.	4		vt daa2=hit
26.	4		vt gin3=see
27.	3		vi sei2=to_die
28.	3		vt co5=sit
29.	3		vt sai2=to_wash
30.	3		vt waan2waan2=to_play
31.	3		vt zi1dou6=to_know
32.	2		vd bei2=give
33.	2		verg laan6=rot
34.	2		vt Dou2=pour
35.	2		vt cyun1=broken_through
36.	2		vt daap3=to_take
37.	2		vt duk6=read
38.	2		vt heoi3=to_go
39.	2		vt naau6=to_scold
40.	1		dir ceot1=out
41.	1		vi Co5=sit
42.	1		vi Zyu6=live
43.	1		vi haam3=cry
44.	1		vi juk1=move
45.	1		vi kei5=stand
46.	1		vi siu3=to-smile
47.	1		vi tiu3=to_jump
48.	1		vt Bong1=help
49.	1		vt Sik1=to_switch_off

No.	Frequency	Character	Word-types
50.	1		vt caak3=to_break_open
51.	1		vt cung1=flush
52.	1		vt daam1=to_carry_up
53.	1		vt daan6=jump
54.	1		vt dam2=to_throw_away
55.	1		vt dang2=wait
56.	1		vt diu6=interchange
57.	1		vt dou2dou2=pour
58.	1		vt gei3dak1=remember
59.	1		vt gong2=say
60.	1		vt hok6=to_learn
61.	1		vt kam2=cover
62.	1		vt kam4=to_climb
63.	1		vt laai1=to_pull
64.	1		vt lo2lo2=to_take
65.	1		vt maat3=to_wipe
66.	1		vt mang1=to_push_out
67.	1		vt mo4=grind
68.	1		vt o1=to_go_for_excretments
69.	1		vt saan1=close
70.	1		vt sai2sai2=to_wash
71.	1		vt sau1=to_hide
72.	1		vt se2=to_write
73.	1		vt sik6sik6=to_eat
74.	1		vt tek3=to_kick
75.	1		vt waak6=to_draw
76.	1		vt wan2=find

No.	Frequency	Character	Word-types
77.	1		vt wat1=to_bend
78.	1		vt zyUn3=change
79.	1		vt zyu2=cook

Adjectives used by two-year-old children

35 Total number of different word types used

158 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	23		adj hou2=good
2.	21		adj ging6=super
3.	12		adj ngaam1=correct
4.	12		adj waai6=out_of_order
5.	8		adj daai6=big
6.	8		adj laan5=lazy
7.	7		adj dak1ji3=cute
8.	7		adj do1=many
9.	7		adj geng1=afriad_of
10.	6		adj faai3=quick
11.	4		adj goulgoul=high
12.	4		adj naulnaul=to_get_angry
13.	4		adj so4=silly
14.	3		adj laam4sik1=blue_colour
15.	3		adj luk6sik1=green_colour
16.	3		adj saai3=dry_in_the_sun
17.	3		adj wong4sik1=yellow_color
18.	2		adj Goul=tall
19.	2		adj goul=high
20.	2		adj hung4sik1=red_color
21.	2		adj jail=naughty

22.	2		adj leng3=pretty
23.	1		adj cau3=smelly
24.	1		adj coeng4=long
25.	1		adj cung5=heavy
26.	1		adj faat3wan1=crazy
27.	1		adj hak1sik1=black
28.	1		adj hoeng1=giving_good_smell
29.	1		adj hoi1sam1=happy
30.	1		adj hou2sik6=tastful
31.	1		adj hou2waan2=interesting
32.	1		adj leng3leng3=pretty
33.	1		adj loeng4=cool
34.	1		adj sai3=small
35.	1		adj tyun5=broken

Adverbs used by two-year-old children

7 Total number of different word types used

98 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	36		adv _m maan ₆ =slow
2.	30		adv _i Hou ₂ =very
3.	17		adv _m maan ₂ =slow
4.	11		adv _f zung ₆ =still
5.	2		adv _i gam ₃ =so
6.	1		adv _f sin ₁ =first
7.	1		adv _f zoi ₃ =again

Closed Class categories use by two-year-old children

Aspect Marker used by two-year-old children

- 2 Total number of different word types used
24 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	20		asp zo2=ASP
2.	4		asp zyu6=ASP

Locatives used by two-year-old children

- 1 Total number of different word types used
3 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	3		nnloc zO2=left

Negative used by two-year-old children

- 1 Total number of different word types used
20 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	20		neg mou5=nothing

Connective used by two-year-old children

- 0 Total number of different word types used
0 Total number of words (tokens)

Pronouns used by two-year-old children

- 3 Total number of different word types used
29 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	15		nnpr ngo5=I_me
2.	13		nnpr nei5=you
3.	1		nnpr keoi5=he_or_she

Question words used by two-year-old children

- 3 Total number of different word types used
6 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	2		wh bin1=which
2.	2		wh mat1je5=what
3.	2		wh me1=what

Classifiers used by two-year-old children

- 10 Total number of different word types used
54 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	17		cl bun2=CL
2.	9		cl go3=CL
3.	6		cl di1=CL
4.	6		cl gaan1=CL
5.	5		cl zek3=CL
6.	4		cl gAa3=CL
7.	3		cl baa2=CL
8.	2		cl hau6=CL
9.	1		cl go3go3=CL
10.	1		cl kap1=CL

Post-Verbal Particle used by two-year-old children

- 7 Total number of different word types used
 20 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	7		prt ngok6ngok6=fierce
2.	6		prt dou2=PRT
3.	2		prt faan1=PRT
4.	2		prt jyun4=PRT
5.	1		prt Laan6=PRT
6.	1		prt haa5=PRT
7.	1		prt maai4=PRT

Chapter 3. Language characteristics of three-year-old children

3.1 General language measures

Table 3.1. General language measures for three-year-old children.

	Name	Sex	Age	Language Measures				
				MLU	MLU#5	Type	Token	VOCD Reynell*
1.	LCK	M	2;11.19	2.64	7.40	78	169	38.96
2.	LCN	M	2;11.29	4.05	9.00	147	677	55
3.	LLH	M	2;11.18	2.46	5.80	67	114	41
4.	LWS	M	2;11.28	2.96	7.60	147	374	43
5.	YCH	M	2;11.29	2.48	5.80	114	405	46
6.	LCL	F	3;01.06	2.81	9.80	157	379	58
7.	CSY	F	2;11.06	2.82	6.60	149	480	38
8.	CWT	F	3;00.29	3.71	8.60	136	517	48
9.	DGC	F	3;01.05	6.52	21.00	242	1130	54
10.	TTC	F	2;11.16	2.88	10.60	205	756	35
Median				2.85	7.50	141	442	41.06

*Reynell Normal Range: (-1.5 sd - +1.5 sd) 31 - 43

In Table 3.1 we provide information on MLU (based on 100 utterances); MLU5, which is the mean length of utterance of the 5 longest utterances the child produces; and VOCD, which as we indicated earlier is based on repeated sampling of 50 tokens, and does not depend on sample size. For the MLU scores and VOCD, the table

also identifies the score that is located at the median. With a small number of subjects, and considerable individual variation on each of the general measures, means would be suspect as measures of typicality. Accordingly, we once again identify a median child on measures of expressive language. Child number 7 comes closest to the median, if we take into account the three measures MLU, TYPES and VOCD (indicated in bold).

Table 3.1 also includes each child raw score on the Reynell Developmental Language Scale (Receptive). All children in the group are within normal limits or above for receptive ability for three year olds. It is clear from the general measures that there is considerable individual variation in the group. This is apparent in the ranges for both syntax (MLU: 2.46—6.52) and vocabulary (Types: 67—242, Tokens: 114-1130).

3.2 Vocabulary—Open class and Closed class

The ‘Typical’ Child: Open and Closed Class. Taking a typical child as an example, we can explore the words that a child uses at this age. Figure 3.1 shows that a typical child has about an equal number of closed class and noun types in a twenty minute conversation.

Figure 3.1. Distribution of word-types used by a typical three-year-old child in a conversation.

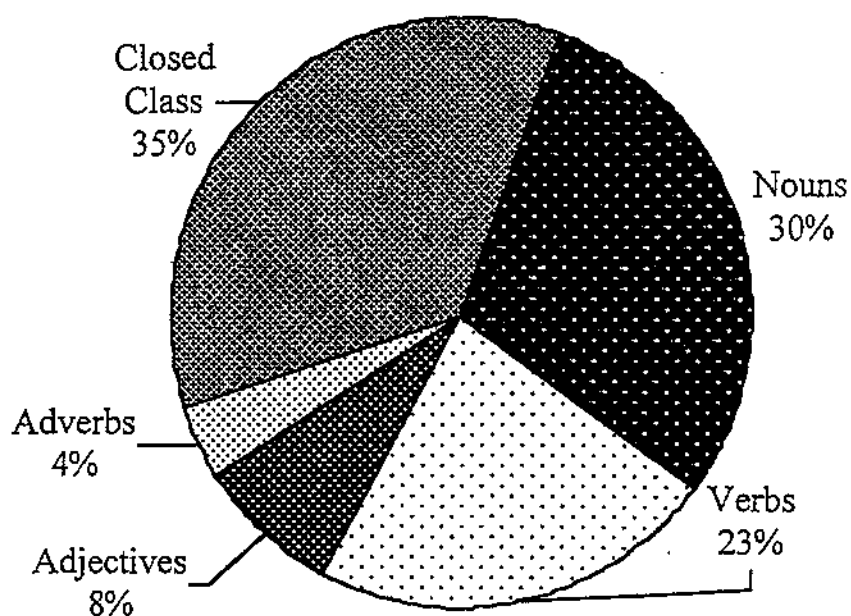
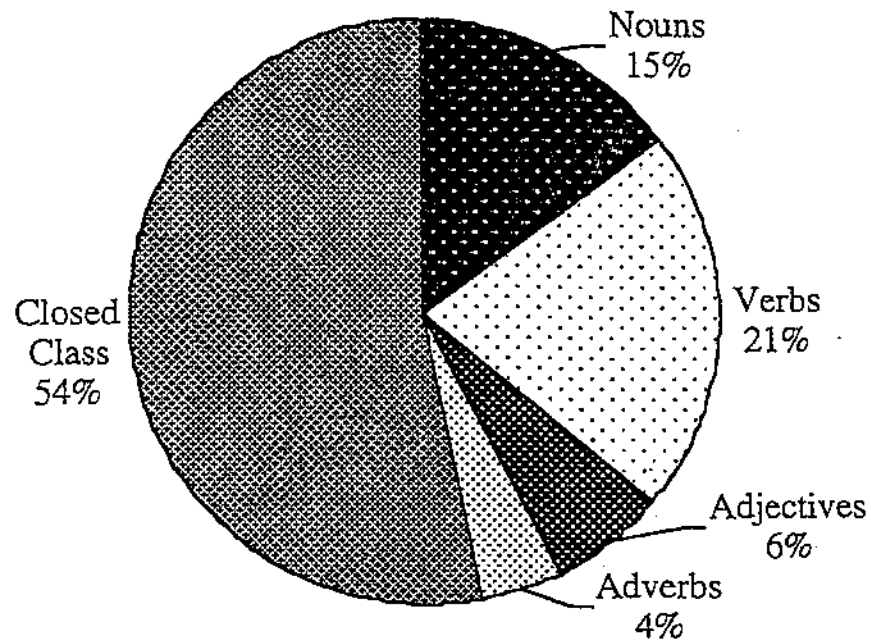


Figure 3.2 shows that of all of the word-tokens used in the sample, there is a majority of closed class words used (54% of all words used in this child's sample). This means that over half of all the words that a three-year-old used in a conversation consisted of words like classifiers, question words, etc. This is a considerable increase over the proportion of closed class words (39%) used by the typical two-year-old.

Figure 3.2. Distribution of word-tokens used by a typical three-year-old child in a conversation



All Children: Frequencies of Open Class words. Table 3.2 shows the total number of open class types and tokens produced by all of the three-year-old children.

Table 3.2. Open Class – Types and Tokens produced by three-year-old children.

No. Grammatical Categories			Types	Tokens
1.	Adjective	adj	70	294
2.	Focus adverb	advf	7	76
3.	Adverb of intensity	advi	4	42
4.	Adverb of manner	advn	1	3
5.	Sentential adverb	advs	15	74
6.	Noun	nn	198	677
7.	Proper name	nnpp	13	18
8.	Directional verb	dir	3	14
9.	Ditransitive verb	vd	1	10
10.	Ergative verb	verg	2	6
11.	Function verb	vf	4	288
12.	Intransitive verb	vi	20	89
13.	Transitive verb	vt	100	635
Open Class Total			438	2226

As the data were collected during a bath-time setting (the child bathed a doll) the most frequent words used were those referring either to the activity in which the child was engaged, or to the child's family. Table 3.3 shows the 12 most frequently occurring nouns in the conversations of all of the ten three-year-old children (see the end of the chapter for the complete list of nouns used by the ten children).

Table 3.3. The most frequent nouns used by three-year-old children.

No.	Frequency	Character	Word-types
1.	38		nn dou6=place
2.	23		nn faan1 gaan2=soap
3.	23		nn je5=thing
4.	21		nn Saam1=clothes
5.	18		nn ze4ze1=sister
6.	16		nn gung1zai2=doll
7.	15		nn bi4bi1=baby
8.	13		nn gaau3=sleep
9.	13		nn go4go1=elder_brother
10.	12		nn maai1mi4=mother
11.	11		nn faan6=rice
12.	11		nn tau4=head

Table 3.4 shows the 12 most frequently occurring verbs in the conversations of all of the ten three-year-old children (see the end of the chapter for the complete list of verbs used by the children).

Table 3.4. The most frequent verbs used by three-year-old children.

No.	Frequency	Character	Word-types
1.	171		vf hai6=is
2.	93		vf jau5=have
3.	75		vt sik6=to_eat
4.	59		vt zoek3=to_wear
5.	38		vt cung1=flush
6.	35		vt sai2=to_wash
7.	29		vi fan3=sleep
8.	29		vt ceoi4=remove
9.	19		vt heoi3=to_go
10.	17		vt maat3=to_wipe
11.	15		vt waan2=to_play
12.	14		vt gan1zyu6=follow

Table 3.5 shows the 12 most frequently occurring adjectives in the conversations of all of the ten three-year-old children (see the end of the chapter for the complete list of adjectives used by the children).

Table 3.5. The most frequent adjectives used by three-year-old children.

No.	Frequency	Character	Word-types
1.	70		adj hou2=good
2.	27		adj loeng4=cool
3.	14		adj faai3lok6=happy
4.	9		adj baau2=full
5.	8		adj daai6=big
6.	8		adj leng3=pretty
7.	8		adj ngaang6=hard
8.	7		adj dai1=low
9.	7		adj do1=many
10.	7		adj dung3=cold
11.	6		adj coeng4=long
12.	6		adj gon1zeng6=clean

Table 3.6 shows the 12 most frequently occurring adverbs in the conversations of all of the three-year-old children (see the end of the chapter for the complete list of adverbs used by the children).

Table 3.6. The most frequent adverbs used by three-year-old children.

No.	Frequency	Character	Word-types
1.	34		adv Hou2=very
2.	26		adv dou1=too
3.	26		adv sin1=first
4.	23		adv Gam2=in_this_way
5.	12		adv bat1jyu4=it_is_better_to
6.	11		adv zung6=still
7.	11		adv gam2joeng2=such_way
8.	9		adv jau6=again
9.	6		adv gam3=so
10.	6		adv ji4gaa1=now
11.	5		adv jat1cai4=together
12.	4		adv tau4sin1=just_now

All Children: Frequencies of Closed Class words. Table 3.7 shows the total number of closed class types and tokens produced by the three-year-old children.

Table 3.7. Closed Class – Types and Tokens produced by three-year-old children.

No. Grammatical Categoires			Types	Tokens
1.	Aspectual marker	asp	6	57
2.	Auxiliary / Modal verb	aux	5	53
3.	Classifier	cl	17	275
4.	Comparative morpheme	com	1	5
5.	Connective	conj	5	37
6.	Correlative	corr	-	-
7.	Clitic	clc	2	26
8.	Determiner	det	6	209
9.	Expressive utterance	ex	26	86
10.	Genitive marker	gen	2	6
11.	Emphatic inserted marker	ins	-	-
12.	Locative noun phrase	nnloc	4	10
13.	Pronoun	nnpr	6	231
14.	Negative morpheme	neg	4	115
15.	Post-verbal particle	pvt	8	77
16.	Preposition	prep	7	54
17.	Quantifier	q	7	34
18.	Reflexive pronoun	rfl	1	3
19.	Sentence final particle	sfp	28	884
20.	WH words	wh	10	77
Closed Class Total			145	2279

One of the significant differences between two and three years of age is the increase in the use of closed class words, as the child develops syntactic ability. By the age of three, about half of all words used by a child are 'closed class' words, however, a large number of these are sentence final particles. With a median MLU of 2.85, children at age three start to expand noun phrases and verb phrases with words that

modify nouns and verbs. There is a wide range of the types of closed class words that children use.

Table 3.8. List of closed class word-types used by three-year-old children².

Aspect Marker	Locative	Negative	Connective	Pronouns	Question words	Classifier	Post- verbal particles
zo2	Soeng6min6	m4	bat1gwo3	ngo5	Mat1	go3	jyun4
gwo3	hau6min6	mou5	jan1wai6	keoi5	mei	di1	dou2
gan2	jap6bin6	mei6	tung4mai4	nei5	mat1je5	tiu4	faan1
zyu6			daan6hai6	ngo5dei6	mei1je5	ci3	can1
Haa5			so2ji3	keoi5dei6	dim2	joeng6	maai4
(fan3) zOek6				nei5dei6	dim2joeng2	zek3	hOu2
					Gei2(dim2)	gin6	
					gei2 + adj.	zoeng1	
					bin1	deng2	
					bin1dou6	deoi3	
					dim2gaai2	baa2	
					Zou6mat1je5	lap1	
					Zou6mat1	Wun2	
						Lau2	

- ². Readers will note some discrepancies between the lists here and those at the end of the chapter. The end-of-chapter lists were derived automatically by CLAN procedures from our cross-sectional database. In transcribing this database, we followed the same conventions for segmentation, and for grammatical category labeling, as were used in the longitudinal database. So for example 'Zou6mat1je5', represented in Table 3.8 as a compound, as it can be used to mean 'why', occurs in the transcription as separate elements – 'Zou6 mat1 je5'. The automatic analysis will treat each of these elements as separate words, and count them accordingly. But Table 3.8 is based on an analysis of the transcriptions by hand, enabling appropriate modifications to be made to segmentation and to category labels, which in the Table are based on Matthews and Yip (1994). So as in Table 2.7, Haa5 is designated 'aspect marker' (instead of post-verbal particle).

The Typical Child: Frequencies of Closed Class words. Figure 3.3 shows the frequency distribution of the most important closed class word-types used by a typical child in a 20 minute conversation. For example, of these eight different closed class items, in comparison with the use of post-verbal particles and question words, a typical three-year-old used relatively few different aspect markers and connectives (only 4% of different words in these eight categories were aspect markers, where as 24% of the different words were question words).

Figure 3.3. Distribution of closed class word-types used by a typical three-year-old child in a conversation.

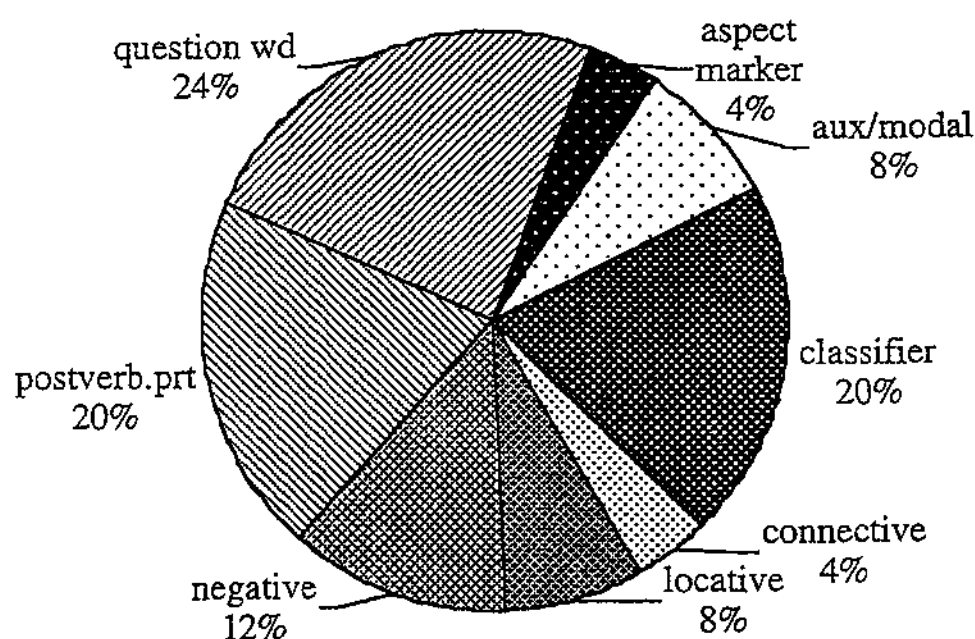
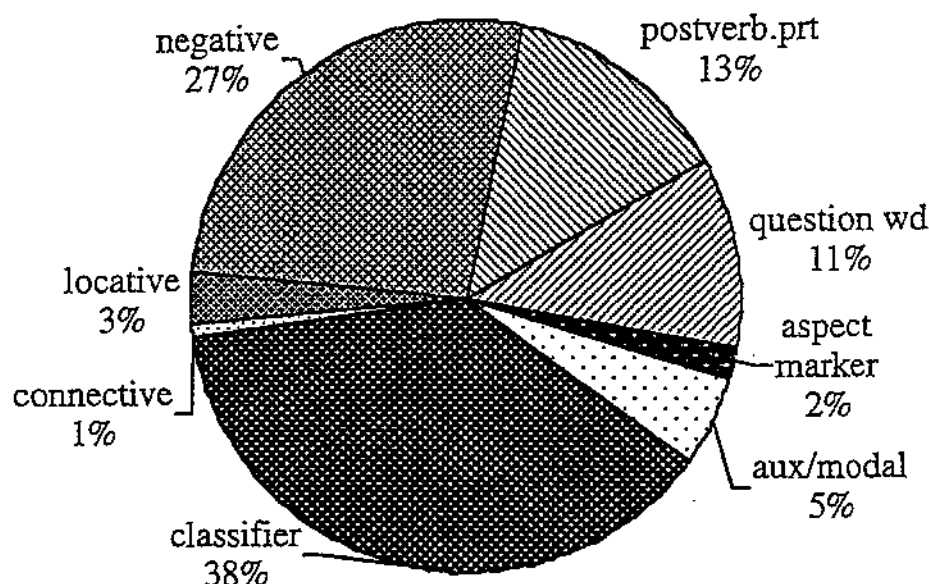


Figure 3.4 shows the distribution of the most important closed class words-tokens used by a typical child in a 20 minute conversation. For example, of the eight categories of closed class words used by this child, 38% were classifiers and 27% were negatives, indicating the high

rate of use of classifiers and negatives to expand noun phrases and verb phrases, rather than locatives and auxiliary verbs in this typical three-year-old child.

Figure 3.4. Distribution of closed class word-tokens used by a typical three-year-old child in a conversation.



3.3 Syntax

In a 20-minute child-adult conversation, a typical three-year-old child had an MLU of 2.85, and used 167 utterances. The range for MLU is 2.46– 6.52 and for MLU5 from 5.80 – 21.0, indicating that some three-year olds can construct lengthy utterances. We now look in some detail at the examples of the grammatical structures used by the children.

Examples of structures used by three-year-old children

Phrase Structure

The examples of phrase and sentence structure were taken from two three years old children who were the closest to the median in terms of MLUs values.

Noun Phrase

n

*CHI: bi4bi1

pr

*CHI: keoi5 zaam2 ngaan5 aa3!

d.cl

*CHI: e6 , li1 go3

cl.n

*CHI: zou6 di1 solso1

adj.n

*CHI: jau5 daai6 cin1cau1

d.n

*CHI: sai2 nei1 dou6 sin1 laa1!

d.cl.n

*CHI: go2 tiu4 kwan4 lo1

q.cl

*INV: jau5 gei2 do1 Saam1 hai6 luk6sik1 gaa3?

*CHI: loeng5 zi1

Verb Phrase**cop**

*CHI: hai6

v.asp

*CHI: waan2 zo2 cung1 loeng4

v.prt

*CHI: Co5 dai1 gaa3!

*CHI: cung1 jyun4

aux

*INV: Sai2 m4 Sai2 ceoi4 Saam1 gaa3?

*CHI: Sai2

aux.v

*CHI: Jiu3 zoek3 Saam1

Prepositional Phrase**prep.n**

*CHI: Jiu3 Co5 Hai2 nei1 dou6

Sentence Structures

Declaratives – affirmative

V

*CHI: hai6

*CHI: fan3gaau3 aa3!

VO

*CHI: ceoi4 saam1saam1

*CHI: zung6 jau5 e6 syun4syun4 aa3!

VC

*INV: Hai2 uk1kei2 bin1go3 tung4 jin4jin2 cung1 loeng4 gaa3?

*CHI: hai6 li1 go3

SC

*CHI: li1 go3 faan1gaan2

SV

*CHI: keoi5 fan3gaau3 laak3 , keoi5'

*INV: ping4si4 ceot1 gaai1 le1, nei5 zi6gei2 gaan2

saam1saam1 zoek3 ding6 maa4maal gaan2 aa3?

*CHI: < ze4ze1 ze4ze1 > [/] ze4ze1 fu3 lol

SVO

*CHI: gung1zai2 zaam2 ngaan5

SVC

*CHI: li1 go3 hai6 li1 go3 Le1!

SVOO

no example found

Declaratives – negative**m4**

*CHI: mit1 m4 dou2 aa3!

m4hai6

no example found

mou5

*CHI: aai1 jo1 , mou5 laak3!

*CHI: keoi5 mou5 aa3!

mei6

INV: cung1 jyun4?

*CHI: mei6 aa3

Interrogatives**Intonation question**

no example found

Particle question

*CHI: li1 go3 Le1?

A-not-A question

*CHI: hai6 mai6 gam2joeng2 gaa3?

Wh question

*CHI: dim2gaa2 aa3?

*CHI: zou6 mat1je5 mei1 Maai4 go3 ngaa5 ge2?

Imperatives

*CHI: heoi3 gaai1 laa1!

Other Features

Serial Verb Construction

*CHI: jung6 li1 go3 sai2 aa1!

Topicalisation

*CHI: mou5 si6 aa3 nei5?

[=! interviewer dropped the toy food on the floor]

*INV: nei5 uk1kei2 Le1 , nei5 uk1kei2 jau5 bin1go3 tung4 nei5
jat1cai4 Zyu6 aa3?

*CHI: nei1 dou6 Zyu6

Verb used as Noun

*CHI: waan2 zo2 cung1 loeng4 . (v as the O here)

Comparative

*CHI: faai3 Di1 aa3!

*CHI: Co5 hou2 Di1 sin1 laa1

Complex Sentence

*CHI: cung1 loeng4 zi1cin4 , Jiu3 jung6 faan1gaan2

*CHI: sai2 gon1zeng6 < gam2 zau6 > [/] gam2 zau6 bin3 zo2
naam4zai2 aa3!

Syntactic Systems

Here we see how three-year-old children deploy the closed class words that are part of their vocabulary.

Aspect markers

*INV: nei5 Dou2 zo2 di1 mat1je5 lok6 heoi3 aa3 ?

*CHI: Dou2 zo2 li1 go3

*CHI: ngo5dei6 heoi3 heoi3 gwo3 , heoi3 gwo3
haa6wai1ji4 o3

*CHI: ngo5 Wai3 gan2 <keoi5> [/] keoi5 ngo5 Wai3 keoi5

*CHI: sik6 zo2

*CHI: cung1 loeng4, tai2 haa5 sai2 dak1 gei2 gon1zeng6

Post-verbal Particles

*CHI: ngo5 maat3 jyun4 aa3.

*CHI: zou6 mat1je5 mei1 Maai4 go3 ngaan5 ge2 ?

*CHI: sik6 jyun4 faan6 , Hou2 baau2 aa3!

*CHI: < nei1 dou6 aa3 > [/] nei1 dou6 sap1 saai3 aa3

Locatives

*INV: hai6 aa4 , jau5 mat1je5 aa3 *leoi5min6* ?

*CHI: jap6bin6 mou5 aa3!

*CHI: go2 go3 , soeng6mIn6

*CHI: hau6min6 jau5 mat1je5 gaa3 hau6min6 ?

Pronouns

*CHI: ngo5 caa4 gwo3 song2san1fan2

*CHI: nei5 deoi3 haai4 mei1 sik1 gaa3 ?

*CHI: keoi5dei6 di1 gau2lung4 jan4 lei1 , dou1 waa6 dou1
jau5 cong4 gaa3

Negatives

*INV: hou2 laa1 cung1 dak1 mei6 aa3 ji4gaa1

*CHI: mei6

*CHI: mou5 saai3 Saam1 zoek3 gaa3

*CHI: m4 dak1 gaa3

Question words

*INV: hai6 wo3 ceoi4 saaml1saaml1

*CHI: dim2gaa12 aa3 ?

*CHI: go3 bo1 hai2 bin1 aa3 ?

*CHI: me1 lei4 gaa3 ?

*CHI: li1 go3 mat1je5 ?

*CHI: zou6mat1je5 mei1 Maai4 go3 ngaa5 ge2 ?

*CHI: < mou5 sai2tau4seoi2 > [<] dim2 sai2 aa3 , mou5
juk6gong1 go2 di1 je5

*CHI: keoi5 Jiu3 fan3 gei2 noi6 aa4 ?

Classifiers

*CHI: go2 go3 go2 go3 hai6 oI3 lei4 daa2 bo1 gaa4 ?

*CHI: li1 di1 ne1 ?

*CHI: jau5 tiu4 geng2lin2 ge2 ?

*CHI: jau5 li1 joeng6

Developmental error/non-adult forms

Although children have some facility with closed class vocabulary, there are of course still some developmental non-adult-like uses. Most of these are in the category of classifier, where many children use the default forms of *go3* or *zek3* instead of specific classifiers.

Error in aspect marker use

*CHI: mei6 sai2 zo2 laa1.

Usually, mei6 sai2 *jyun4* aa3 or mei6 sai2 *saai3* aa3

Error in question word use

*CHI: Jiu3 jam2 di1 me1 lei4 gaa3 ?

It should be either “jam2 di1 me1 gaa3”? or “me1 lei4 gaa3”?

*CHI: me1 bin1go3 lei4 gaa3 ?

The child is using **me1** as well as **bin1go3** in the same question

Error in Classifier use

- *CHI: li1 go3 sai2tau4seoi2 gam2joeng2 Zit1 lok6 heoi3
Should really be "li1 zeon1/zi1 sai2tau4seoi2"

Longest utterances

Although the median MLU for age three is 2.85, children do use sentences of much greater length. Some examples are:

- *CHI: <go2 go3> [/] go2 go3 hai6 oi3 lei4 daa2 bo1 gaa4?
- *CHI: zau6 Gam2 Zit1 lok6 heoi3 ngaa4gou1 go2 dou6
- *CHI: ngo5 jau4 seoi2 sik1 baai2 go3 tau4 lok6 heoi3
gaa3?
- *CHI: bat1jyu4 ngo5dei6 waan2 go2 di1 je5 ,, hou2 mou2
aa3?
- *CHI: zou6 mat1je5 mei1 Maai4 go3 ngaan5 ge2?

Advanced forms

Children also used some more advanced word forms. For example:

Bat1jyu4: 'a term to make suggestions'

Je6maan5: night

Vocabulary used by three-year-old children

594 Total number of different word types used

4525 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	276		sfp aa3=SFP
2.	174		sfp gaa3=SFP
3.	171		vf hau6=is
4.	162		cl go3=CL
5.	162		det li1=this
6.	94		nnpr ngo5=I_me
7.	93		vf jau5=have
8.	87		nnpr keoi5=he_or_she
9.	86		neg m4=not
10.	75		vt sik6=to_eat
11.	74		sfp lei4=SFP
12.	71		cl di1=CL
13.	70		adj hau2=good
14.	59		vt zoek3=to_wear
15.	48		sfp le1=SFP
16.	47		neg mou5=nothing
17.	47		sfp aa1=SFP
18.	42		sfp laa1=SFP
19.	41		nnpr nei5=you
20.	40		sfp lo1=SFP
21.	40		wh me1=what
22.	39		asp zo2=ASP

No.	Frequency	Character	Word-types
23.	38		nn dou6=place
24.	38		vt cung1=flush
25.	35		vt sai2=to_wash
26.	34		adv Hou2=very
27.	32		sfp laa3=SFP
28.	30		prt jyun4=PRT
29.	29		vi fan3=sleep
30.	29		vt ceoi4=remove
31.	28		det go2=that
32.	27		adj loeng4=cool
33.	26		advf dou1=too
34.	26		advf sin1=first
35.	26		sfp aa4=SFP
36.	25		aux Jiu3=want
37.	23		adv Gam2=in_this_way
38.	23		ctc dak1=CTC
39.	23		nn faan1gaan2=soap
40.	23		nn je5=thing
41.	23		vf mai6=not
42.	21		ex jaa3=EX
43.	21		neg mei6=not_yet
44.	21		nn Saam1=clothes
45.	20		conj bat1gwo3=but
46.	20		prt dou2=PRT
47.	20		sfp ne1=SFP
48.	20		sfp wo3=SFP
49.	19		sfp gaa4=SFP

No.	Frequency	Character	Word-types
50.	19		vt heoi3=to_go
51.	18		nn ze4ze1=sister
52.	17		vt maat3=to_wipe
53.	16		det nei1=this
54.	16		nn gung1zai2=doll
55.	16		sfp ge2=SFP
56.	15		nn bi4bi1=baby
57.	15		vt waan2=to_play
58.	14		adj faai3lok6=happy
59.	14		vt gan1zyu6=follow
60.	14		vt zou6=to_do
61.	13		nn gaau3=sleep
62.	13		nn go4go1=elder_brother
63.	13		prep tung4=with
64.	13		prep zau6=then
65.	13		qj at1=one
66.	13		vi waa6=to_tell
67.	13		wh mat1je5=what
68.	12		adv bat1jyu4=it_is_better_to
69.	12		nn maai1mi4=mother
70.	12		vt hei2=up
71.	12		vt hoi1=open
72.	12		vt san1=new
73.	11		advf zung6=still
74.	11		adv gam2joeng2=such_way
75.	11		conj jan1wai6=because_of
76.	11		nn faan6=rice

No.	Frequency	Character	Word-types
77.	11		nn tau4=head
78.	11		vt Jung6=to_use
79.	11		vt mit1=to_open
80.	11		vt sol=brush
81.	10		aux ho2nang4=may
82.	10		dir lok6=down
83.	10		nn Min6=noodle
84.	10		nn ngaan5=eye
85.	10		prt faan1=PRT
86.	10		vd bei2=give
87.	10		vt jam2=to_drink
88.	10		vt zung1ji3=love
89.	9		adj baau2=full
90.	9		advf jau6=again
91.	9		ex ai1jaa3=EX
92.	9		ex e6=EX
93.	9		nn haai4=shoes
94.	9		nn jan4=people
95.	9		nn ngaa4goul=tooth_paste
96.	9		sfp laak3=SFP
97.	9		sfp maa3=SFP
98.	9		vi Co5=sit
99.	9		vt Zit1=squeeze_out
100.	8		adj daai6=big
101.	8		adj leng3=pretty
102.	8		adj ngaang6=hard
103.	8		asp gwo3=ASP

No.	Frequency	Character	Word-types
104.	8		aux Sai2=need
105.	8		cl Zi1=CL
106.	8		nn mat6=sock
107.	8		nn seoi3=age
108.	8		prep Bei2=to
109.	8		prep Hai2=at
110.	8		q saam1=three
111.	8		vt Bong1=help
112.	8		vt baai2=place
113.	8		vt jiu3=want
114.	7		adj dai1=low
115.	7		adj dol=many
116.	7		adj dung3=cold
117.	7		ex Le1=EX
118.	7		nn maa4maal=mother
119.	7		nn ngaa4=teeth
120.	7		nn oi3=love
121.	7		nn seoi2=water
122.	7		nn wun2=bowl
123.	7		q luk6=six
124.	7		vt caa4=spread
125.	7		vt gaau2=to_disturb
126.	7		vt kam2=cover
127.	6		adj coeng4=long
128.	6		adj dim6=okay
129.	6		adj gon1zeng6=clean
130.	6		adj luk6sik1=green_colour

No.	Frequency	Character	Word-types
131.	6		adj saai3=dry_in_the_sun
132.	6		adj wulzou1=dirty
133.	6		adv gam3=so
134.	6		adv ji4gaal=now
135.	6		aux wui5=would
136.	6		nnpr ngo5dei6=we_us
137.	6		nn dai2fu3=underwear
138.	6		nn fu3=pants
139.	6		nn kwan4=dress
140.	6		nn mou4gan1=towel
141.	6		nn naai1naail=milk
142.	6		nn naai5zeon1=milk_bottle
143.	6		nn pei5=blanket
144.	6		nn saang1jat6=birthday
145.	6		prt Maai4=PRT
146.	6		vi paa3=to_be_afraid
147.	6		vi soeng2=to_want
148.	6		vt Cyun1=get_through
149.	6		vt daai3=to_bring
150.	6		vt gaal=add
151.	6		vt hAa1=bully
152.	6		vt sik1=to_know
153.	6		vt zaam2=to_chop_with_knife
154.	6		vt zuK1=wish
155.	6		wh bin1dou6=where
156.	5		adv jat1cai4=together
157.	5		cl tiu4=CL

No.	Frequency	Character	Word-types
158.	5		com Di1=COM
159.	5		ex gam2=EX
160.	5		ex waa3=EX
161.	5		nn loc soeng6=up
162.	5		nn bol=ball
163.	5		nn ci4gang1=spoon
164.	5		nn haai4haai4=shoe
165.	5		nn mui4mui2=yonger_sister
166.	5		nn seoi6jil=night_shirt
167.	5		nn si4=time
168.	5		nn sin1saang1=teacher
169.	5		nn song2san1 fan2=baby_powder
170.	5		nn tau4faat3=hair
171.	5		nn tip3zi2=sticker
172.	5		nn zam2tau4=pillow
173.	5		prep bong1=help
174.	5		prep jung6=by
175.	5		sfp e3=SFP
176.	5		sfp zaa3=SFP
177.	5		verg dit3=to_fall_down
178.	5		vt Dou2=pour
179.	5		vt Wai3=feed
180.	5		vt daa2=hit
181.	5		vt maai5=to_buy
182.	5		vt tai2=to_look
183.	5		vt zyu2=cook
184.	5		wh dim2=how

No.	Frequency	Character	Word-types
185.	5		wh dim2joeng2=how
186.	4		ENG Benny
187.	4		adj cau3=smelly
188.	4		adj dai6ji6=number_two
189.	4		adj hau2mei6=delicious
190.	4		adj yun6=messy
191.	4		adv tau4sin1=just_now
192.	4		aux ho2ji3=can
193.	4		cl ci3=CL
194.	4		cl joeng6=CL
195.	4		cl zek3=CL
196.	4		ex ho1=EX
197.	4		gen Ge3=GEN
198.	4		nn Caat3=to_brush
199.	4		nn aap3aap3=duck
200.	4		nn bat1=pen
201.	4		nn dOng3=shop
202.	4		nn gai1=street
203.	4		nn gaan2jik6=liquid_soup
204.	4		nn hau2seoi2gin1=baby_napkin
205.	4		nn hok6haau6=school
206.	4		nn kwan4kwan4=dress
207.	4		nn neoi5zai2=girl
208.	4		nn pei4=skin
209.	4		nn ping4gwo2=apple
210.	4		nn uk1kei2=home
211.	4		prt can1=PRT

No.	Frequency	Character	Word-types
212.	4		pri maai4=PRT
213.	4		sfp Laa4=SFP
214.	4		sfp ge3=SFP
215.	4		vi siu3=to-smile
216.	4		vi siu3siu3=to_smile
217.	4		vt Faan1=again
218.	4		vt caat3=to_brush
219.	4		vt duk6=read
220.	4		vt giu3=call
221.	4		vt waak6=to_draw
222.	3		SND am4
223.	3		adj ci5=similar
224.	3		adj faai3=quick
225.	3		adj mei1=the_last
226.	3		adj ngaam1=correct
227.	3		adj sai3=small
228.	3		adj siu2=small
229.	3		adv noi6=for_a_long_time
230.	3		asp hOI1=ASP
231.	3		asp zyu6=ASP
232.	3		cl gin6=CL
233.	3		cl zoeng1=CL
234.	3		conj tung4maai4=and
235.	3		ctc dou3=CTC
236.	3		dir soeng5=up
237.	3		ex baai1 baai3=EX
238.	3		ex em3=EX

No.	Frequency	Character	Word-types
239.	3		ex m4goi1=EX
240.	3		nn loc hau6min6=back
241.	3		nn So1=comb
242.	3		nn Zap1=juice
243.	3		nn beng2=biscuit
244.	3		nn cong4=bed
245.	3		nn fu3fu3=trousers
246.	3		nn je6maan5=night
247.	3		nn ji1=aunt
248.	3		nn laam6=cable
249.	3		nn maa4maa4=grandmother
250.	3		nn min6=face
251.	3		nn naai5=milk
252.	3		nn naai5naai5=milk
253.	3		nn pang4jau5=friends
254.	3		nn pei2=quilt
255.	3		nn pet1pet1=hips
256.	3		nn pin2=diaper
257.	3		nn saam1saam1=clothes
258.	3		nn saang1gwo2=fruit
259.	3		nn si6=matter
260.	3		nn zou2caan1=breakfast
261.	3		nn zyu1gullik1=chocolate
262.	3		rfl zi6gei2=self
263.	3		sfp lu3=SFP
264.	3		vi hai2=present
265.	3		vt Lau2=to_twist

No.	Frequency	Character	Word-types
266.	3		vt ceng2=invite
267.	3		vt hou2ci5=similar
268.	3		vt lo2=to_take
269.	3		vt oi3=use
270.	3		vt sau1=to_hide
271.	3		vt wun6=to_replace
272.	3		wh gei2=how_much
273.	2		ENG hand
274.	2		ENG party
275.	2		ENG this
276.	2		ENG tissue
277.	2		adj Gan2=tight
278.	2		adj Gat1=stinging
279.	2		adj Lau1=angry
280.	2		adj dyun2=short
281.	2		adj gau3=enough
282.	2		adj gon1=dry
283.	2		adj hak1sik1=black
284.	2		adj hoi1sam1=happy
285.	2		adj hou2sik6=tastful
286.	2		adj hou2waan2=interesting
287.	2		adj hung4sik1=red_color
288.	2		adj jit6=hot
289.	2		adj naan4=difficult
290.	2		adj sap1=wet
291.	2		adj zi2sik1=purple_color
292.	2		advf zeoi3=the_most

No.	Frequency	Character	Word-types
293.	2		advs jau5si4=sometimes
294.	2		advs jyu4gwo2=if
295.	2		advs seng4jat6=always
296.	2		advs zing6hai6=only
297.	2		asp gan2=ASP
298.	2		asp zOek6=ASP
299.	2		cl Loeng5=CL
300.	2		cl deng2=CL
301.	2		cl deoi3=CL
302.	2		conj daan6hai6=but
303.	2		ex wai3=EX
304.	2		gen di1=GEN
305.	2		nnpp gu2geoi6gei1=NNPP
306.	2		nnpp hoi2joeng4gung1jyun2=NNPP
307.	2		nnpp laap6bat1siu2san1=NNPP
308.	2		nnpp lok6seon3toi4=NNPP
309.	2		nnpp lou4gaa1jan1=NNPP
310.	2		nnpr keoi5dei6=they
311.	2		nn Dim2=o_clock
312.	2		nn Gau2=dog
313.	2		nn Mei6=taste
314.	2		nn Min6min6=noodle
315.	2		nn bol bol=ball
316.	2		nn caa4wu2=kettle_for_making_tea
317.	2		nn caang2=orange
318.	2		nn cin2cin2=money
319.	2		nn gail bei2=chicken_thigh

No.	Frequency	Character	Word-types
320.	2		nn geng3=mirror
321.	2		nn goek3=foot
322.	2		nn joeng4waa1waa1=doll
323.	2		nn juk6gong1=bath_tub
324.	2		nn mam1mam1=food
325.	2		nn mat6mat6=sock
326.	2		nn min6baau1=bread
327.	2		nn naam4zai2=boy
328.	2		nn ngaa4caat2=tooth_brush
329.	2		nn sai2tau4seoi2=shampoo
330.	2		nn sau2=hand
331.	2		nn sau2sau2=hand
332.	2		nn seoi2hau4=water_pipe
333.	2		nn sik6mat6=food
334.	2		nn tau4tau4=head
335.	2		nn zeoi2=mouth
336.	2		nn ziu1tau4zou2=morning
337.	2		prep Tung4maai4=with
338.	2		prt haa5=PRT
339.	2		q cat1=seven
340.	2		q sap6jat1=eleven
341.	2		sfp e1=SFP
342.	2		sfp lo3=SFP
343.	2		sfp m6=SFP
344.	2		vi Zau2=run
345.	2		vi tUng4=same_as
346.	2		vi zi1dou3=understand

No.	Frequency	Character	Word-types
347.	2		vt Sik1=to_switch_off
348.	2		vt caak3=to_break_open
349.	2		vt caau3=to_look_for
350.	2		vt cil=stick
351.	2		vt hok6=to_learn
352.	2		vt lat1=to_loose
353.	2		vt ling6=to_turn
354.	2		vt ol=to_go_for_excretments
355.	2		vt on1=fit_something_in
356.	2		vt sung3=to_give
357.	2		vt teng1=to_hear
358.	2		vt zeot1=rub
359.	2		vt zing2=to_make
360.	2		vt zit1=ticket
361.	2		wh bin1=which
362.	1		ENG Lego
363.	1		ENG apple
364.	1		ENG auntie
365.	1		ENG baby
366.	1		ENG bottle
367.	1		adj baak6sik1=white_colour
368.	1		adj caang2sik1=orange_colour
369.	1		adj co3=worng
370.	1		adj cou4=noisy
371.	1		adj daai6baa2=many
372.	1		adj dak1ji3=cute
373.	1		adj fan2hung4sik1=pink_colour

No.	Frequency	Character	Word-types
374.	1		adj fei4=fat
375.	1		adj gan2jiu3=important
376.	1		adj gan2zoeng1=nervous
377.	1		adj geng1=afriad_of
378.	1		adj gui6=tired
379.	1		adj gwaai1=well_behaved
380.	1		adj haam4=salty
381.	1		adj hoeng1=giving_good_smell
382.	1		adj hoeng1pan3pan3=good_smell
383.	1		adj hung4=red
384.	1		adj jau3=thin
385.	1		adj jau3zi6=infantile
386.	1		adj koeng4=strong
387.	1		adj laam4sik1=blue_colour
388.	1		adj laang5=cold
389.	1		adj laat6taat3=dirty
390.	1		adj lyun6cat1baat3zou1=messy
391.	1		adj noi6noi6=long_time
392.	1		adj sai1lei6=magical
393.	1		adj sai3sai3=small
394.	1		adj syu1fuk6=comfortable
395.	1		adj tou5ngo6=hungry
396.	1		advf taai3=too
397.	1		advf zoi3=again
398.	1		adv joeng6joeng6=everything
399.	1		adv zan1hai6=really
400.	1		adv go2zan6si4=that_time

No.	Frequency	Character	Word-types
401.	1		advsljat1zan6gaan1=later
402.	1		advslji5ging1=already
403.	1		advsljyun4loi4=actually
404.	1		advslzilcin4=before
405.	1		cl baa2=CL
406.	1		cl fan6=CL
407.	1		cl gAa3=CL
408.	1		cl lap1=CL
409.	1		cl mIn6=CL
410.	1		conj so2ji3=therefore
411.	1		det gam1=this
412.	1		det haa6=next
413.	1		det mui5=every
414.	1		dir jap6=enter
415.	1		ex ai1=EX
416.	1		ex ailjaa4=EX
417.	1		ex ailjo3=EX
418.	1		ex cE1=EX
419.	1		ex deoi3m4zyu6=EX
420.	1		ex dolze6=EX
421.	1		ex haa1=EX
422.	1		ex haa2=EX
423.	1		ex je3=EX
424.	1		ex jo1=EX
425.	1		ex laa4=EX
426.	1		ex m3=EX
427.	1		ex o3=EX

No.	Frequency	Character	Word-types
428.	1		ex o4=EX
429.	1		ex ou3=EX
430.	1		neg mou2=not_good
431.	1		nnloc bin6=side
432.	1		nnloc jap6bin6=inside
433.	1		nnpp aa3fei1=NNPP
434.	1		nnpp cung4cung2dak6gung1deoi2=NNPP
435.	1		nnpp gau2lung4=NNPP
436.	1		nnpp haa6wai1ji4=NNPP
437.	1		nnpp jin4jin2=NNPP
438.	1		nnpp mak6dong1lou4=NNPP
439.	1		nnpp zeng6sin6jing4=NNPP
440.	1		nnpp zi2jan1=NNPP
441.	1		nnpr nei5dei6=you_plural
442.	1		nn Dou1=knife
443.	1		nn Gang1=spoon
444.	1		nn Mou2=hat
445.	1		nn Sung3=dish
446.	1		nn aap3zai2=duck
447.	1		nn bo1haai4=sport_shoes
448.	1		nn bo4bo1=ball
449.	1		nn bou2bou2=baby
450.	1		nn bou3=cloth
451.	1		nn bui1=cup
452.	1		nn bui3sam1=vest
453.	1		nn bui3zek3=back_of_body
454.	1		nn caa1=fork

No.	Frequency	Character	Word-types
455.	1		nn caal caal=fork
456.	1		nn ci3 zi2=tissue
457.	1		nn cin1 caul=swing
458.	1		nn coeng2 fan2=Chinese_dim_sim
459.	1		nn coeng4 coeng4=wall
460.	1		nn coi3=vegetable
461.	1		nn cong4 cong4=bed
462.	1		nn cung4=worm
463.	1		nn daai6 bei2=thigh
464.	1		nn daai6 jan4=adult
465.	1		nn daan2=egg
466.	1		nn de1 di4=father
467.	1		nn dong1=bell
468.	1		nn faal=flower
469.	1		nn faal saa2=shower
470.	1		nn faan6 faan6=rice
471.	1		nn fong2=room
472.	1		nn gOul goul=cream
473.	1		nn geng2 lin2=necklace
474.	1		nn gol=song
475.	1		nn gul zel=aunt
476.	1		nn gung1 jan4=maid
477.	1		nn hei3=movie
478.	1		nn hoeng1 coeng2=sausage
479.	1		nn hoeng1 ziul=banana
480.	1		nn je4 je2=grandfather
481.	1		nn jing4=shape

No.	Frequency	Character	Word-types
482.	1		nn jyu5lau1=rain_cloth
483.	1		nn kaa1tung1pin2=cartoon
484.	1		nn laam4kau4=basketball
485.	1		nn laat6ziu1=chilli
486.	1		nn lau1=coat
487.	1		nn maalmaal=mother
488.	1		nn man1=mosquito
489.	1		nn mei6dou6=taste
490.	1		nn meng2=name
491.	1		nn naai5zeoi2=sucker
492.	1		nn ngaan2=eye
493.	1		nn ngaan5zing1=eye
494.	1		nn niu6=urine
495.	1		nn niu6pin2=diaper
496.	1		nn pei5pei5=blanket
497.	1		nn pun4=basin
498.	1		nn pun4pun4=basin
499.	1		nn sik1=color
500.	1		nn saam1man4zi6=sandwich
501.	1		nn sai3lou2=younger_brother
502.	1		nn sam1=heart
503.	1		nn sam1sam1=heart
504.	1		nn sau2gung1=handicraft
505.	1		nn sek6tau4=stone
506.	1		nn seng1=sound
507.	1		nn si2=excrements
508.	1		nn si6do1be1lei2=strawberry

No.	Frequency	Character	Word-types
509.	1		nn siu2haai4=children
510.	1		nn solcoi3=vegetable
511.	1		nn solfaa2=sofa
512.	1		nn sol1sol1=comb
513.	1		nn soeng2bou2=photo_album
514.	1		nn syun4syun4=ship
515.	1		nn syut3goui=ice_cream
516.	1		nn tai4zi2=grape
517.	1		nn toi2=table
518.	1		nn tong2=candy
519.	1		nn tong4=sugar
520.	1		nn tou4waa2zi2=cardboard
521.	1		nn tou5ci4=navel
522.	1		nn tou5naam5=abdomen
523.	1		nn tung1fan2=macaromi
524.	1		nn waat6tail=slide
525.	1		nn wai4kwan2=apron
526.	1		nn wul1dung1=udon
527.	1		nn wul1dung1min6=udon
528.	1		nn ze1=umbrella
529.	1		nn zeon1=bottle
530.	1		nn zi1si2=cheese
531.	1		nn zik1muk6=building_blocks
532.	1		nn zin3=cushion
533.	1		nn zoek3zai2=bird
534.	1		nn zung1tau4=hour
535.	1		nn zyul1zyul1=pig

No.	Frequency	Character	Word-types
536.	1		nn zyu2faan6zai2=cooking_utensils
537.	1		prt hOu2=PRT
538.	1		q gau2=nine
539.	1		q loeng5=two
540.	1		sfp Sin1=SFP
541.	1		sfp jaa4=SFP
542.	1		sfp laak6=SFP
543.	1		sfp lu4=SFP
544.	1		sfp wo2=SFP
545.	1		verg ding3=hold
546.	1		vf zik1hai6=that_is
547.	1		vi Zyu6=live
548.	1		vi bin3=to_change
549.	1		vi haang4=to_walk
550.	1		vi juk1=move
551.	1		vi kei2=stand
552.	1		vi kei5=stand
553.	1		vi sei2=to_die
554.	1		vi si3=to_try
555.	1		vi zil=know
556.	1		vt Cau3=take_care_of
557.	1		vt Gaa3=to_teach
558.	1		vt Hap6=close
559.	1		vt Nau1=is_angry_with
560.	1		vt Oi3=love
561.	1		vt Tung3=to_be_in_pain
562.	1		vt Zaang1=fight_for

No.	Frequency	Character	Word-types
563.	1		vt Zip3=fold
564.	1		vt aail=lay_against
565.	1		vt cai3=to_build_up
566.	1		vt ceo1=blow
567.	1		vt cit3=cut
568.	1		vt co5=sit
569.	1		vt coeng3=sing
570.	1		vt daap3=to_take
571.	1		vt dang2=wait
572.	1		vt dim2zung1=o_clock
573.	1		vt haP6=combine
574.	1		vt hapi1=cheat
575.	1		vt hip1=to_close_the_eyes
576.	1		vt jau4=to_swim
577.	1		vt laam3=to_cross_over
578.	1		vt lau4=to_flow
579.	1		vt leon4=wheel
580.	1		vt lim4=stick
581.	1		vt ling2=to_turn
582.	1		vt nam2=to_think
583.	1		vt ngak1=shake_hand
584.	1		vt pai1=approve
585.	1		vt po3waai6=damage
586.	1		vt pou5=hold_in_arm
587.	1		vt pui4=to_compensate
588.	1		vt soe4=to_slide
589.	1		vt tip3tip3=stick

No.	Frequency	Character	Word-types
590.	1		vt zaM1=bitten_by_mosquito
591.	1		vt zong6=to_crash
592.	1		wh bin1go3=who
593.	1		wh dim2gaai2=why
594.	1		wh me1je5=what

Nouns used by three-year-old children

198 Total number of different word types used

677 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	38		nn dou6=place
2.	23		nn faan1 gaan2=soap
3.	23		nn je5=thing
4.	21		nn Saam1=clothes
5.	18		nn ze4ze1=sister
6.	16		nn gung1 zai2=doll
7.	15		nn bi4bi1=baby
8.	13		nn gaau3=sleep
9.	13		nn go4go1=elder_brother
10.	12		nn maal1mi4=mother
11.	11		nn faan6=rice
12.	11		nn tau4=head
13.	10		nn Min6=noodle
14.	10		nn ngaan5=eye
15.	9		nn haai4=shoes
16.	9		nn jan4=people
17.	9		nn ngaa4gou1=tooth_paste
18.	8		nn mat6=sock
19.	8		nn seoi3=age
20.	7		nn maa4maa1=mother
21.	7		nn ngaa4=teeth
22.	7		nn oi3=love

No.	Frequency	Character	Word-types
23.	7		nn seoi2=water
24.	7		nn wun2=bowl
25.	6		nn dai2fu3=underwear
26.	6		nn fu3=pants
27.	6		nn kwan4=dress
28.	6		nn mou4gan1=towel
29.	6		nn naai1naai1=milk
30.	6		nn naai5zeon1=milk_bottle
31.	6		nn pei5=blanket
32.	6		nn saang1jat6=birthday
33.	5		nn bo1=ball
34.	5		nn ci4gang1=spoon
35.	5		nn haai4haai4=shoe
36.	5		nn mui4mui2=yonger_sister
37.	5		nn seoi6jil=night_shirt
38.	5		nn si4=time
39.	5		nn sin1saang1=teacher
40.	5		nn song2san1fan2=baby_powder
41.	5		nn tau4faat3=hair
42.	5		nn tip3zi2=sticker
43.	5		nn zam2tau4=pillow
44.	4		nn Caat3=to_brush
45.	4		nn aap3aap3=duck
46.	4		nn bat1=pen
47.	4		nn dOng3=shop
48.	4		nn gaai1=street
49.	4		nn gaan2jik6=liquid_soup

No.	Frequency	Character	Word-types
50.	4		nn hau2seoi2gin1=baby_napkin
51.	4		nn hok6haau6=school
52.	4		nn kwan4kwan4=dress
53.	4		nn neoi5zai2=girl
54.	4		nn pei4=skin
55.	4		nn ping4gwo2=apple
56.	4		nn uk1kei2=home
57.	3		nn So1=comb
58.	3		nn Zap1=juice
59.	3		nn beng2=biscuit
60.	3		nn cong4=bed
61.	3		nn fu3fu3=trousers
62.	3		nn je6maan5=night
63.	3		nn ji1=aunt
64.	3		nn laam6=cable
65.	3		nn maa4maa4=grandmother
66.	3		nn min6=face
67.	3		nn naai5=milk
68.	3		nn naai5naai5=milk
69.	3		nn pang4jau5=friends
70.	3		nn pei2=quilt
71.	3		nn pet1pet1=hips
72.	3		nn pin2=diaper
73.	3		nn saam1saam1=clothes
74.	3		nn saang1gwo2=fruit
75.	3		nn si6=matter
76.	3		nn zou2caan1=breakfast

No.	Frequency	Character	Word-types
77.	3		nn zyu1gullik1=chocolate
78.	2		nn Dim2=o_clock
79.	2		nn Gau2=dog
80.	2		nn Mei6=taste
81.	2		nn Min6min6=noodle
82.	2		nn bol1bol1=ball
83.	2		nn caa4wu2=kettle_for_making_tea
84.	2		nn caang2=orange
85.	2		nn cin2cin2=money
86.	2		nn gai1bei2=chicken_thigh
87.	2		nn geng3=mirror
88.	2		nn goek3=foot
89.	2		nn joeng4waa1waa1=doll
90.	2		nn juk6gong1=bath_tub
91.	2		nn mam1mam1=food
92.	2		nn mat6mat6=sock
93.	2		nn min6baaul=bread
94.	2		nn naam4zai2=boy
95.	2		nn ngaa4caat2=tooth_brush
96.	2		nn sai2tau4seoi2=shampoo
97.	2		nn sau2=hand
98.	2		nn sau2sau2=hand
99.	2		nn seoi2hau4=water_pipe
100.	2		nn sik6mat6=food
101.	2		nn tau4tau4=head
102.	2		nn zeoi2=mouth
103.	2		nn ziul1tau4zou2=morning

No.	Frequency	Character	Word-types
104.	1		nn Dou1=knief
105.	1		nn Gang1=spoon
106.	1		nn Mou2=hat
107.	1		nn Sung3=dish
108.	1		nn aap3zai2=duck
109.	1		nn bo1haai4=sport_shoes
110.	1		nn bo4bo1=ball
111.	1		nn bou2bou2=baby
112.	1		nn bou3=cloth
113.	1		nn bui1=cup
114.	1		nn bui3sam1=vest
115.	1		nn bui3zek3=back_of_body
116.	1		nn caal=fork
117.	1		nn caalcaal=fork
118.	1		nn ci3zi2=tissue
119.	1		nn cin1caul=swing
120.	1		nn coeng2fan2=Chinese_dim_sim
121.	1		nn coeng4coeng4=wall
122.	1		nn coi3=vegetable
123.	1		nn cong4cong4=bed
124.	1		nn cung4=worm
125.	1		nn daai6bei2=thigh
126.	1		nn daai6jan4=adult
127.	1		nn daan2=egg
128.	1		nn de1di4=father
129.	1		nn dong1=bell
130.	1		nn faal=flower

No.	Frequency	Character	Word-types
131.	1		nn faa1saa2=shower
132.	1		nn faan6faan6=rice
133.	1		nn fong2=room
134.	1		nn gOulgoul=cream
135.	1		nn geng2lin2=necklace
136.	1		nn gol=song
137.	1		nn gulzel=aunt
138.	1		nn gung1jan4=maid
139.	1		nn hei3=movie
140.	1		nn hoeng1coeng2=sausage
141.	1		nn hoeng1ziul=banana
142.	1		nn je4je2=grandfather
143.	1		nn jing4=shape
144.	1		nn jyu5lau1=rain_cloth
145.	1		nn kaa1tung1pin2=cartoon
146.	1		nn laam4kau4=basketball
147.	1		nn laat6ziul=chilli
148.	1		nn lau1=coat
149.	1		nn maalmaal=mother
150.	1		nn man1=mosquito
151.	1		nn mei6dou6=taste
152.	1		nn meng2=name
153.	1		nn naai5zeoi2=sucker
154.	1		nn ngaan2=eye
155.	1		nn ngaan5zing1=eye
156.	1		nn niu6=urine
157.	1		nn niu6pin2=diaper

No.	Frequency	Character	Word-types
158.	1		nn pei5pei5=blanket
159.	1		nn pun4=basin
160.	1		nn pun4pun4=basin
161.	1		nn sik1=color
162.	1		nn saam1man4zi6=sandwich
163.	1		nn sai3lou2=younger_brother
164.	1		nn sam1=heart
165.	1		nn sam1sam1=heart
166.	1		nn sau2gung1=handicraft
167.	1		nn sek6tau4=stone
168.	1		nn seng1=sound
169.	1		nn si2=excrements
170.	1		nn si6dol1be1lei2=strawberry
171.	1		nn siu2haai4=children
172.	1		nn sol1coi3=vegetable
173.	1		nn sol1faa2=sofa
174.	1		nn sol1sol1=comb
175.	1		nn soeng2bou2=photo_album
176.	1		nn syun4syun4=ship
177.	1		nn syut3goul=ice_cream
178.	1		nn tai4zi2=grape
179.	1		nn toi2=table
180.	1		nn tong2=candy
181.	1		nn tong4=sugar
182.	1		nn tou4waa2zi2=cardboard
183.	1		nn tou5ci4=navel
184.	1		nn tou5naam5=abdomen

No.	Frequency	Character	Word-types
185.	1		nn tung1 fan2=macaromi
186.	1		nn waat6tai1=slide
187.	1		nn wai4kwan2=apron
188.	1		nn wul dung1=udon
189.	1		nn wul dung1 min6=udon
190.	1		nn ze1=umbrella
191.	1		nn zeon1=bottle
192.	1		nn zi1 si2=cheese
193.	1		nn zik1 muk6=building_blocks
194.	1		nn zin3=cushion
195.	1		nn zoek3 zai2=bird
196.	1		nn zung1 tau4=hour
197.	1		nn zyu1 zyu1=pig
198.	1		nn zyu2 faan6 zai2=cooking_utensils

Verbs used by three-year-old children

130 Total number of different word types used

1042 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	171		vt hai6=is
2.	93		vt jau5=have
3.	75		vt sik6=to_eat
4.	59		vt zoek3=to_wear
5.	38		vt cung1=flush
6.	35		vt sai2=to_wash
7.	29		vi fan3=sleep
8.	29		vt ceoi4=remove
9.	23		vt mai6=not
10.	19		vt heoi3=to_go
11.	17		vt maat3=to_wipe
12.	15		vt waan2=to_play
13.	14		vt gan1zyu6=follow
14.	14		vt zou6=to_do
15.	13		vi waa6=to_tell
16.	12		vt hei2=up
17.	12		vt hoi1=open
18.	12		vt san1=new
19.	11		vt Jung6=to_use
20.	11		vt mit1=to_open
21.	11		vt sol=brush
22.	10		dir lok6=down

No.	Frequency	Character	Word-types
23.	10		vd bei2=give
24.	10		vt jam2=to_drink
25.	10		vt zung1ji3=love
26.	9		vi Co5=sit
27.	9		vt Zit1=squeeze_out
28.	8		vt Bong1=help
29.	8		vt baai2=place
30.	8		vt jiu3=want
31.	7		vt caa4=spread
32.	7		vt gaau2=to_disturb
33.	7		vt kam2=cover
34.	6		vi paa3=to_be_afraid
35.	6		vi soeng2=to_want
36.	6		vt Cyun1=get_through
37.	6		vt daai3=to_bring
38.	6		vt gaai1=add
39.	6		vt hAa1=bully
40.	6		vt sik1=to_know
41.	6		vt zaam2=to_chop_with_knife
42.	6		vt zuK1=wish
43.	5		verg dit3=to_fall_down
44.	5		vt Dou2=pour
45.	5		vt Wai3=feed
46.	5		vt daa2=hit
47.	5		vt maai5=to_buy
48.	5		vt tai2=to_look
49.	5		vt zyu2=cook

No.	Frequency	Character	Word-types
50.	4		vi siu3=to-smile
51.	4		vi siu3siu3=to_smile
52.	4		vt Faan1=again
53.	4		vt caat3=to_brush
54.	4		vt duk6=read
55.	4		vt giu3=call
56.	4		vt waak6=to_draw
57.	3		dir soeng5=up
58.	3		vi hai2=present
59.	3		vt Lau2=to_twist
60.	3		vt ceng2=invite
61.	3		vt hau2ci5=similar
62.	3		vt lo2=to_take
63.	3		vt oi3=use
64.	3		vt saul=to_hide
65.	3		vt wun6=to_replace
66.	2		vi Zau2=run
67.	2		vi tUng4=same_as
68.	2		vi zi1dou3=understand
69.	2		vt Sik1=to_switch_off
70.	2		vt caak3=to_break_open
71.	2		vt caau3=to_look_for
72.	2		vt cil=stick
73.	2		vt hok6=to_learn
74.	2		vt lat1=to_loose
75.	2		vt ling6=to_turn
76.	2		vt ol=to_go_for_excretments

No.	Frequency	Character	Word-types
77.	2		vt on1=fit_something_in
78.	2		vt sung3=to_give
79.	2		vt teng1=to_hear
80.	2		vt zeot1=rub
81.	2		vt zing2=to_make
82.	2		vt zit1=ticket
83.	1		dir jap6=enter
84.	1		verg ding3=hold
85.	1		vf zik1hai6=that_is
86.	1		vi Zyu6=live
87.	1		vi bin3=to_change
88.	1		vi haang4=to_walk
89.	1		vi juk1=move
90.	1		vi kei2=stand
91.	1		vi kei5=stand
92.	1		vi sei2=to_die
93.	1		vi si3=to_try
94.	1		vi zi1=know
95.	1		vt Cau3=take_care_of
96.	1		vt Gaau3=to_teach
97.	1		vt Hap6=close
98.	1		vt Nau1=is_angry_with
99.	1		vt Oi3=love
100.	1		vt Tung3=to_be_in_pain
101.	1		vt Zaang1=fight_for
102.	1		vt Zip3=fold
103.	1		vt aail=lay_against

No.	Frequency	Character	Word-types
104.	1		vt cai3=to_build_up
105.	1		vt ceo1=blow
106.	1		vt cit3=cut
107.	1		vt co5=sit
108.	1		vt coeng3=sing
109.	1		vt daap3=to_take
110.	1		vt dang2=wait
111.	1		vt dim2zung1=o_clock
112.	1		vt haP6=combine
113.	1		vt hap1=cheat
114.	1		vt hip1=to_close_the_eyes
115.	1		vt jau4=to_swim
116.	1		vt laam3=to_cross_over
117.	1		vt lau4=to_flow
118.	1		vt leon4=wheel
119.	1		vt lim4=stick
120.	1		vt ling2=to_turn
121.	1		vt nam2=to_think
122.	1		vt ngak1=shake_hand
123.	1		vt pail=approve
124.	1		vt po3waai6=damage
125.	1		vt pou5=hold_in_arm
126.	1		vt pui4=to_compensate
127.	1		vt soe4=to_slide
128.	1		vt tip3tip3=stick
129.	1		vt zaM1=bitten_by_mosquito
130.	1		vt zong6=to_crash

Adjectives used by three-year-old children

70 Total number of different word types used

294 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	70		adj hou2=good
2.	27		adj loeng4=cool
3.	14		adj faai3lok6=happy
4.	9		adj baau2=full
5.	8		adj daai6=big
6.	8		adj leng3=pretty
7.	8		adj ngaang6=hard
8.	7		adj dai1=low
9.	7		adj dol=many
10.	7		adj dung3=cold
11.	6		adj coeng4=long
12.	6		adj dim6=okay
13.	6		adj gon1zeng6=clean
14.	6		adj luk6sik1=green_colour
15.	6		adj saai3=dry_in_the_sun
16.	6		adj wulzoul=dirty
17.	4		adj cau3=smelly
18.	4		adj dai6ji6=number_two
19.	4		adj hou2mei6=delicious
20.	4		adj lyun6=messy
21.	3		adj ci5=similar
22.	3		adj faai3=quick

No.	Frequency	Character	Word-types
23.	3		adj meil=the_last
24.	3		adj ngaam1=correct
25.	3		adj sai3=small
26.	3		adj siu2=small
27.	2		adj Gan2=tight
28.	2		adj Gat1=stinging
29.	2		adj Lau1=angry
30.	2		adj dyun2=short
31.	2		adj gau3=enough
32.	2		adj gon1=dry
33.	2		adj hak1sik1=black
34.	2		adj hoil sam1=happy
35.	2		adj hou2sik6=tastful
36.	2		adj hou2waan2=interesting
37.	2		adj hung4sik1=red_color
38.	2		adj jit6=hot
39.	2		adj naan4=difficult
40.	2		adj sap1=wet
41.	2		adj zi2sik1=purple_color
42.	1		adj baak6sik1=white_colour
43.	1		adj caang2sik1=orange_colour
44.	1		adj co3=wrong
45.	1		adj cou4=noisy
46.	1		adj daai6baa2=many
47.	1		adj dak1ji3=cute
48.	1		adj fan2hung4sik1=pink_colour
49.	1		adj fei4=fat

No.	Frequency	Character	Word-types
50.	1		adj gan2jiu3=important
51.	1		adj gan2zoeng1=nervous
52.	1		adj geng1=afriad_of
53.	1		adj gui6=tired
54.	1		adj gwaai1=well_behaved
55.	1		adj haam4=salty
56.	1		adj hoeng1=giving_good_smell
57.	1		adj hoeng1pan3pan3=good_smell
58.	1		adj hung4=red
59.	1		adj jau3=thin
60.	1		adj jau3zi6=infantile
61.	1		adj koeng4=strong
62.	1		adj laam4sik1=blue_colour
63.	1		adj laang5=cold
64.	1		adj laat6taat3=dirty
65.	1		adj lyun6cat1baat3zou1=messy
66.	1		adj noi6noi6=long_time
67.	1		adj sai1lei6=mavellous
68.	1		adj sai3sai3=small
69.	1		adj syu1fuk6=comfortable
70.	1		adj tou5ngo6=hungry

Adverbs used by three-year-old children

27 Total number of different word types used

195 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	34		advj Hou2=very
2.	26		advf dou1=too
3.	26		advf sin1=first
4.	23		adv Gam2=in_this_way
5.	12		adv bat1jyu4=it_is_better_to
6.	11		advf zung6=still
7.	11		adv gam2joeng2=such_way
8.	9		advf jau6=again
9.	6		advj gam3=so
10.	6		adv ji4gaal=now
11.	5		adv jat1cai4=together
12.	4		adv tau4sin1=just_now
13.	3		adv noi6=for_a_long_time
14.	2		advf zeoi3=the_most
15.	2		adv jau5si4=sometimes
16.	2		adv jyu4gwo2=if
17.	2		adv seng4jat6=always
18.	2		adv zing6hai6=only
19.	1		advf taai3=too
20.	1		advf zoi3=again
21.	1		advj joeng6joeng6=everything
22.	1		advj zan1hai6=really

23.	1		advs go2zan6si4=that_time
24.	1		advs jat1zan6gaan1=later
25.	1		advs ji5ging1=already
26.	1		advs jyun4loi4=actually
27.	1		advs zi1cin4=before

Closed Class categories use by three-year-old children

Aspect Marker used by three-year-old children

- 6 Total number of different word types used
 57 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	39		asp zo2=ASP
2.	8		asp gwo3=ASP
3.	3		asp hOI1=ASP
4.	3		asp zyu6=ASP
5.	2		asp gan2=ASP
6.	2		asp zOek6=ASP

Locatives used at by three-year-old children

- 4 Total number of different word types used
 10 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	5		nnloc soeng6=up
2.	3		nnloc hau6min6=back
3.	1		nnloc bin6=side
4.	1		nnloc jap6bin6=inside

Negative used by three-year-old children

4 Total number of different word types used

155 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	86		neg m4=not
2.	47		neg mou5=nothing
3.	21		neg mei6=not_yet
4.	1		neg mou2=not_good

Connective used by three-year-old children

5 Total number of different word types used

37 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	20		conj bat1gwo3=but
2.	11		conj jan1wai6=because_of
3.	3		conj tung4maai4=and
4.	2		conj daan6hai6=but
5.	1		conj so2ji3=therefore

Pronouns used by three-year-old children

6 Total number of different word types used

231 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	94		nnpr ngo5=I_me
2.	87		nnpr keoi5=he_or_she
3.	41		nnpr nei5=you
4.	6		nnpr ngo5dei6=we_us
5.	2		nnpr keoi5dei6=they
6.	1		nnpr nei5dei6=you_plural

Question words used by three-year-old children

- 10 Total number of different word types used
 77 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	40		wh me1=what
2.	13		wh mat1je5=what
3.	6		wh bin1dou6=where
4.	5		wh dim2=how
5.	5		wh dim2joeng2=how
6.	3		wh gei2=how_much
7.	2		wh bin1=which
8.	1		wh bin1go3=who
9.	1		wh dim2gaai2=why
10.	1		wh me1je5=what

Classifier used by three-year-old children

- 17 Total number of different word types used
 275 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	162		cl go3=CL
2.	71		cl di1=CL
3.	8		cl Zi1=CL
4.	5		cl tiu4=CL
5.	4		cl ci3=CL
6.	4		cl joeng6=CL
7.	4		cl zek3=CL
8.	3		cl gin6=CL
9.	3		cl zoeng1=CL
10.	2		cl Loeng5=CL
11.	2		cl deng2=CL
12.	2		cl deoi3=CL
13.	1		cl baa2=CL
14.	1		cl fan6=CL
15.	1		cl gAa3=CL
16.	1		cl lap1=CL
17.	1		cl mIn6=CL

Post-Verbal Particle used by three-year-old children

8 Total number of different word types used

77 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	30		pri jyun4=PRT
2.	20		pri dou2=PRT
3.	10		pri faan1=PRT
4.	6		pri Maai4=PRT
5.	4		pri can1=PRT
6.	4		pri maai4=PRT
7.	2		pri haa5=PRT
8.	1		pri hOu2=PRT

Chapter 4. Language characteristics of four-year-old children

4.1 General language measures

Table 4.1. General language measures for four-year-old children.

Name	Sex	Age	Language Measures					
			MLU	MLU#5	Type	Token	VOCD	Reynell*
1. ACT	M	4;00.24	2.39	7.20	107	254	57.08	45
2. CKY	M	3;11.13	2.87	8.40	161	498	72.51	55
3. CY	M	3;11.00	4.30	15.80	219	977	70.22	57
4. LCL	M	3;11.01	2.31	8.60	121	308	65.98	53
5. YCY	M	3;11.20	2.60	14.80	193	567	61.20	52
6. CBL	F	4;00.21	4.62	17.00	203	731	60.68	43
7. CGW	F	3;11.17	3.27	9.40	132	375	68.76	53
8. CYW	F	4;01.12	4.18	12.20	190	887	47.17	48
9. LHK	F	3;10.26	4.21	17.20	150	526	39.90	49
10. MCL	F	4;01.13	4.39	14.00	179	616	59.42	59
Median			3.73	13.10	170	546	60.94	

*Reynell Normal Range: (-1.5 sd - +1.5 sd) 42 - 54

In Table 4.1, in addition to age, we provide information on MLU (based on 100 utterances); MLU5, which is the mean length of utterance of the 5 longest utterances the child produces; and VOCD, which as we indicated earlier is based on repeated sampling of 50 tokens, and does not depend on

sample size. In fact the samples on which these VOCD values are based vary quite considerably in length. For the MLU scores and VOCD, the table also identifies the score that is located at the median. With a small number of subjects, and considerable individual variation on each of the general measures, means would be suspect as measures of typicality. Raw scores from the Reynell Developmental Language Scale (Receptive) are also supplied in the table. All the children are within or above normal limits.

4.2 Vocabulary — Open class and Closed class

The 'Typical' Child: Open and Closed Class. In a 20 minute conversation with an adult, a typical four-year-old child uses 170 different words-types) and a total of 546 word-tokens altogether. The range in both types and tokens reflects productivity differences among the children. Please see the end of the chapter for the complete list of words used by the four-year-olds.

Based on median scores for MLU5 and VOCD, we take child 20 as a typical four-year-old to explore the vocabulary that a child uses at this age. Figure 4.1 shows that she has about an equal number of closed class words and nouns in the sorts of different words-types that she uses in a conversation.

Figure 4.1. Distribution of word-types used by a typical four-year-old child in a conversation.

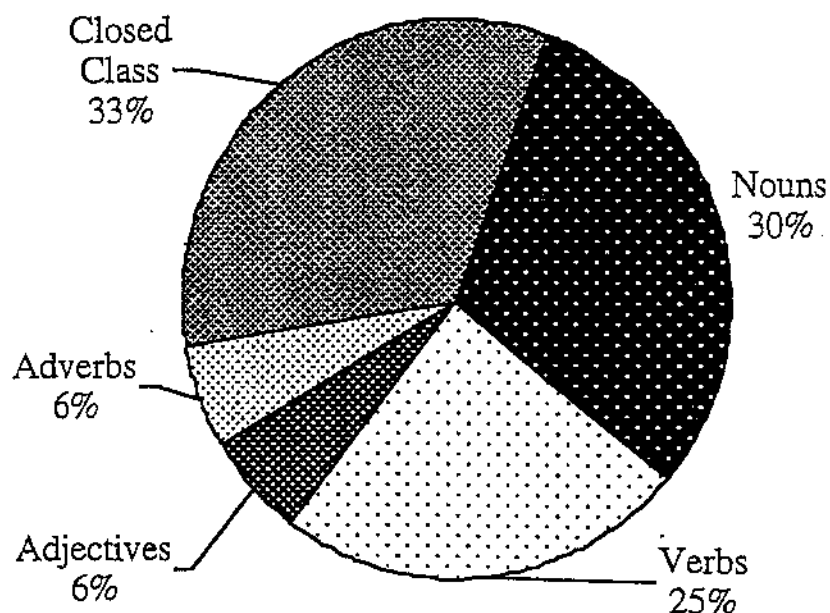
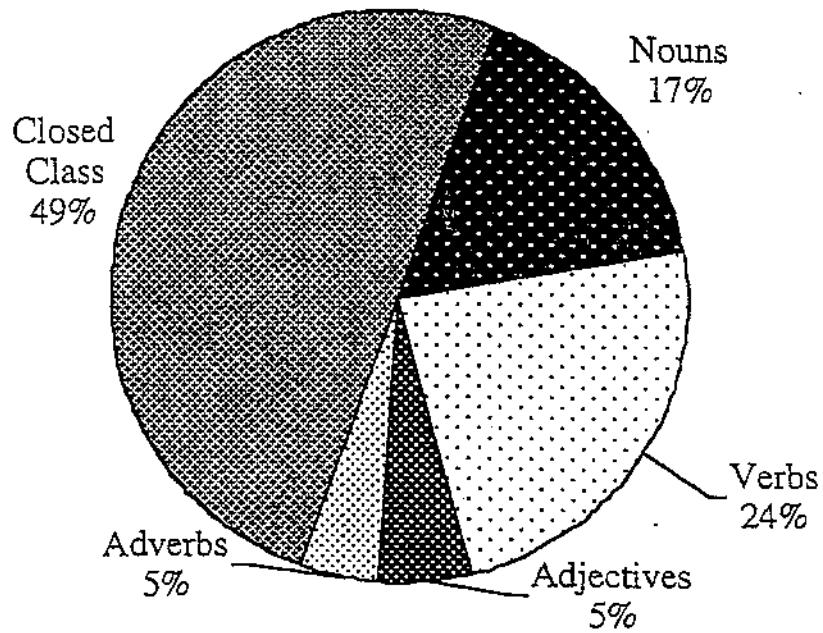


Figure 4.2 shows that of all of the word-tokens used in the sample, there is a large number of closed class words used (49% of all words in this child's sample). This means that about half of all the words the child used in the conversation were words such as classifiers, connectives and post-verbal particles. (Compare this with Figure 2.2 when only 39% of the tokens used by two-year olds are closed class.)

Figure 4.2. Distribution of word-tokens used by a typical four-year-old child in a conversation.



All Children: Frequencies of Open Class words. Table 4.2 shows the total number of open class types and tokens produced by all of the four-year-old children.

Table 4.2. Open Class – Types and Tokens produced by four-year-old children.

No.	Grammatical Categories		Types	Tokens
1.	Adjective	adj	71	329
2.	Focus adverb	advf	8	106
3.	Adverb of intensity	advi	2	37
4.	Adverb of manner	advn	2	2
5.	Sentential adverb	advS	24	110
6.	Noun	nn	236	880
7.	Proper name	nnpp	9	14
8.	Directional verb	dir	3	17
9.	Ditransitive verb	vd	1	16
10.	Ergative verb	verg	4	7
11.	Function verb	vf	3	320
12.	Intransitive verb	vi	21	126
13.	Transitive verb	vt	130	907
Open Class Total			514	2871

As the data were collected during a bath-time setting (the child bathed a doll) the most frequent words used were those referring either to the activity in which the child was engaged, or to the child's family. Table 4.3 shows the most frequently occurring nouns in the conversations of all of the ten four-year-old children (see the end of the chapter for the complete list of nouns used by the children).

Table 4.3. The most frequent nouns used by four-year-old children.

No.	Frequency	Character	Word-types
1.	47		nn je5=thing
2.	32		nn Saam1=clothes
3.	26		nn maam1mi4=mother
4.	23		nn tau4=head
5.	22		nn dou6=place
6.	21		nn gaau3=sleep
7.	21		nn uk1kei2=home
8.	18		nn haai4=shoes
9.	18		nn naailnaail=milk
10.	16		nn jil=aunt
11.	15		nn mou4gan1=towel
12.	13		nn faan1gaan2=soap

Table 4.4 shows the 12 most frequently occurring verbs in the conversations of all of the ten four-year-old children (see the end of the chapter for the complete list of verbs used by the children).

Table 4.4. The most frequent verbs used by four-year-old children.

No.	Frequency	Character	Word-types
1.	197		vt hai6=is
2.	109		vt sik6=to_eat
3.	102		vt jau5=have
4.	55		vt cung1=flush
5.	51		vt zoek3=to_wear
6.	46		vt sai2=to_wash
7.	44		vi fan3=sleep
8.	40		vt jam2=to_drink
9.	36		vt ceoi4=remove
10.	32		vt zung1ji3=love
11.	24		vt Jung6=to_use
12.	24		vt jiu3=want

Table 4.5 shows the 12 most frequently occurring adjectives in the conversations of all of the four-year-old children (see the end of the chapter for the complete list of adjectives used by the children).

Table 4.5. The most frequent adjectives used by four-year-old children.

No.	Frequency	Character	Word-types
1.	94		adj hou2=good
2.	28		adj loeng4=cool
3.	17		adj dol1=many
4.	14		adj saai3=dry_in_the_sun
5.	10		adj wulzou1=dirty
6.	9		adj faai3=quick
7.	7		adj daai6=big
8.	7		adj gon1zeng6=clean
9.	7		adj leng3=pretty
10.	6		adj faai3lok6=happy
11.	6		adj hoeng1=giving_good_smell
12.	5		adj Haai4=rough

Table 4.6 shows the 12 most frequently occurring adverbs in the conversations of all of the four-year-old children (see the end of the chapter for the complete list of adverbs used by the children).

Table 4.6. The most frequent adverbs used by four-year-old children.

No.	Frequency	Character	Word-types
1.	33		advf zung6=still
2.	31		adv Hou2=very
3.	29		advf dou1=too
4.	25		advf sin1=first
5.	19		adv jau5si4=sometimes
6.	18		adv ping4si4=in_usual_days
7.	15		adv gam2joeng2=such_way
8.	12		adv sin1=only
9.	11		adv bat1jyu4=it_is_better_to
10.	9		advf zeoi3=the_most
11.	7		advf jau6=again
12.	6		adv gam3=so

All Children: Frequencies of Closed Class words. Table 4.7 shows the total number of closed class types and tokens produced by the four-year-old children.

Table 4.7. Closed Class – Types and Tokens produced by four-year-old children.

No.	Grammatical Categories		Types	Tokens
1.	Aspectual marker	asp	6	71
2.	Auxiliary / Modal verb	aux	5	109
3.	Classifier	cl	15	323
4.	Comparative morpheme	com	1	6
5.	Connective	conj	8	35
6.	Correlative	corr	1	4
7.	Clitic	ctc	2	37
8.	Determiner	det	6	171
9.	Expressive utterance	ex	21	157
10.	Genitive marker	gen	2	2
11.	Emphatic inserted marker	ins	-	-
12.	Locative noun phrase	nnloc	11	16
13.	Pronoun	nnpr	6	275
14.	Negative morpheme	neg	4	259
15.	Post-verbal particle	prt	11	102
16.	Preposition	prep	8	71
17.	Quantifier	q	12	42
18.	Reflexive pronoun	rfl	1	10
19.	Sentence final particle	sfp	29	867
20.	WH words	wh	10	98
Closed Class Total			159	2655

By the age of four, about half of all words used by a child are 'closed class' words. However, a large number of these are sentence final particles. With a median MLU of 3.73, children at age four expand noun phrases and verb phrases with words that modify nouns and verbs. There is a wide range of the types of closed class words that children use.

Table 4.8 shows the most important closed class words that occurred in the conversations of all of the ten four-year-old children.

Table 4.8. List of closed class word-types used by four-year-old children⁴.

<u>Aspect</u> <u>Marker</u>	<u>Locative</u>	<u>Negative</u>	<u>Connective</u>	<u>Pronouns</u>	<u>Question</u> <u>words</u>	<u>Classifier</u>	<u>Post-verbal</u> <u>particles</u>
zo2	Soeng6min6/bin6	m4	bat1gwo3	ngo5	mat1	go3	jyun4
zyu6	hau6min6/bin6	mou3	jan1wai6	keoi5	me1	di1	dou2
gan2	hau6	mei6	tung4mai4	nei5	mat1je5	Zi1	faan1
Haa5	jap6bin6/min6		daan6hai6	ngo5dei6	me1je5	tiu4	Maai4
(fan3) zOek6	cin4bin6/min6		tung4	keoi5dei6	dim2	ci3	can1
	cin4		Waak6ze2	nei5dei6	dim2joeng2	joeng6	hOi1
	leoi5min6		ding6	jan4dei6	gei2 + adj.	zek3	hOu2
			wo4		bin1	gin6	sat6
					bin1dou6	oeng1	
					bin1 + cl.	Deng2	
					Bin1go3	deoi3	
					dim2gaai2	Gaa3	
					Zou6mat1		
					Zou6me1		

⁴ Readers will note some discrepancies between the lists here and those at the end of the chapter. The end-of-chapter lists were derived automatically by CLAN procedures from our cross-sectional database. In transcribing this database, we followed the same conventions for segmentation, and for grammatical category labeling, as were used in the longitudinal database.

So for example 'bin1go3', represented in Table 4.8 as a compound, occurs in the transcription as separate elements – 'bin1 go3'. The automatic analysis will treat each of these elements as separate words, and count them accordingly. But Table 4.8 is based on an analysis of the transcriptions by hand, enabling appropriate modifications to be made to segmentation and to category labels, which in the Table are based on Matthews and Yip (1994).

The Typical Child: Frequencies of Closed Class words. Figure 4.3 shows the frequency distribution of the most important (aspect markers, auxiliary/modal verbs, classifiers, connectives, locatives, negatives, post-verbal particles and question words) closed class words used by a typical child in a 20 minute conversation. For example, of these eight different closed class items, in comparison with the use of post-verbal particles and question words, a typical four-year-old used relatively few different locatives (only 3% of different words in these eight categories were locatives, where as 21% of the different words were question words.) Of note for this four-year-old is the fairly even distribution of different word types across the categories of question words, aspect markers, post-verbal particles, auxiliary/modal verbs and classifiers.

Figure 4.3. Distribution of closed class word-types used by a typical four-year-old child in a conversation.

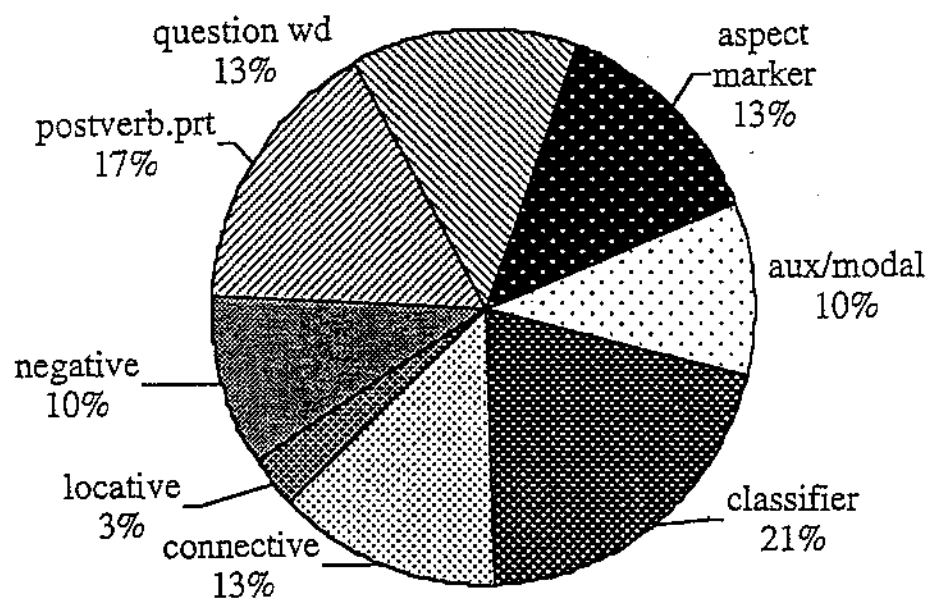
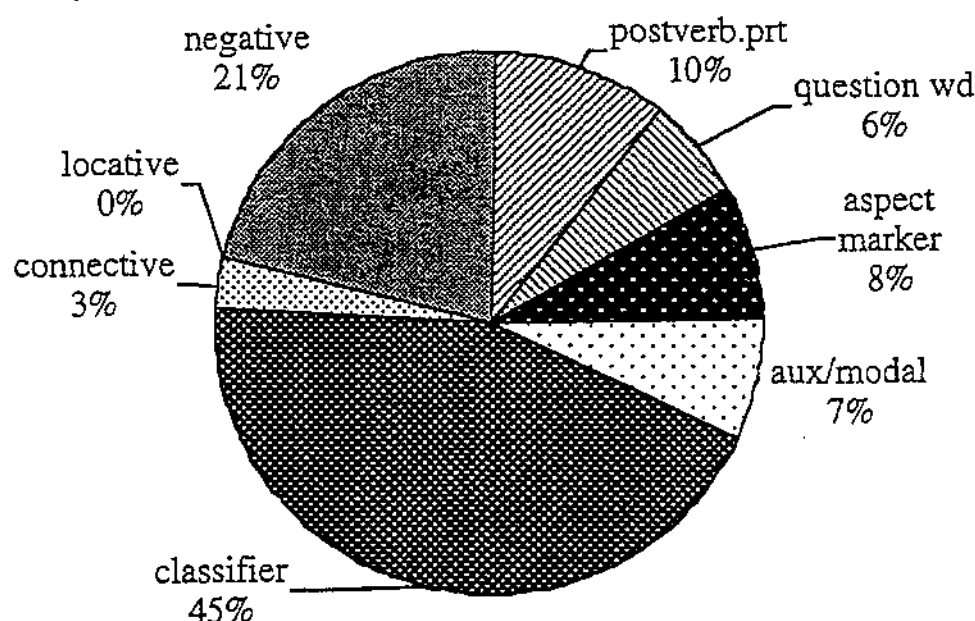


Figure 4.4 shows the distribution of the most important closed class word-tokens used by a typical child in a 20 minute conversation. For example, of the eight categories of closed class words used by this child, 45% were classifiers and 21% were negatives, indicating the high rate of use of classifiers and negatives to expand noun phrases and verb phrases, rather than locatives and auxiliary verbs in this typical four-year-old child.

Figure 4.4. Distribution of closed class word-tokens used by a typical four-year-old child in a conversation.



4.3 Syntax

In a 20 minute conversation with an adult, the median MLU value is 3.73, and the median number of utterances is 167.

Examples of structures used by three-year-old children

Phrase Structure

Below are some examples were taken from two age four samples: 4G-CYW40112.cha and 4G-CGW31117.cha, and they were the middle two among the ten at the same age in terms of MLUs.

Noun Phrase

n

*CHI: ailjo3 -: niu6pin2 .

*CHI: maat3 haa5 hau6min6 .

pr

*CHI: dak1 , dang2 nei5 .

q

*CHI: cyun4bou6 dou1 hai6 sai2 je5 ge3 .

d.cl

*CHI: bat1jyu4 m4 jiu3 li1 go3 laa3 .

cl.n

*CHI: laa1 , zek3 caa1 .

adj.n

*CHI: Gaa2 Dou1 aa3 .

n.n

*INV: gam2 bin1go3 Bong1 nei5 gaa3 .

*CHI: de1di4 maa1mi4 .

d.cl.n

*CHI: li1 zek3 je5 .

*CHI: Jiu3 sai2 zo2 li1 gin6 Saam1 keoi5

q.cl.n

no example found

n.conj.n

*INV: dou1 wui5 gaa4 , bin1go3 bong1 nei5 sai2 baak6baak6 gaa3 ?

*CHI: de1di4 Waak6ze2 maa1mi4 .

pr.n.gen.n

*CHI: ngo5 zung1ji3 tai2 ngo5 uk1kei2 Ge3 din6si6 .

Verb Phrase**cop**

*CHI: hai6 lo1 .

aux

*CHI: ngo5 sik1 gaa3 .

v

*CHI: zin2 aa3 [= pretending to put powder into a box] .

a.aux

*CHI: dou1 wui5 ge3 .

*INV: hai6 wo3 , hou2 laa1 wing6wing6 aa4 nei5 zung1(ji3) m4
zung1ji3 sik6 je5 gaa3 .

*CHI: Hou2 zung1ji3 .

a.cop

*CHI: cyun4bou6 dou1 hai6 sai2 je5 ge3 .

a.v

*CHI: ngo5 dou1 jau5 song2san1fan2 .

*CHI: gam2joeng2 zing2 .

v.asp

*CHI: deu6 zo2 keoi5 .

*CHI: ngo5 sai2 gan2 .

v.prt

*CHI: Jung6 maai4 li1 go3 .

aux.v

*CHI: ngo5 soeng2 zoek3 .

aux.v.asp

*CHI: Jiu3 sai2 zo2 li1 gin6 Saam1 keoi5 .

*CHI: Jiu3 sai2 haa5 go3 min6 gaa3 .

v.asp.prt

no example found

Prepositional Phrase**prep.n**

*CHI: <sai2> [/] ngo5 Hai2 uk1 kei2 sai2 tau4 sin1 gaa3 .

Sentence Structures**Declaratives – affirmative****cop**

*CHI: hai6 wo3 .

V

*CHI: jau5 ge3 .

VO

*CHI: zoek3 Saam1 laa3 .

*CHI: wai4 zyu6 keoi5 laa1 [= tying napkin on] .

SC

*CHI: li1 go3 song2san1fan2 lei4 gaa3 .

*CHI: ji1 go3 Gau6 zo2 laa3 .

SV

*CHI: ji1ji1 Wai3 gaa3 .

*CHI: li1 go3 sai2baak6baak6 .

SVC

*CHI: li1 go3 sIn1 hai6 sai2tau4seoi2 aa3 .

SVO

*CHI: ngo5 dou1 jau5 song2san1fan2 .

*CHI: ngo5 sol jyun4 tau4 laak3 .

SVOO

no example found

SAVO

*CHI: <sai2> [/] ngo5 Hai2 uk1kei2 sai2 tau4 sin1 gaa3 .

Declaratives-negative

m4

*CHI: m4 Zi1 aa3 .

m4 hai6

*CHI: m4 hai6 .

mou5

*CHI: li1 , mou5 zoek3 dai2fu3 .

*CHI: leoi5min6 mou5 naailnaail aa3 .

mei6

*CHI: o1 , ailjo3 mei6 lok6 song2san1(fan2) mei6 .

*CHI: m4 hou2 jiu3 li1 go3 aa1 .

Interrogatives**Intonation question**

no example found

Particle question

*CHI: li1 go3 le1 ?

*CHI: wai3 -: nei5 tung4 keoi5 Zip3 Saam1 aa4 ?

*CHI: ceoi4 zo2 Saam1 Laa4 ?

A-not-A question

*CHI: hai6 m4 hai6 gam2joeng2 aa3 ?

*CHI: jau5 mou5 je5 zong1 zyu6 aa3 ?

*CHI: hai6 m4 hai6 bei2 keoi5 zoek3 gaa3 ?

Wh question

*CHI: bin1 go3 cung1 aa3 ?

*CHI: li1 go3 me1 lei4 gaa3 ?

Other Features

Negative Questions

(negative mature particle question)

*CHI: aai1 , mou5 je5 zong1 zyu6 gaa3 mei1 .

(negative simple particle question)

*CHI: zoek3 zyu6 li1 go3 mei6 aa3 [= picking up diaper] ?

*CHI: mei6 aa4 ?

*INV: mei6 aa3 , keoi5 dou1 m4 Sai2 zoek3 lo3 gam3 daai6 go3 , hou2
mou5 aa3 .

*CHI: mou5 je5 ge2 ?

Serial Verb Construction

*CHI: bat1jyu4 ngo5dei6 heoi3 zoek3 dai2fu3 lo3 .

*CHI: bong1 ngo5 ceoi4 .

*CHI: bei2 keoi5 zoek3 ge3 .

Topicalisation

*CHI: zong1 song2san1fan2 gaa3 , ngo5 soeng2 .

Complex Sentence

*CHI: sai2 jyun4 tau4 sin1 jiu3 .

*CHI: cung1 jyun4 loeng4 sin1 Jung6 gaa3 .

Use of a pronoun to reinforce a noun

*CHI: Jiu3 sai2 zo2 li1 gin6 Saam1 keoi5 .

Syntactic Systems

Here we see how four-year-old children deploy the closed class words that are part of their vocabulary.

Aspect markers

*CHI: tau4sin1 Jung6 zo2 li1 di1

*CHI: ngo5 man4 haa5 hoeng1 m4 hoeng1 zi1maa3

Post-verbal Particles

*CHI: cung1 Jyun4 .

*CHI: jan1wai6 sik6 je5 , ailjaa3 Hap6 Maai4 ngaan5 sin1 .

*CHI: jam2 saai3 laa3 .

Locatives

*CHI: cin4bin6 .

*CHI: jap6bin6 zung6 jau5 aa4 ?

*CHI: hoeng3 cin4 le1 , fan3 dai1 hai2 dou6 .

*CHI: jYu2 Hai2 hoi2 leoi5min6 Jau4 gaa3 !

*CHI: bat1gwo3 mou5 je5 gaa3 , jap6bin6 hai6 wun6geoi6 lei4 gaa3 11.

*CHI: m4 hai6 jau5si4 m4 Siu2sam1 zing2 zo2 jit6 Di1 sei2 aa3 soeng6min6 aa3 !

Negatives

*CHI: ngo5 m4 zi1 .

*CHI: m4 wulzou1 .

Pronouns

- *CHI: ngo5dei6 mei6 waan2 jyun4 .
 *CHI: wai3 -: nei5 tung4 keoi5 Zip3 Saam1 aa4 ?
 *CHI: mou5 dil je5 zong1 zyu6 keoi5 gaa3 me1 ?

Connectives

- *CHI: jan1wai6 jau5 dil siu2 pang4jau5 m4 Sai2 daap3
 haau6cel , jau5 dil siu2 pang4jau5 daap3 haau6cel
 gaa3.

Question words

- *CHI: bin1go3 cung1 aa3 ?

Classifiers

- *CHI: Loeng5 ci3 .
 *CHI: Jiu3 Jung6 go3 xxx Jung6 li1 dil .
 *CHI: Jiu3 sai2 zo2 li1 gin6 Saam1 keoi5 .

Syntactic errors

Although children have some facility with closed class vocabulary, there are of course still some developmental non-adult-like uses. Most of these are in the category of classifier, where many children use the default forms of go3 or zek3 instead of specific classifiers.

Unnecessary word repetition

- *CHI: o1 , ailjo3 mei6 lok6 song2san1(fan2) mei6 .
 ("mei6" was repeated unnecessarily)

Error in forming coordinated sentence by juxtaposition

*INV: jiu3 li1 go3 ?

*CHI: li1 go3 m4 hai6 , jiu3 go2 go3 .

Verb omitted

*CHI: neit5 zou6 mat1 (jau5) loeng5 go3 naai5zeon1 ge2?

Double question word

*CHI: Li1 go3 mel bei2 bin1go3 aa4

Classifier error

*CHI: Lei4 go3 ping4gwo2, lei4 go3 tai4zi2

Copula omitted

*CHI: Keoi5 saam1 aa4? (should be keoi5 hai6 saam1)

Longest utterances

Although the median MLU for age four is 3.73, children do use sentences of much greater length. Some examples are:

*CHI: ji1 gAa3 Bin1 gAa3 wui5' zeoi3 faai3 aa4 ?

*CHI: ngo5 jau5zan6si4 sik6 ji1 go3 Hou2 Tung3 aa3 !

*CHI: ngo5 ping4si4 Hai2 uk1kei2 dou1 fan3 gaau3

*CHI: maa1mi4 wui5 gong2 gu2zai2 Bei2 ngo5 teng1

- *CHI: jyu4gwo2 le1 , ngo5 Faan1 lei4 ge3 si4hau6 aa4 , ngo5
m4 zi1 faan1 lei4 aa3
- *CHI: long keoi5 zi6gei2 heoi3 zo2 jan4dei6 go2 bIn1
- *CHI: suk6 sIn1 hou2 lo2 ceot1 lei4 taan1 dung3 sIn1 hou2
sik6
- *CHI: ngo5 jau5si4 ne1 tin1gwong1 go2 si4 fan3 gaau3 go2 si4
m4 Sai2 laai6 syu4 gaa3
- *CHI: keoi5 cung1 jyun4 bong1 keoi5 zoek3 me1 saam1 hou2
le1
- *CHI: m4tung1 aa3 , keoi5 zaat6 zyu6 Bin1 lei4 cung1 me1?
- *CHI: suk6 sIn1 hou2 lo2 ceot1 lei4; taan1 dung3 sIn1 hou2
sik6
- *CHI: sin1saang1 waa6 m4 ho2ji3 sik6 gam3 do1 tong2

Advanced forms

Children aged four also used some advanced vocabulary forms, for example:

ping4si4	'normally'
gam2	'in this way'
jau5zan6si4	'sometimes'

m4tung1	'a term for rhetorical question'
dol zan6	'for a while longer'
gam1 ziu1	'this morning'
go2 si4	'at the time of'
jin4zilhou6	'and then'
m4hai6	'otherwise, if not'
si4si4	'often'
zilcin4	'Before (in time)'

Vocabulary used by four-year-old children

687 Total number of different word types used

5556 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	270		sfp aa3=SFP
2.	197		vf hai6=is
3.	170		neg m4=not
4.	150		sfp gaa3=SFP
5.	141		cl go3=CL
6.	137		det li1=this
7.	124		nnpr ngo5=I_me
8.	111		nnpr keoi5=he_or_she
9.	109		vt sik6=to_eat
10.	102		cl di1=CL
11.	102		vf jau5=have
12.	94		adj hau2=good
13.	65		sfp lei4=SFP
14.	59		aux Jiu3=want
15.	58		wh me1=what
16.	55		neg mou5=nothing
17.	55		vt cung1=flush
18.	51		vt zoek3=to_wear
19.	50		ex e6=EX
20.	47		nn je5=thing

No.	Frequency	Character	Word-types
21.	46		vt sai2=to_wash
22.	45		sfp laa3=SFP
23.	44		sfp aa1=SFP
24.	44		vi fan3=sleep
25.	42		sfp le1=SFP
26.	40		vt jam2=to_drink
27.	39		asp zo2=ASP
28.	36		nnpr nei5=you
29.	36		sfp aa4=SFP
30.	36		vt ceoi4=remove
31.	35		prr jyun4=PRT
32.	34		ctc dak1=CTC
33.	33		advf zung6=still
34.	33		neg mei6=not_yet
35.	32		nn Saam1=clothes
36.	32		sfp laa1=SFP
37.	32		vt zung1ji3=love
38.	31		adv Hou2=very
39.	31		ex gam2=EX
40.	31		sfp ge3=SFP
41.	29		advf dou1=too
42.	28		adj loeng4=cool
43.	27		prep bong1=help
44.	26		nn maa1mi4=mother
45.	25		advf sin1=first

No.	Frequency	Character	Word-types
46.	25		pri dou2=PRT
47.	24		sfp lo1=SFP
48.	24		vt Jung6=to_use
49.	24		vt jiu3=want
50.	23		aux wui5=would
51.	23		nn tau4=head
52.	23		vt maat3=to_wipe
53.	22		nn dou6=place
54.	22		vt waan2=to_play
55.	21		cl Zi1=CL
56.	21		cl zek3=CL
57.	21		nn gaau3=sleep
58.	21		nn uk1kei2=home
59.	21		sfp ge2=SFP
60.	21		vf mai6=not
61.	19		adv jau5si4=sometimes
62.	19		det go2=that
63.	19		ex haa2=EX
64.	19		vi soeng2=to_want
65.	19		vt zou6=to_do
66.	18		adv ping4si4=in_usual_days
67.	18		nn haai4=shoes
68.	18		nn naai1naai1=milk
69.	18		sfp ne1=SFP
70.	18		vt Zit1=squeeze_out

No.	Frequency	Character	Word-types
71.	17		adj dol=many
72.	17		asp zyu6=ASP
73.	16		nn ji1=aunt
74.	16		sfp e3=SFP
75.	16		vd bei2=give
76.	16		vt heoi3=to_go
77.	15		adv gam2joeng2=such_way
78.	15		ex ailjaa3=EX
79.	15		nn mou4gan1=towel
80.	15		vt san1=new
81.	14		adj saai3=dry_in_the_sun
82.	14		aux Sai2=need
83.	14		vt sik1=to_know
84.	13		dir lok6=down
85.	13		nn faan1gaan2=soap
86.	13		nn ze4ze1=sister
87.	13		prep zau6=then
88.	13		prt faan1=PRT
89.	13		vt Faan1=again
90.	12		adv sIn1=only
91.	12		aux ho2ji3=can
92.	12		conj bat1gwo3=but
93.	12		nn seoi2=water
94.	12		prep Hai2=at
95.	12		prt haa5=PRT

No.	Frequency	Character	Word-types
96.	12		sfp laak3=SFP
97.	12		sfp wo3=SFP
98.	12		vi zi1=know
99.	12		vt gan1zyu6=follow
100.	12		vt hoi1=open
101.	12		vt hok6=to_learn
102.	11		advs bat1jyu4=it_is_better_to
103.	11		cl gAa3=CL
104.	11		nn cong4=bed
105.	11		nn maa4maai1=mother
106.	11		vt caat3=to_brush
107.	10		adj wu1zou1=dirty
108.	10		det nei1=this
109.	10		nn bi4bi1=baby
110.	10		nn pei5=blanket
111.	10		prep tung4=with
112.	10		q jat1=one
113.	10		rfl zi6gei2=self
114.	10		sfp m6=SFP
115.	10		vt Dou2=pour
116.	10		vt Wai3=feed
117.	10		vt baai2=place
118.	10		vt wan2=find
119.	10		wh mat1je5=what
120.	9		adj faai3=quick

No.	Frequency	Character	Word-types
121.	9		advf zeoi3=the_most
122.	9		conj tung4maai4=and
123.	9		nn saang1gwo2=fruit
124.	9		vi seng2=awake
125.	9		vt aai1=lay_against
126.	9		vt so1=brush
127.	8		asp gan2=ASP
128.	8		cl tiu4=CL
129.	8		nn cel1cel1=car
130.	8		nn naai5=milk
131.	8		nn ngaa4=teeth
132.	8		nn sai2tau4seoi2=shampoo
133.	8		nn si4=time
134.	8		nn song2san1fan2=baby_powder
135.	8		nn zam2tau4=pillow
136.	8		sfp maa3=SFP
137.	8		vt daa2=hit
138.	8		vt hAa1=bully
139.	8		vt lo2=to_take
140.	8		vt mok1=to_take_off
141.	7		ENG Sailor+Moon
142.	7		adj daai6=big
143.	7		adj gon1zeng6=clean
144.	7		adj leng3=pretty
145.	7		advf jau6=again

No.	Frequency	Character	Word-types
146.	7		nn caal1caal1=fork
147.	7		nn dai2fu3=underwear
148.	7		nn naai5naai5=milk
149.	7		nn ngaan5=eye
150.	7		nn sau2=hand
151.	7		nn wun6geoi6=toy
152.	7		nn zou2caan1=breakfast
153.	7		prrt Maai4=PRT
154.	7		vt Bong1=help
155.	7		vt kam2=cover
156.	7		vt sau1=to_hide
157.	7		vt tai2=to_look
158.	7		vt wun6=to_replace
159.	7		wh bin1=which
160.	6		SND am4
161.	6		adj faai3lok6=happy
162.	6		adj hoeng1=giving_good_smell
163.	6		adv gam3=so
164.	6		adv Gam2=in_this_way
165.	6		com Di1=COM
166.	6		conj jan1wai6=because_of
167.	6		exj aa3=EX
168.	6		nn Min6=noodle
169.	6		nn caal1=fork
170.	6		nn caang2=orange

No.	Frequency	Character	Word-types
171.	6		nn ci4gang1=spoon
172.	6		nn de1di4=father
173.	6		nn faan6=rice
174.	6		nn goek3=foot
175.	6		nn ping4gwo2=apple
176.	6		q loeng5=two
177.	6		q saam1=three
178.	6		wh dim2gaai2=why
179.	5		adj Haa4=rough
180.	5		adj baak6sik1=white_colour
181.	5		adj tou5ngo6=hungry
182.	5		cl gin6=CL
183.	5		ex o4=EX
184.	5		nn Dim2=o_clock
185.	5		nn ce1=car
186.	5		nn faan1ke2=tomato
187.	5		nn gaalze1=elder_sister
188.	5		nn hau2seoi2gin1=baby_napkin
189.	5		nn min6=face
190.	5		nn mui4mui2=yonger_sister
191.	5		nn ngaa4caat2=tooth_brush
192.	5		nn saam1saam1=clothes
193.	5		nn tai4zi2=grape
194.	5		nn tau4faat3=hair
195.	5		prt maai4=PRT

No.	Frequency	Character	Word-types
196.	5		q sei3=four
197.	5		sfp gaa4=SFP
198.	5		sfp lo3=SFP
199.	5		sfp zaa3=SFP
200.	5		vi hai2=present
201.	5		viljuk1=move
202.	5		vi paa3=to_be_afraid
203.	5		vi waa6=to_tell
204.	5		vt Gaa3=to_teach
205.	5		vt Sik1=to_switch_off
206.	5		vt gaa1=add
207.	5		vt hei2=up
208.	5		vt mak6=dictate
209.	5		vt zing2=to_make
210.	5		wh bin1dou6=where
211.	5		wh dim2=how
212.	4		adj baau2=full
213.	4		adj caang2sik1=orange_colour
214.	4		adj dung3=cold
215.	4		adj ngaan5fan3=sleepy
216.	4		adj sai3=small
217.	4		adj sak1=to_stuff
218.	4		adj wong4sik1=yellow_color
219.	4		adj zi2sik1=purple_color
220.	4		adv ji4gaa1=now

No.	Frequency	Character	Word-types
221.	4		asp zOek6=ASP
222.	4		cl ci3=CL
223.	4		conj daan6hai6=but
224.	4		corr Jyut6=CORR
225.	4		ex ji2=EX
226.	4		ex m2=EX
227.	4		nn Bin1=pigtail
228.	4		nn Mei6=taste
229.	4		nn aap3aap3=duck
230.	4		nn bat1=pen
231.	4		nn daan6goul=cake
232.	4		nn dau2dau2=bean
233.	4		nn gaan2jik6=liquid_soup
234.	4		nn gung1zai2=doll
235.	4		nn haau6ce1=school_bus
236.	4		nn kwan4=dress
237.	4		nn naai5fan2=milk_powder
238.	4		nn ngaa4goul=tooth_paste
239.	4		nn pet1pet1=hips
240.	4		nn sin1saang1=teacher
241.	4		nn suk1mai2pin2=corn_fries
242.	4		nn tung1fan2=macaromi
243.	4		nn zUk1=congee
244.	4		nn zeon1=bottle
245.	4		prepljung6=by

No.	Frequency	Character	Word-types
246.	4		sfp lu3=SFP
247.	4		verg wai4=to_surround
248.	4		vt Cyun1=get_through
249.	4		vt Nau2=to_twist
250.	4		vt maak3=to_make_open
251.	4		vt ol=to_go_for_excretments
252.	4		vt zong1=to_contain
253.	4		vt zyu2=cook
254.	3		adj Gan2=tight
255.	3		adj Jyun4=rounded
256.	3		adj ci5=similar
257.	3		adj fan2hung4sik1=pink_colour
258.	3		adj hung4sik1=red_color
259.	3		adj jel=grandfather
260.	3		adj jit6=hot
261.	3		adj tim4=sweet
262.	3		adv seng4jat6=always
263.	3		adv ting1jat6=tomorrow
264.	3		ctc dou3=CTC
265.	3		dir ceot1=out
266.	3		ex Le1=EX
267.	3		ex ailjo3=EX
268.	3		ex waa3=EX
269.	3		nnpp si1zi2wong4=NNPP
270.	3		nn Dou1=knief

No.	Frequency	Character	Word-types
271.	3		nn ci3zi2=tissue
272.	3		nn cung4cung2=worm
273.	3		nn fan2=noodles
274.	3		nn fu3fu3=trousers
275.	3		nn goek3goek3=foot
276.	3		nn hau2=mouth
277.	3		nn jan4=people
278.	3		nn jil1jil1=aunt
279.	3		nn juk6seoi3zuk1=congee_with_chopped_meat
280.	3		nn mat6=sock
281.	3		nn naai5zeon1=milk_bottle
282.	3		nn neoi5zai2=girl
283.	3		nn ning4mung1=lemon
284.	3		nn niu6pin2=diaper
285.	3		nn ol3=love
286.	3		nn pei2=quilt
287.	3		nn pei5pei5=blanket
288.	3		nn pun4pun4=basin
289.	3		nn soe4waat6tail=a_slide
290.	3		nn tong1=soup
291.	3		nn waat6tail=slide
292.	3		nn zan6=CL_of_time
293.	3		nn zin3=cushion
294.	3		qlji6=two
295.	3		qlsap6=ten

No.	Frequency	Character	Word-types
296.	3		q sap6jat1=eleven
297.	3		sfp Laa4=SFP
298.	3		vi haang4=to_walk
299.	3		vt Tung3=to_be_in_pain
300.	3		vt Zam1=to_pour_liquid
301.	3		vt daap3=to_take
302.	3		vt dang2=wait
303.	3		vt fan1=divide
304.	3		vt gaau2=to_disturb
305.	3		vt giu3=call
306.	3		vt lau4=to_flow
307.	3		vt soe4=to_slide
308.	3		vt tip3=to_stick
309.	3		vt zit1=ticket
310.	3		wh dim2joeng2=how
311.	2		ENG Hello+Kitty
312.	2		ENG Minnie
313.	2		ENG Pretty+Moon
314.	2		ENG bear
315.	2		ENG daddy
316.	2		adj Fu3=vice
317.	2		adj Gaa2=false
318.	2		adj Gat1=stinging
319.	2		adj ai2=short
320.	2		adj daai6daai6=big

No.	Frequency	Character	Word-types
321.	2		adj dai1=low
322.	2		adj dim6=okay
323.	2		adj jYu2=bruised
324.	2		adj laam4sik1=blue_colour
325.	2		adj luk6sik1=green_colour
326.	2		adj siu2=small
327.	2		adj zan1=real
328.	2		adv jat1zan6=later
329.	2		adv jin4zi1hau6=then
330.	2		adv si4si4=always
331.	2		adv tau4sin1=just_now
332.	2		asp hOI1=ASP
333.	2		cl Loeng5=CL
334.	2		cl deoi3=CL
335.	2		cl joeng6=CL
336.	2		det gam1=this
337.	2		det haa6=next
338.	2		ex ai1jo1=EX
339.	2		ex ou3=EX
340.	2		ex waa1=EX
341.	2		ex wai3=EX
342.	2		nnloc cin4=front
343.	2		nnloc hau6bin6=back_side
344.	2		nnloc jap6bin6=inside
345.	2		nnloc leoi5min6=inside

No.	Frequency	Character	Word-types
346.	2		nn loc soeng6=up
347.	2		nnpp ding1mun5=NNPP
348.	2		nnpp loeng4loeng4=NNPP
349.	2		nnpp paang4paang2=NNPP
350.	2		nnpr ngo5dei6=we_us
351.	2		nn Gang1=spoon
352.	2		nn Sol=comb
353.	2		nn bIn1=boundary
354.	2		nn baa4baa1=father
355.	2		nn baak6baak6=shower
356.	2		nn baan1dim2gau2=spotted_dog
357.	2		nn beng2gon1=biscuit
358.	2		nn cin1caul=swing
359.	2		nn coi3=vegetable
360.	2		nn dai6=ordinal_number
361.	2		nn dang1=lamp
362.	2		nn dip2=plate
363.	2		nn fo3gwai6cel=cargo_lorry
364.	2		nn fu3=pants
365.	2		nn gang1gang1=spoon
366.	2		nn gol=song
367.	2		nn goi3=cover
368.	2		nn gung1=work
369.	2		nn gwo2zap1=juice
370.	2		nn hung4lo4baak6=carrot

No.	Frequency	Character	Word-types
371.	2		nn jau3zi6jyun2=kindergarten
372.	2		nn kaal1tung1pin2=cartoon
373.	2		nn laang5hei3=air_conditioning
374.	2		nn leoi5=female
375.	2		nn meng2=name
376.	2		nn min6min6=face
377.	2		nn nung4ful=fammer
378.	2		nn pang4jau5=friends
379.	2		nn pun4=basin
380.	2		nn san1tai2=body
381.	2		nn sau2sau2=hand
382.	2		nn sik6mat6=food
383.	2		nn syun1=grandchildren
384.	2		nn tong2=candy
385.	2		nn zeoi2=mouth
386.	2		nn zuk1zuk1=bamboo
387.	2		nn zyul1gullik1=chocolate
388.	2		nn zyul1zyul1=pig
389.	2		prep Bei2=to
390.	2		prep Tung4maai4=with
391.	2		q bun3=half
392.	2		sfp bo3=SFP
393.	2		sfp tim1=SFP
394.	2		vi bin3=to_change
395.	2		vi man4=to_smell

No.	Frequency	Character	Word-types
396.	2		vi si3=to_try
397.	2		vi siu3=to-smile
398.	2		vi siu3siu3=to_smile
399.	2		vi zi1dou3=understand
400.	2		vi zyun3=rotate
401.	2		vt coeng3=sing
402.	2		vt deoi2=point_with_force
403.	2		vt dim2zung1=o_clock
404.	2		vt fu4=lend_a_hand
405.	2		vt gin3=see
406.	2		vt gong2=say
407.	2		vt gu3=take_care_of
408.	2		vt jaap6=call_sb
409.	2		vt lat1=to_loose
410.	2		vt maai5=to_buy
411.	2		vt naau6=to_scold
412.	2		vt paai4=to_queue
413.	2		vt sam2=investigate
414.	2		vt suk6=cooked
415.	2		vt teng1=to_hear
416.	2		vt zaat6=make
417.	2		vt zap1=to_pick_up
418.	2		vt zeot1=rub
419.	2		vt zit1zit1=squeeze
420.	2		vt zuk1=catch

No.	Frequency	Character	Word-types
421.	2		wh gei2=how_much
422.	1		ENG Garfield
423.	1		ENG Lego
424.	1		ENG Mickey
425.	1		ENG cereal
426.	1		ENG mummy
427.	1		SND pu4
428.	1		SND si1
429.	1		adj Gau6=old
430.	1		adj Gou1=tall
431.	1		adj Zoek6=on
432.	1		adj baau2baau2=full
433.	1		adj ceng1=green
434.	1		adj dak1haan4=free
435.	1		adj gau3=enough
436.	1		adj gon1=dry
437.	1		adj gui6=tired
438.	1		adj gwaai1gwaai1=well_behaved
439.	1		adj haam4haam2dei6=salty
440.	1		adj hak1sik1=black
441.	1		adj hou2mei6=delicious
442.	1		adj hou2sik6=tastful
443.	1		adj hou2tai2=good_to_watch
444.	1		adj jat1joeng6=the_same
445.	1		adj jyun5=far_away

No.	Frequency	Character	Word-types
446.	1		adj laat6=hot_and_spicy
447.	1		adj lau6=to_leak
448.	1		adj naan4=difficult
449.	1		adj nyun5=warm
450.	1		adj sap1=wet
451.	1		adj sau3=thin
452.	1		adj siu2sam1=be_careful
453.	1		adj siu2siu2=little
454.	1		adj soeng1=injured
455.	1		adj song2=dry
456.	1		adj syu4=outdated
457.	1		adj wAn4=mixed_well
458.	1		advf seng4=whole
459.	1		advf zaalmaa3=only
460.	1		advf zoi3=again
461.	1		advml faai3faai3=quickly
462.	1		advml noi6=for_a_long_time
463.	1		advsl cam4jat6=yesterday
464.	1		advsl go2si4=that_time
465.	1		advsl go2zan6=that_time
466.	1		advsl jau5zan6si4=sometimes
467.	1		advsl je6maalmaal=at_night
468.	1		advsl jyu4gwo2=if
469.	1		advsl m4tung1=unexpectedly
470.	1		advsl tin1gwong1=dawn

No.	Frequency	Character	Word-types
471.	1		adv zil cin4=before
472.	1		adv zil hau6=after
473.	1		adv zing6hai6=only
474.	1		asp gwo3=ASP
475.	1		aux jing1goi1=should
476.	1		cl Gan1=CL
477.	1		cl fan6=CL
478.	1		cl mIn6=CL
479.	1		cl zoeng1=CL
480.	1		conj Tung4=and
481.	1		conj Waak6ze2=or
482.	1		conj ding6=or
483.	1		conj wo4=and
484.	1		det mui5=every
485.	1		dir soeng5=up
486.	1		ex ail jo4=EX
487.	1		ex e5=EX
488.	1		ex m3=EX
489.	1		ex m4goi1=EX
490.	1		ex maa2=EX
491.	1		ex o3=EX
492.	1		gen Ge3=GEN
493.	1		gen zi1=GEN
494.	1		neg mou2=not_good
495.	1		nnloc Jau6=right

No.	Frequency	Character	Word-types
496.	1		nnloc cin4bin6=front_side
497.	1		nnloc cin4min6=front_side
498.	1		nnloc hau6=back
499.	1		nnloc hau6min6=back
500.	1		nnloc ji1dou6=here
501.	1		nnpp kei4kei2=NNPP
502.	1		nnpp maa5cing4laam4=NNPP
503.	1		nnpp mei5siu3neoi5=NNPP
504.	1		nnpp mo1mo1=NNPP
505.	1		nnpp zoeng1ging2jiu6=NNPP
506.	1		nnpr jan4dei6=others
507.	1		nnpr keoi5dei6=they
508.	1		nn Gaan2=soap
509.	1		nn Gau2=dog
510.	1		nn Hung4=bear
511.	1		nn Saai1=hill
512.	1		nn Zap1=juice
513.	1		nn aap3=duck
514.	1		nn aap3zai2=duck
515.	1		nn baak6lo4baak6=white_carrot
516.	1		nn bel1bel1hung4=bear
517.	1		nn bel1lei2=pear
518.	1		nn bei6=nose
519.	1		nn bi4bi4=baby
520.	1		nn bo1bo1=ball

No.	Frequency	Character	Word-types
521.	1		nn bollo4=pineapple
522.	1		nn bou3bou3=cloth
523.	1		nn bui3zek3=back_of_body
524.	1		nn caang2zap1=orange_juice
525.	1		nn cellei4zi2=cherry
526.	1		nn coeng2coeng2=sausage
527.	1		nn coi3coi3=vegetable
528.	1		nn cong4cong4=bed
529.	1		nn cyu4fong2=ktichen
530.	1		nn daai6gaa1=altogether
531.	1		nn daan2=egg
532.	1		nn dai2saam1=underwear
533.	1		nn dau4dau2=bean
534.	1		nn din6si6=television
535.	1		nn faai3zi2=chopstick
536.	1		nn faan1gaan2pou5=bubbles_made_from_soap
537.	1		nn fo2=fire
538.	1		nn gai1daan2=egg
539.	1		nn geng2=neck
540.	1		nn geng3=mirror
541.	1		nn goek3zi2=toe
542.	1		nn gu2zai2=story
543.	1		nn gung1fo3=homework
544.	1		nn gung1jyun2=graden
545.	1		nn haam2=things_inside

No.	Frequency	Character	Word-types
546.	1		nn hei3seoi2=soft_drink
547.	1		nn hoeng1ziul=banana
548.	1		nn hoi2=sea
549.	1		nn hok3=shell
550.	1		nn hon3bou2baau1=hamberger
551.	1		nn jat6=day
552.	1		nn je5sik6=food
553.	1		nn ji1sang1=doctor
554.	1		nn ji3daai6lei6fan2=spaghetti
555.	1		nn jik1=advantage
556.	1		nn joeng4cung1=onion
557.	1		nn juk6=meat
558.	1		nn jyu4daan2=fish_ball
559.	1		nn kwan4kwan4=dress
560.	1		nn kwan4zai2=dress
561.	1		nn laam6=cable
562.	1		nn laang1saam1=woollen_fabrics
563.	1		nn lau4tai1=stairs
564.	1		nn lei6=tongue
565.	1		nn lo1jau2=hip
566.	1		nn lo4baak6=carrot
567.	1		nn lou6=road
568.	1		nn lung1lung1=hole
569.	1		nn m1=faece
570.	1		nn maa1maal=mother

No.	Frequency	Character	Word-types
571.	1		nn mam1mam1=food
572.	1		nn mei5=tail
573.	1		nn min6baau1=bread
574.	1		nn naai5zeoi2=sucker
575.	1		nn naam4zai2=boy
576.	1		nn ngaa4ngaa4=tooth
577.	1		nn ngaau4naai5=milk
578.	1		nn ngau4juk6=beef
579.	1		nn niu6=urine
580.	1		nn paau2ce1=racing_car
581.	1		nn pang4jau5zai2=friends
582.	1		nn pin2=diaper
583.	1		nn ping4gwo2zap1=apple_juice
584.	1		nn pun2=basin
585.	1		nn saan1lung1=cave
586.	1		nn sailgwaal=water_melon
587.	1		nn sau2zi2gung1=thumb
588.	1		nn seoi2hau4=water_pipe
589.	1		nn seoi2seoi2=water
590.	1		nn seoi6ji1=night_shirt
591.	1		nn si2=excrements
592.	1		nn si4hak1=moment
593.	1		nn si4hau6=time
594.	1		nn si6jau4=soy_sauce
595.	1		nn sin3tiu4=stripe

No.	Frequency	Character	Word-types
596.	1		nn sing1sing1beng2=star_shaped_biscuit
597.	1		nn sol1sol1=comb
598.	1		nn suk1mai2=corn
599.	1		nn syu1=book
600.	1		nn syu4syu2=excret_the_urine
601.	1		nn syu6hung4=koala
602.	1		nn wan6dung6=physical_exercise
603.	1		nn wun2=bowl
604.	1		nn zi2=paper
605.	1		nn zam1=needle
606.	1		nn ze1=umbrella
607.	1		nn ze4ze2=sister
608.	1		nn zi2gan1=tissue
609.	1		nn ziu1=banana
610.	1		nn zou2=early
611.	1		nn zyu1=pig
612.	1		prep hoeng3=to_face
613.	1		prt can1=PRT
614.	1		prt gWo3=PRT
615.	1		prt hOi1=PRT
616.	1		prt hOu2=PRT
617.	1		prt sat6=PRT
618.	1		q baat3=eight
619.	1		q cyun4bou6=all
620.	1		q luk6=six

No.	Frequency	Character	Word-types
621.	1		q ng5=five
622.	1		sfp Lo4=SFP
623.	1		sfp aak3=SFP
624.	1		sfp jo3=SFP
625.	1		sfp wo5=SFP
626.	1		sfp zilmaa3=SFP
627.	1		verg dam3=hang
628.	1		verg dit3=to_fall_down
629.	1		verg laan6=rot
630.	1		vi ceotlsai3=born
631.	1		vi kat1kat1=to_cough
632.	1		vi loi4=to_come
633.	1		vi tUng4=same_as
634.	1		vi tan3=move
635.	1		vt Bou1=to_boil
636.	1		vt Caan2=to_uproot
637.	1		vt Cau3=take_care_of
638.	1		vt Gam3=to_prohibit
639.	1		vt Hap6=close
640.	1		vt Hoi1=activate
641.	1		vt Jau4=to_paint
642.	1		vt Laam2=hug
643.	1		vt Lap1=cover_up
644.	1		vt Lou6=expose
645.	1		vt Siu2sam1=careful

No.	Frequency	Character	Word-types
646.	1		vt Soeng5=attend_lesson
647.	1		vt Zip3=fold
648.	1		vt aai3=shout
649.	1		vt au3=generate
650.	1		vt cAa4=check
651.	1		vt ci1=stick
652.	1		vt cit3=cut
653.	1		vt co5=sit
654.	1		vt daai3=to_bring
655.	1		vt dam2=to_throw_away
656.	1		vt deu6=throw
657.	1		vt duk1=to_point_with_effort
658.	1		vt duk6=read
659.	1		vt fong3=place_onto
660.	1		vt gei3=remeber
661.	1		vt gyun1=donate
662.	1		vt kik1=kick
663.	1		vt kul1=to_tie_up
664.	1		vt laa2=take
665.	1		vt laai6=lose_control_in_excretion
666.	1		vt lam2=think
667.	1		vt lam4=pour_liquid_on
668.	1		vt ling2=to_turn
669.	1		vt long2=to_rinse_the_mouth
670.	1		vt lou1=mix

No.	Frequency	Character	Word-types
671.	1		vt mong6=to_look
672.	1		vt pou1=place
673.	1		vt pui4=to_compensate
674.	1		vt saan1=close
675.	1		vt sai2sai2=to_wash
676.	1		vt sek3=to_kiss
677.	1		vt taan1=wait_for
678.	1		vt zaa1=hold
679.	1		vt zaang1=lack
680.	1		vt zaat3=to_tie
681.	1		vt zai1zai1=put_into
682.	1		vt zam3=to_sleep_on_pillow
683.	1		vt ze3=to_lend
684.	1		vt zin2=to_cut_with_scissor
685.	1		vt zoek6=to_switch
686.	1		wh mat1=what
687.	1		wh me1je5=what

Nouns used by four-year-old children

236 Total number of different word types used

880 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	47		nn je5=thing
2.	32		nn Saam1=clothes
3.	26		nn maai1mi4=mother
4.	23		nn tau4=head
5.	22		nn dou6=place
6.	21		nn gaau3=sleep
7.	21		nn uk1kei2=home
8.	18		nn haai4=shoes
9.	18		nn naai1naai1=milk
10.	16		nn ji1=aunt
11.	15		nn mou4gan1=towel
12.	13		nn faan1gaan2=soap
13.	13		nn ze4ze1=sister
14.	12		nn seoi2=water
15.	11		nn cong4=bed
16.	11		nn maa4maal=mother
17.	10		nn bi4bi1=baby
18.	10		nn pei5=blanket
19.	9		nn saang1gwo2=fruit
20.	8		nn cel1cel1=car

No.	Frequency	Character	Word-types
21.	8		nn naai5=milk
22.	8		nn ngaa4=teeth
23.	8		nn sai2tau4seoi2=shampoo
24.	8		nn si4=time
25.	8		nn song2san1fan2=baby_powder
26.	8		nn zam2tau4=pillow
27.	7		nn caalcaal=fork
28.	7		nn dai2fu3=underwear
29.	7		nn naai5naai5=milk
30.	7		nn ngaan5=eye
31.	7		nn sau2=hand
32.	7		nn wun6geoi6=toy
33.	7		nn zou2caan1=breakfast
34.	6		nn Min6=noodle
35.	6		nn caal=fork
36.	6		nn caang2=orange
37.	6		nn ci4gang1=spoon
38.	6		nn de1di4=father
39.	6		nn faan6=rice
40.	6		nn goek3=foot
41.	6		nn ping4gwo2=apple
42.	5		nn Dim2=o_clock
43.	5		nn cel=car
44.	5		nn faan1ke2=tomato
45.	5		nn gaalzel=elder_sister

No.	Frequency	Character	Word-types
46.	5		nn hau2seoi2gin1=baby_napkin
47.	5		nn min6=face
48.	5		nn mui4mui2=yonger_sister
49.	5		nn ngaa4caat2=tooth_brush
50.	5		nn saam1saam1=clothes
51.	5		nn tai4zi2=grape
52.	5		nn tau4faat3=hair
53.	4		nn Bin1=pigtail
54.	4		nn Mei6=taste
55.	4		nn aap3aap3=duck
56.	4		nn bat1=pen
57.	4		nn daan6gou1=cake
58.	4		nn dau2dau2=bean
59.	4		nn gaan2jik6=liquid_soup
60.	4		nn gung1zai2=doll
61.	4		nn haau6ce1=school_bus
62.	4		nn kwan4=dress
63.	4		nn naai5fan2=milk_powder
64.	4		nn ngaa4gou1=tooth_paste
65.	4		nn pet1pet1=hips
66.	4		nn sin1saang1=teacher
67.	4		nn suk1mai2pin2=corn_fries
68.	4		nn tung1fan2=macaromi
69.	4		nn zUk1=congee
70.	4		nn zeon1=bottle

No.	Frequency	Character	Word-types
71.	3		nn Dou1=knife
72.	3		nn ci3zi2=tissue
73.	3		nn cung4cung2=worm
74.	3		nn fan2=noodles
75.	3		nn fu3fu3=trousers
76.	3		nn goek3goek3=foot
77.	3		nn hau2=mouth
78.	3		nn jan4=people
79.	3		nn ji1ji1=aunt
80.	3		nn juk6seoi3zuk1=congee_with_chopped_meat
81.	3		nn mat6=sock
82.	3		nn naai5zeon1=milk_bottle
83.	3		nn neoi5zai2=girl
84.	3		nn ning4mung1=lemon
85.	3		nn niu6pin2=diaper
86.	3		nn oi3=love
87.	3		nn pei2=quilt
88.	3		nn pei5pei5=blanket
89.	3		nn pun4pun4=basin
90.	3		nn soe4waat6tai1=a_slide
91.	3		nn tong1=soup
92.	3		nn waat6tai1=slide
93.	3		nn zan6=CL_of_time
94.	3		nn zin3=cushion
95.	2		nn Gang1=spoon

No.	Frequency	Character	Word-types
96.	2		nn Sol=comb
97.	2		nn bInl=boundary
98.	2		nn baa4baa1=father
99.	2		nn baak6baak6=shower
100.	2		nn baan1dim2gau2=spotted_dog
101.	2		nn beng2gon1=biscuit
102.	2		nn cin1caul=swing
103.	2		nn coi3=vegetable
104.	2		nn dai6=ordinal_number
105.	2		nn dang1=lamp
106.	2		nn dip2=plate
107.	2		nn fo3gwei6cel=cargo_lorry
108.	2		nn fu3=pants
109.	2		nn gang1gang1=spoon
110.	2		nn go1=song
111.	2		nn goi3=cover
112.	2		nn gung1=work
113.	2		nn gwo2zap1=juice
114.	2		nn hung4lo4baak6=carrot
115.	2		nn jau3zi6jyun2=kindergarten
116.	2		nn kaa1tung1pin2=cartoon
117.	2		nn laang5hei3=air_conditioning
118.	2		nn leoi5=female
119.	2		nn meng2=name
120.	2		nn min6min6=face

No.	Frequency	Character	Word-types
121.	2		nn nung4ful=fammer
122.	2		nn pang4jau5=friends
123.	2		nn pun4=basin
124.	2		nn san1tai2=body
125.	2		nn sau2sau2=hand
126.	2		nn sik6mat6=food
127.	2		nn syun1=grandchildren
128.	2		nn tong2=candy
129.	2		nn zeoi2=mouth
130.	2		nn zuk1zuk1=bamboo
131.	2		nn zyul1gullik1=chocolate
132.	2		nn zyul1zyul1=pig
133.	1		nn Gaan2=soap
134.	1		nn Gau2=dog
135.	1		nn Hung4=bear
136.	1		nn Saan1=hill
137.	1		nn Zap1=juice
138.	1		nn aap3=duck
139.	1		nn aap3zai2=duck
140.	1		nn baak6lo4baak6=white_carrot
141.	1		nn bel1bel1hung4=bear
142.	1		nn bel1lei2=pear
143.	1		nn bei6=nose
144.	1		nn bi4bi4=baby
145.	1		nn bol1bol1=ball

No.	Frequency	Character	Word-types
146.	1		nn bo1lo4=pineapple
147.	1		nn bou3bou3=cloth
148.	1		nn bui3zek3=back_of_body
149.	1		nn caang2zap1=orange_juice
150.	1		nn ce1lei4zi2=cherry
151.	1		nn coeng2coeng2=sausage
152.	1		nn coi3coi3=vegetable
153.	1		nn cong4cong4=bed
154.	1		nn cyu4fong2=ktichen
155.	1		nn daai6gaa1=altogether
156.	1		nn daan2=egg
157.	1		nn dai2saam1=underwear
158.	1		nn dau4dau2=bean
159.	1		nn din6si6=television
160.	1		nn faai3zi2=chopstick
161.	1		nn faan1gaan2pou5=bubbles_made_from_soap
162.	1		nn fo2=fire
163.	1		nn gail daan2=egg
164.	1		nn geng2=neck
165.	1		nn geng3=mirror
166.	1		nn goek3zi2=toe
167.	1		nn gu2zai2=story
168.	1		nn gung1fo3=homework
169.	1		nn gung1jyun2=graden
170.	1		nn haam2=things_inside

No.	Frequency	Character	Word-types
171.	1		nn hei3seoi2=soft_drink
172.	1		nn hoengi1ziul=banana
173.	1		nn hoi2=sea
174.	1		nn hok3=shell
175.	1		nn hon3bou2baaul=hamberger
176.	1		nn jat6=day
177.	1		nn je5sik6=food
178.	1		nn jil1sang1=doctor
179.	1		nn ji3daai6lei6fan2=spaghetti
180.	1		nn jik1=advantage
181.	1		nn joeng4cung1=onion
182.	1		nn juk6=meat
183.	1		nn jyu4daan2=fish_ball
184.	1		nn kwan4kwan4=dress
185.	1		nn kwan4zai2=dress
186.	1		nn laam6=cable
187.	1		nn laang1saam1=wollen_fabrics
188.	1		nn lau4tail=stairs
189.	1		nn lei6=tongue
190.	1		nn lo1jau2=hip
191.	1		nn lo4baak6=carrot
192.	1		nn lou6=road
193.	1		nn lung1lung1=hole
194.	1		nn m1=faece
195.	1		nn maal1maal=mother

No.	Frequency	Character	Word-types
196.	1		nn mam1mam1=food
197.	1		nn mei5=tail
198.	1		nn min6baau1=bread
199.	1		nn naai5zeoi2=sucker
200.	1		nn naam4zai2=boy
201.	1		nn ngaa4ngaa4=tooth
202.	1		nn ngaau4naai5=milk
203.	1		nn ngau4juk6=beef
204.	1		nn niu6=urine
205.	1		nn paau2ce1=racing_car
206.	1		nn pang4jau5zai2=friends
207.	1		nn pin2=diaper
208.	1		nn ping4gwo2zap1=apple_juice
209.	1		nn pun2=basin
210.	1		nn saan1lung1=cave
211.	1		nn sailgwaal=water_melon
212.	1		nn sau2zi2gung1=thumb
213.	1		nn seoi2hau4=water_pipe
214.	1		nn seoi2seoi2=water
215.	1		nn seoi6ji1=night_shirt
216.	1		nn si2=excrements
217.	1		nn si4hak1=moment
218.	1		nn si4hau6=time
219.	1		nn si6jau4=soy_sauce
220.	1		nn sin3tiu4=stripe

No.	Frequency	Character	Word-types
221.	1		nn sing1sing1beng2=star_shaped_biscuit
222.	1		nn sol1sol1=comb
223.	1		nn suk1mai2=corn
224.	1		nn syu1=book
225.	1		nn syu4syu2=excret_the_urine
226.	1		nn syu6hung4=koala
227.	1		nn wan6dung6=physical_exercise
228.	1		nn wun2=bowl
229.	1		nn zi2=paper
230.	1		nn zam1=needle
231.	1		nn ze1=umbrella
232.	1		nn ze4ze2=sister
233.	1		nn zi2gan1=tissue
234.	1		nn ziu1=banana
235.	1		nn zou2=early
236.	1		nn zyu1=pig

Verbs used by four-year-old children

162 Total number of different word types used

1393 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	197		vf hai6=is
2.	109		vt sik6=to_eat
3.	102		vf jau5=have
4.	55		vt cung1=flush
5.	51		vt zoek3=to_wear
6.	46		vt sai2=to_wash
7.	44		vi fan3=sleep
8.	40		vt jam2=to_drink
9.	36		vt ceoi4=remove
10.	32		vt zung1ji3=love
11.	24		vt Jung6=to_use
12.	24		vt jiu3=want
13.	23		vt maat3=to_wipe
14.	22		vt waan2=to_play
15.	21		vf mai6=not
16.	19		vi soeng2=to_want
17.	19		vt zou6=to_do
18.	18		vt Zit1=squeeze_out
19.	16		vd bei2=give
20.	16		vt heoi3=to_go

No.	Frequency	Character	Word-types
21.	15		vt san1=new
22.	14		vt sik1=to_know
23.	13		dir lok6=down
24.	13		vt Faan1=again
25.	12		vi zi1=know
26.	12		vt gan1zyu6=follow
27.	12		vt hoi1=open
28.	12		vt hok6=to_learn
29.	11		vt caat3=to_brush
30.	10		vt Dou2=pour
31.	10		vt Wai3=feed
32.	10		vt baai2=place
33.	10		vt wan2=find
34.	9		vi seng2=awake
35.	9		vt aai1=lay_against
36.	9		vt sol=brush
37.	8		vt daa2=hit
38.	8		vt hAa1=bully
39.	8		vt lo2=to_take
40.	8		vt mok1=to_take_off
41.	7		vt Bong1=help
42.	7		vt kam2=cover
43.	7		vt sau1=to_hide
44.	7		vt tai2=to_look
45.	7		vt wun6=to_replace

No.	Frequency	Character	Word-types
46.	5		vi hai2=present
47.	5		vi juk1=move
48.	5		vi paa3=to_be_afraid
49.	5		vi waa6=to_tell
50.	5		vt Gaau3=to_teach
51.	5		vt Sik1=to_switch_off
52.	5		vt gaa1=add
53.	5		vt hei2=up
54.	5		vt mak6=dictate
55.	5		vt zing2=to_make
56.	4		verg wai4=to_surround
57.	4		vt Cyun1=get_through
58.	4		vt Nau2=to_twist
59.	4		vt maak3=to_make_open
60.	4		vt ol1=to_go_for_excretments
61.	4		vt zong1=to_contain
62.	4		vt zyu2=cook
63.	3		dir ceot1=out
64.	3		vi haang4=to_walk
65.	3		vt Tung3=to_be_in_pain
66.	3		vt Zam1=to_pour_liquid
67.	3		vt daap3=to_take
68.	3		vt dang2=wait
69.	3		vt fan1=divide
70.	3		vt gaau2=to_disturb

No.	Frequency	Character	Word-types
71.	3		vt giu3=call
72.	3		vt lau4=to_flow
73.	3		vt soe4=to_slide
74.	3		vt tip3=to_stick
75.	3		vt zit1=ticket
76.	2		vi bin3=to_change
77.	2		vi man4=to_smell
78.	2		vi si3=to_try
79.	2		vi siu3=to-smile
80.	2		vi siu3siu3=to_smile
81.	2		vi zildou3=understand
82.	2		vi zyun3=rotate
83.	2		vt coeng3=sing
84.	2		vt deoi2=point_with_force
85.	2		vt dim2zung1=o_clock
86.	2		vt fu4=lend_a_hand
87.	2		vt gin3=see
88.	2		vt gong2=say
89.	2		vt gu3=take_care_of
90.	2		vt jaap6=call_sb
91.	2		vt lat1=to_loose
92.	2		vt maai5=to_buy
93.	2		vt naau6=to_scold
94.	2		vt paai4=to_queue
95.	2		vt sam2=investigate

No.	Frequency	Character	Word-types
96.	2		vt suk6=cooked
97.	2		vt tengl=to_hear
98.	2		vt zaat6=make
99.	2		vt zap1=to_pick_up
100.	2		vt zeot1=rub
101.	2		vt zit1zit1=squeeze
102.	2		vt zuk1=catch
103.	1		dir soeng5=up
104.	1		verg dam3=hang
105.	1		verg dit3=to_fall_down
106.	1		verg laan6=rot
107.	1		vi ceot1sai3=born
108.	1		vi kat1kat1=to_cough
109.	1		vi loi4=to_come
110.	1		vi tUng4=same_as
111.	1		vi tan3=move
112.	1		vt Bou1=to_boil
113.	1		vt Caan2=to_uproot
114.	1		vt Cau3=take_care_of
115.	1		vt Gam3=to_prohibit
116.	1		vt Hap6=close
117.	1		vt Hoi1=activate
118.	1		vt Jau4=to_paint
119.	1		vt Laam2=hug
120.	1		vt Lap1=cover_up

No.	Frequency	Character	Word-types
121.	1		vt Lou6=expose
122.	1		vt Siu2sam1=careful
123.	1		vt Soeng5=attend_lesson
124.	1		vt Zip3=fold
125.	1		vt aai3=shout
126.	1		vt au3=generate
127.	1		vt cAa4=check
128.	1		vt cil=stick
129.	1		vt cit3=cut
130.	1		vt co5=sit
131.	1		vt daai3=to_bring
132.	1		vt dam2=to_throw_away
133.	1		vt deu6=throw
134.	1		vt duk1=to_point_with_effort
135.	1		vt duk6=read
136.	1		vt fong3=place_onto
137.	1		vt gei3=remeber
138.	1		vt gyun1=donate
139.	1		vt kik1=kick
140.	1		vt kul=to_tie_up
141.	1		vt laa2=take
142.	1		vt laai6=lose_control_in_excretion
143.	1		vt lam2=think
144.	1		vt lam4=pour_liquid_on
145.	1		vt ling2=to_turn

No.	Frequency	Character	Word-types
146.	1		vt long2=to_rinse_the_mouth
147.	1		vt lou1=mix
148.	1		vt mong6=to_look
149.	1		vt pou1=place
150.	1		vt pui4=to_compensate
151.	1		vt saan1=close
152.	1		vt sai2sai2=to_wash
153.	1		vt sek3=to_kiss
154.	1		vt taan1=wait_for
155.	1		vt zaal=hold
156.	1		vt zaang1=lack
157.	1		vt zaat3=to_tie
158.	1		vt zailzail=put_into
159.	1		vt zam3=to_sleep_on_pillow
160.	1		vt ze3=to_lend
161.	1		vt zin2=to_cut_with_scissor
162.	1		vt zoek6=to_switch

Adjectives used by four-year-old children

71 Total number of different word types used

329 Total number of words (tokens)

No.	Frequency	Character	Word-types
13.	94		adj hou2=good
14.	28		adj loeng4=cool
15.	17		adj do1=many
16.	14		adj saai3=dry_in_the_sun
17.	10		adj wulzou1=dirty
18.	9		adj faai3=quick
19.	7		adj daai6=big
20.	7		adj gon1zeng6=clean
21.	7		adj leng3=pretty
22.	6		adj faai3lok6=happy
23.	6		adj hoeng1=giving_good_smell
24.	5		adj Haai4=rough
25.	5		adj baak6sik1=white_colour
26.	5		adj tou5ngo6=hungry
27.	4		adj baau2=full
28.	4		adj caang2sik1=orange_colour
29.	4		adj dung3=cold
30.	4		adj ngaan5fan3=sleepy
31.	4		adj sai3=small
32.	4		adj sak1=to_stuff
33.	4		adj wong4sik1=yellow_color
34.	4		adj zi2sik1=purple_color

No.	Frequency	Character	Word-types
35.	3		adj Gan2=tight
36.	3		adj Jyun4=rounded
37.	3		adj ci5=similar
38.	3		adj fan2hung4sik1=pink_colour
39.	3		adj hung4sik1=red_color
40.	3		adj je1=grandfather
41.	3		adj jit6=hot
42.	3		adj tim4=sweet
43.	2		adj Fu3=vice
44.	2		adj Gaa2=false
45.	2		adj Gat1=stinging
46.	2		adj ai2=short
47.	2		adj daai6daai6=big
48.	2		adj dai1=low
49.	2		adj dim6=okay
50.	2		adj jYu2=bruised
51.	2		adj laam4sik1=blue_colour
52.	2		adj luk6sik1=green_colour
53.	2		adj siu2=small
54.	2		adj zan1=real
55.	1		adj Gau6=old
56.	1		adj Gou1=tall
57.	1		adj Zoek6=on
58.	1		adj baau2baau2=full
59.	1		adj ceng1=green
60.	1		adj dak1haan4=free
61.	1		adj gau3=enough

No.	Frequency	Character	Word-types
62.	1		adj gon1=dry
63.	1		adj gui6=tired
64.	1		adj gwaai1gwaai1=well_behaved
65.	1		adj haam4haam2dei6=salty
66.	1		adj hak1sik1=black
67.	1		adj hou2mei6=delicious
68.	1		adj hou2sik6=tastful
69.	1		adj hou2tai2=good_to_watch
70.	1		adj jat1joeng6=the_same
71.	1		adj jyun5=far_away
72.	1		adj laat6=hot_and_spicy
73.	1		adj lau6=to_leak
74.	1		adj naan4=difficult
75.	1		adj nyun5=warm
76.	1		adj sap1=wet
77.	1		adj sau3=thin
78.	1		adj siu2sam1=be_careful
79.	1		adj siu2siu2=little
80.	1		adj soeng1=injured
81.	1		adj song2=dry
82.	1		adj syu4=outdated
83.	1		adj wAn4=mixed_well

Adverbs used by four-year-old children

36 Total number of different word types used

255 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	33		advf zung6=still
2.	31		adv Hou2=very
3.	29		advf dou1=too
4.	25		advf sin1=first
5.	19		adv jau5si4=sometimes
6.	18		adv ping4si4=in_usual_days
7.	15		adv gam2joeng2=such_way
8.	12		adv sin1=only
9.	11		adv bat1jyu4=it_is_better_to
10.	9		advf zeoi3=the_most
11.	7		advf jau6=again
12.	6		adv gam3=so
13.	6		adv Gam2=in_this_way
14.	4		adv ji4gaal=now
15.	3		adv seng4jat6=always
16.	3		adv ting1jat6=tomorrow
17.	2		adv jat1zan6=later
18.	2		adv jin4zi1hau6=then
19.	2		adv si4si4=always
20.	2		adv tau4sin1=just_now
21.	1		advf seng4=whole
22.	1		advf zaalmaa3=only

23.	1		advf zoi3=again
24.	1		advn faai3faai3=quickly
25.	1		advn noi6=for_a_long_time
26.	1		advn cam4jat6=yesterday
27.	1		advn go2si4=that_time
28.	1		advn go2zan6=that_time
29.	1		advn jau5zan6si4=sometimes
30.	1		advn je6maalmaal=at_night
31.	1		advn jyu4gwo2=if
32.	1		advn m4tung1=unexpectedly
33.	1		advn tin1gwong1=dawn
34.	1		advn zilcin4=before
35.	1		advn zilhou6=after
36.	1		advn zing6hai6=only

Closed Class categories used by four-year-old children

Aspect Marker used by four-year-old children

6 Total number of different word types used

71 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	39		asp zo2=ASP
2.	17		asp zyu6=ASP
3.	8		asp gan2=ASP
4.	4		asp zOek6=ASP
5.	2		asp hOI1=ASP
6.	1		asp gwo3=ASP

Locative used by four-year-old children

11 Total number of different word types used

16 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	2		nnloc cin4=front
2.	2		nnloc hau6bin6=back_side
3.	2		nnloc jap6bin6=inside
4.	2		nnloc leoi5min6=inside

5.	2		nnloc soeng6=up
6.	1		nnloc Jau6=right
7.	1		nnloc cin4bin6=front_side
8.	1		nnloc cin4min6=front_side
9.	1		nnloc hau6=back
10.	1		nnloc hau6min6=back
11.	1		nnloc ji1dou6=here

Negative used by four-year-old children

4 Total number of different word types used

259 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	170		neg m4=not
2.	55		neg mou5=nothing
3.	33		neg mei6=not_yet
4.	1		neg mou2=not_good

Connective used by four-year-old children

8 Total number of different word types used

35 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	12		conj bat1gwo3=but
2.	9		conj tung4maai4=and
3.	6		conj jan1wai6=because_of
4.	4		conj daan6hai6=but
5.	1		conj Tung4=and
6.	1		conj Waak6ze2=or
7.	1		conj ding6=or
8.	1		conj wo4=and

Pronouns used by four-year-old children

6 Total number of different word types used

275 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	124		nnpr ngo5=I_me
2.	111		nnpr keoi5=he_or_she
3.	36		nnpr nei5=you
4.	2		nnpr ngo5dei6=we_us
5.	1		nnpr jan4dei6=others
6.	1		nnpr keoi5dei6=they

Question words used by four-year-old children

10 Total number of different word types used

98 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	58		wh me1=what
2.	10		wh mat1je5=what
3.	7		wh bin1=which
4.	6		wh dim2gaai2=why
5.	5		wh bin1dou6=where

6.	5		wh dim2=how
7.	3		wh dim2joeng2=how
8.	2		wh gei2=how_much
9.	1		wh mat1=what
10.	1		wh me1je5=what

Classifier used by four-year-old children

15 Total number of different word types used

323 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	141		cl go3=CL
2.	102		cl di1=CL
3.	21		cl Zi1=CL
4.	21		cl zek3=CL
5.	11		cl gAa3=CL
6.	8		cl tiu4=CL
7.	5		cl gin6=CL
8.	4		cl ci3=CL
9.	2		cl Loeng5=CL
10.	2		cl deoi3=CL
11.	2		cl joeng6=CL
12.	1		cl Gan1=CL
13.	1		cl fan6=CL
14.	1		cl mIn6=CL
15.	1		cl zoeng1=CL

Post-Verbal Particles used by four-year-old children

- 11 Total number of different word types used
 102 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	35		prt jyun4=PRT
2.	25		prt dou2=PRT
3.	13		prt faan1=PRT
4.	12		prt haa5=PRT
5.	7		prt Maai4=PRT
6.	5		prt maai4=PRT
7.	1		prt can1=PRT
8.	1		prt gWo3=PRT
9.	1		prt hOi1=PRT
10.	1		prt hOu2=PRT
11.	1		prt sat6=PRT

Chapter 5. Language characteristics of five-year-old children

5.1 General language measures

Table 5.1. General language measures for five-year-old children.

	Name	Sex	Age	Language Measures					
				MLU	MLU#5	Type	Token	VOCD	Reynell*
1.	CH	M	5;00.25	3.337	19.20	231	619	89.10	48
2.	CKK	M	5;00.15	4.409	16.00	276	1207	88.94	56
3.	CWC	M	5;00.10	8.405	20.40	236	1297	58.18	61
4.	KHN	M	5;00.23	5.320	16.00	199	949	65.81	55
5.	LJK	M	5;00.05	5.267	14.00	254	1385	68.05	58
6.	HKK	F	5;01.21	4.772	14.40	248	1004	91.87	59
7.	LZY	F	5;00.16	3.000	10.00	112	248	73.30	59
8.	PMH	F	4;10.02	2.968	12.20	101	187	67.40	56
9.	WSW	F	5;01.18	3.536	12.60	209	559	90.89	58
10.	YWG	F	5;02.14	1.842	8.200	132	270	67.29	59
Median				3.97	14.20	220	784	70.67	

*Reynell Normal Range: (-1.5 sd - +1.5 sd) 50 – 60

In Table 5.1, we provide information on MLU (based on 100 utterances); MLU5, which is the mean length of utterance of the 5 longest utterances the child produces; and VOCD, which as we indicated earlier is based on repeated sampling of 50 tokens, and does not depend on sample size. For the MLU scores and VOCD, the table also identifies

the score that is located at the median. With a small number of subjects, and considerable individual variation on each of the general measures, means would be suspect as measures of typicality. Table 5.1 also gives raw scores on the Reynell Developmental Language Scale (Receptive) for the children. Aside from child 21, who fall slightly below, and child 23, who fall slightly above, all children are within normal limits.

5.2 Vocabulary — Open class and Closed class

The 'Typical' Child: Open and Closed Class. In a 20 minute conversation with an adult, a typical five-year-old child uses 220 different word-types and a total of 784 word-tokens altogether. The range in both types and tokens reflects productivity differences among the children. Please see the appendix for the complete list of words used by the five-year-old children during data collection.

Taking a typical child as an example, we can explore the types of words that a child uses at this age. Figure 5.1 shows that a typical five-year olds has about an equal number of closed class words and nouns in the sorts of different words-types that he/she uses in a conversation. This is similar to the four-year old. The five-year old, however, uses higher proportion of adjectives and adverbs.

Figure 5.1. Distribution of word-types used by a typical five-year-old child in a conversation.

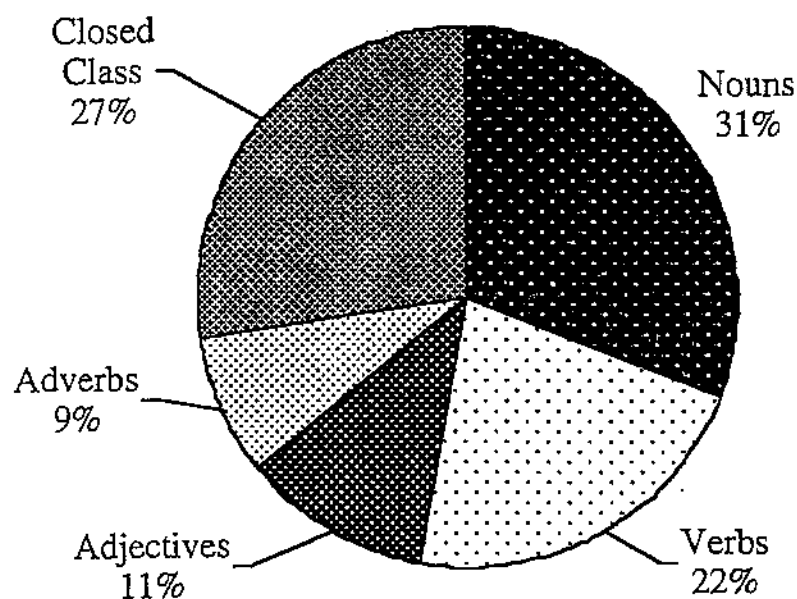
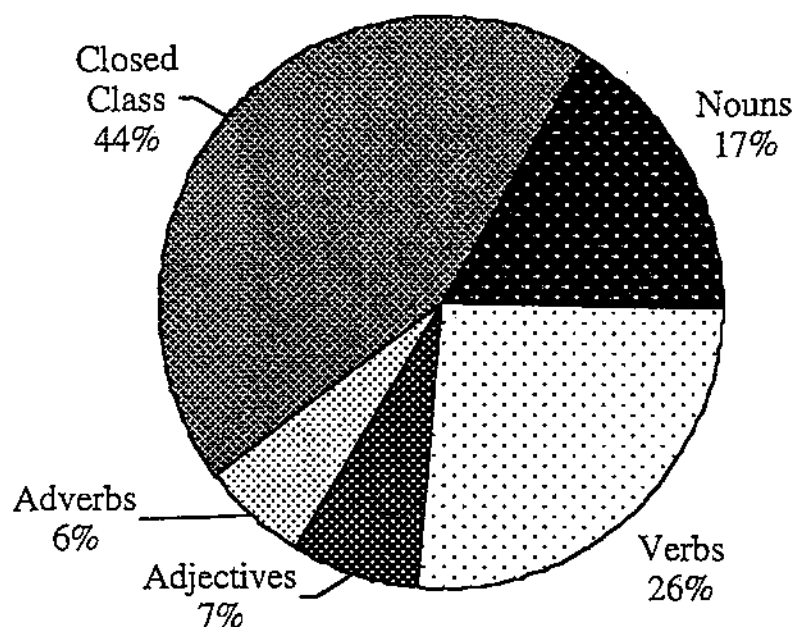


Figure 5.2 shows that of all of the word-tokens used in the sample, there is a large number of closed class words used (44% of all words in this child's sample).

Figure 5.2. Distribution of word-tokens used by a typical five-year-old child in a conversation.



All Children: Frequencies of Open Class words. Table 5.2 shows the total number of open class types and tokens produced by all of the five-year-old children.

Table 5.2. Open Class – Types and Tokens produced by five-year-old children.

<i>No.</i>	<i>Grammatical Categories</i>		<i>Types</i>	<i>Tokens</i>
1.	Adjective	adj	76	347
2.	Focus adverb	advf	11	177
3.	Adverb of intensity	advi	6	71
4.	Adverb of manner	advn	4	7
5.	Sentential adverb	advS	30	175
6.	Noun	nn	269	1122
7.	Proper name	nnpp	35	52
8.	Directional verb	dir	4	40
9.	Ditransitive verb	vd	2	21
10.	Ergative verb	verg	2	16
11.	Function verb	vf	4	322
12.	Intransitive verb	vi	35	163
13.	Transitive verb	vt	141	1225
Open Class Total			619	3738

As the data were collected during a bath-time setting (the child bathed a doll) the most frequent words used were those referring either to the activity in which the child was engaged, or to the child's family. Table 5.3 shows the 12 most frequently occurring nouns in the conversations of all of the ten five-year-old children (see the end of the chapter for the complete list of nouns used by the five-year-old children).

Table 5.3. The most frequent nouns used by five-year-old children.

No.	Frequency	Character	Word-types
1.	69		nn je5=thing
2.	44		nn faan1gaan2=soap
3.	43		nn Saam1=clothes
4.	41		nn seoi2=water
5.	39		nn dou6=place
6.	31		nn tau4=head
7.	25		nn gaau3=sleep
8.	25		nn maa1mi4=mother
9.	24		nn ngaa4=teeth
10.	20		nn dai2fu3=underwear
11.	20		nn ji1=aunt
12.	19		nn bi4bil=baby

Table 5.4 shows the 12 most frequently occurring verbs in the conversations of all of the ten five-year-old children (see the end of the chapter for the complete list of verbs used by the five-year-old children).

Table 5.4. The most frequent verbs used by five-year-old children.

No.	Frequency	Character	Word-types
1.	212		vt hai6=is
2.	98		vt sik6=to_eat
3.	96		vt jau5=have
4.	89		vt sai2=to_wash
5.	68		vt zoek3=to_wear
6.	54		vt cung1=flush
7.	50		vi fan3=sleep
8.	47		vt jam2=to_drink
9.	37		vt aai1=lay_against
10.	37		vt heoi3=to_go
11.	36		vt Jung6=to_use
12.	35		vt caat3=to_brush

Table 5.5 shows the 12 most frequently occurring adjectives in the conversations of all of the ten five-year-old children (see the end of the chapter for the complete list of adjectives used by the children).

Table 5.5. The most frequent adjectives used by five-year-old children.

No.	Frequency	Character	Word-types
1.	57		adj hou2=good
2.	35		adj loeng4=cool
3.	18		adj saai3=dry_in_the_sun
4.	17		adj do1=many
5.	14		adj daai6=big
6.	14		adj dim6=okay
7.	14		adj gon1zeng6=clean
8.	9		adj naan4=difficult
9.	7		adj leng3=pretty
10.	7		adj sai3=small
11.	7		adj zan1=real
12.	6		adj Gaa2=false

Table 5.6 shows the 12 most frequently occurring adverbs in the conversations of all of the ten five-year-old children (see the end of the chapter for the complete list of adverbs used by the children).

Table 5.6. The most frequent adverbs used by five-year-old children.

No.	Frequency	Character	Word-types
1.	56		advf dou1=too
2.	55		advf sin1=first
3.	53		adv Hou2=very
4.	28		adv jin4hou6=then
5.	26		adv gam2joeng2=such_way
6.	25		advf zung6=still
7.	22		adv sin1=only
8.	17		advf jau6=again
9.	14		adv Gam2=in_this_way
10.	11		adv gam3=so
11.	9		adv jat1zan6gaan1=later
12.	9		adv jyu4gwo2=if

All Children: Frequencies of Closed Class words. Table 5.7 shows the total number of closed class types and tokens produced by all of the three-year-old children.

Table 5.7. Closed Class – Types and Tokens produced by five-year-old children.

No.	Grammatical Categories		Types	Tokens
1.	Aspectual marker	asp	5	93
2.	Auxiliary / Modal verb	aux	6	186
3.	Classifier	cl	26	398
4.	Comparative morpheme	com	1	8
5.	Connective	conj	11	79
6.	Correlative	corr	-	-
7.	Clitic	ctc	2	102
8.	Determiner	det	6	212
9.	Expressive utterance	ex	27	199
10.	Genitive marker	gen	1	11
11.	Emphatic inserted marker	ins	1	6
12.	Locative noun phrase	nnloc	10	25
13.	Pronoun	nnpr	6	394
14.	Negative morpheme	neg	3	355
15.	Post-verbal particle	prt	10	176
16.	Preposition	prep	10	158
17.	Quantifier	q	15	65
18.	Reflexive pronoun	rfl	1	15
19.	Sentence final particle	sfp	37	1126
20.	WH words	wh	8	84
Closed Class Total			186	3692

Table 5.8 shows the most important closed class words that occurred in the conversations of all of the ten five-year-old children.

Table 5.8. List of closed class word-types used by five-year-old children⁵.

Aspect	Locative	Negative	Connective	Pronouns	Question	Classifier	Post-verbal
Marker					words		particles
zo2	soeng6min6/bin6	m4	bat1gwo3	ngo5	mat1	go3	jyun2
gwo3	hau6min6/bin6	mou5	jan1wai6	keoi5	me1	di1	dou2
gan2	jap6bin6/min6	mei6	tung4mai4	nei5	mat1je5	tiu4	faan1
zyu6	cin4		daan6hai6	ngo5dei6	dim2	ci3	Maai4
Haa5	leoi5min6		so2ji3	keoi5dei6	dim2joeng2	joeng6	hOi1
(fan3) zOek6	haa6min6		Waak6ze2	nei5dei6	bin1	zek3	sat6
	zung1gaan1		Tung4		bin1dou6	gin6	can1
	ceot1min6		ding6		bin1 + cl.	zoeng1	wAn2
	gaak3lei4		sau2sin1		Bin1go3	Deng2	
					dim2gaai2	deoi3	
						baa2	
						lap1	
						TOu3	
						gaan1	
						bou6	
						coEng4	
						fun2	
						gau6	
						Haa5	
						(nin4)baan1	

⁵ Readers will note some discrepancies between the lists here and those at the end of the chapter. The end-of-chapter lists were derived automatically by CLAN procedures from our cross-sectional database. In transcribing this database, we followed the same conventions for segmentation, and for grammatical category labeling, as were used in the longitudinal database. So for example 'bin1go3', represented in Table 5.8 as a compound, occurs in the transcription as separate elements – 'bin1 go3'. The automatic analysis will treat each of these elements as separate words, and count them accordingly. But Table 5.8

is based on an analysis of the transcriptions by hand, enabling appropriate modifications to be made to segmentation and to category labels, which in the Table are based on Matthews and Yip (1994).

The 'Typical' Child: Frequencies of Closed Class words.

Figure 5.3 shows the frequency distribution of the most important closed class word-types used by a typical child in a 20 minute conversation. Children at age five start to expand the number of different specific closed class words that they use. For example, as seen in Figure 5.3, by the age of five, children have much greater diversity of classifiers than younger children. There is a wide range of the types of closed class words that children use. Figure 5.3 shows the frequency distribution of the most important (aspect markers, auxiliary/modal verbs, classifiers, connectives, locatives, negatives, post-verbal particles and question words) closed class words- types used by a typical child in a 20 minute conversation. For example, of these eight different closed class items, in comparison with the use of classifiers and connectives, a typical five-year-old used relatively few different question words (only 3% of different words in these eight categories were question words, where as 43% of the different words were classifiers).

Figure 5.3. Distribution of closed class word-types used by a typical five-year-old child in a conversation.

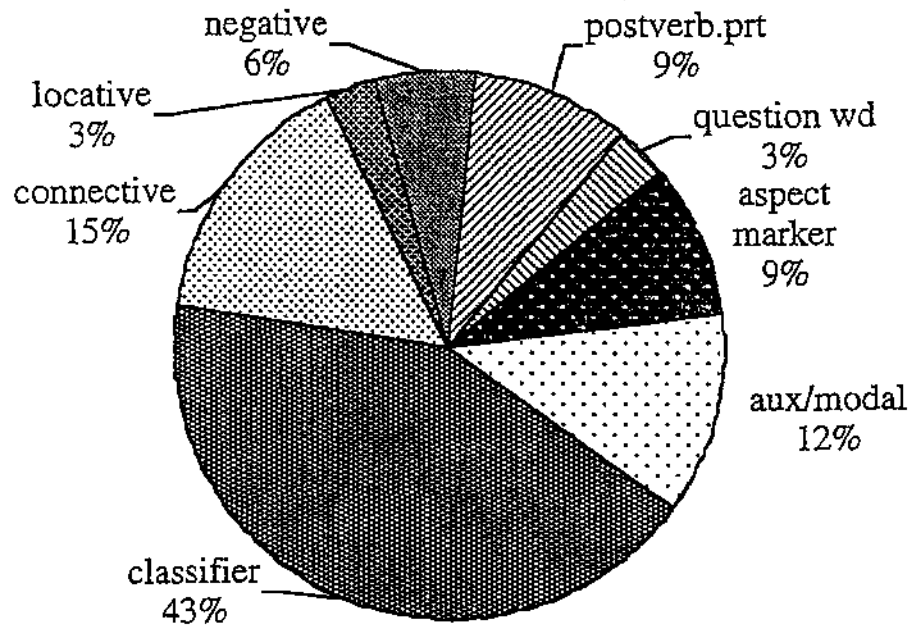
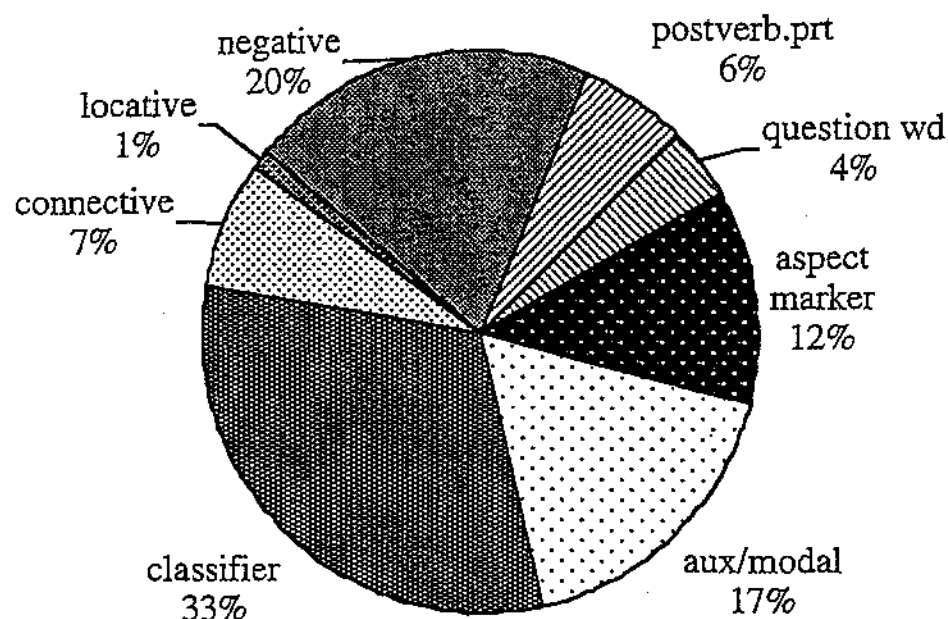


Figure 5.4 shows the distribution of the most important closed class word-tokens used by a typical child in a 20 minute conversation. For example, of the eight categories of closed class words used by this child, 33% were classifiers and 20% were negatives, indicating the high rate of use of classifiers and negatives to expand noun phrases and verb phrases, rather than locatives and post-verbal particles in this typical five-year-old child. The frequency of aspect markers (12%) and auxiliary/modal verbs (17%) was quite high in comparison with other categories.

Figure 5.4. Distribution of closed class word-tokens used by a typical five-year-old child in a conversation.



5.3 Syntax

In a 20 minute conversation with an adult, the median MLU for the children in Table 5.1 is 3.97 and the median number of utterance is 1.64. The range for MLU is 1.84 – 8.40, and for MLU5 8.2 – 20.4. We now look in greater detail at some examples of the grammatical structure used by children.

Phrase Structure

Noun Phrase

n

*CHI: faan1gaan2 .

pr

*CHI: tip3 keoi5 gaa3 .

d.cl

*CHI: go2 di1 cung1 loeng4 ge3 je5 !

q.cl

*CHI: sei3 zi1 .

cl.n

*CHI: zek3 goek3 .

pr.n

*CHI: ngo5 hai2 , e1 , soeng6bin6 ngo5 baan1fong2 , ngo5 gin3
dou2 li1 di1 je5 .

adj.n

*CHI: Jiu3 Jung6 sam1sam1 faan1gaan2 .

d.cl.n

*CHI: ngo5 hai2 , e1 , soeng6bin6 ngo5 baan1fong2 , ngo5 gin3
dou2 li1 di1 je5 .

q.cl.n

no example found

n.gen.n

*CHI: ji1 , gaan3hung4 Ge3 dai4dai2 keoi5dei6 dou1 sik1 Zaa1
 cel ge3 .

a.adj.n

*CHI: ailjaa3 ailjaa3 jau5 Hou2 do1 bei6tai3 tim1 !

n.n.n.n.conj.pr (list, coordinated)

*CHI: maalmi4 , de1di4 , go4go1 , ze4ze1 , tung4maai4 ngo5

Verb Phrase**aux**

*CHI: wui5 .

cop

*CHI: hai6 aa3 !

v

*INV: waa3 , nei5 zung1(ji3) m4 zung1ji3 hung4sik1 gaa3 ?

*CHI: zung1ji3 !

a.cop

*CHI: li1 bIn1 dou1 hai6 .

a.v

*CHI: ngo5 seng4jat6 waan2 zyu2faan6zai2 .

aux.v

*CHI: nei5 Jiu3 sai2 tau4 aa3 !

v.prt

*CHI: caat3 Iyun4 ngaa4 maat3 gon1zeng6 .

v.asp

*CHI: zyu2 gan2 faan6 .

*CHI: tip3 zyu6 .

a.v.prt

no example found

v.asp.prt

no example found

a.aux.v

*CHI: jil , gaan3hung4 Ge3 dai4dai2 keoi5dei6 dou1 sik1 Zaa1
cel ge3 .

aux.v.asp

*CHI: jing1goi1 sai2 zo2 san1 sin1 laa1 !

Prepositional Phrase**prep.n**

*CHI: ngo5 hai2 , e1 , soeng6bin6 ngo5 baan1fong2 , ngo5 gin3
dou2 lil di1 je5 .

Sentence Structures

Declaratives-affirmative

V

*CHI: hai6 aa3 !

*CHI: wui5 .

VO

*CHI: ceoi4 Saam1 .

*CHI: zou6 gan2 je5 lo3 .

VC

*CHI: sik6 dou3 Hou2 fei4 aa3 !

SV

*CHI: li1 bIn1 dou1 hai6 .

SC

*CHI: go2 di1 cung1 loeng4 ge3 je5 !

*CHI: li1 go3 go2 di1 .

*CHI: fan3 gaau3 Hou2 syu1 fuk6 aa3 !

SVC

*CHI: li1 go3 hai6 gaan2 fan2 aa3 !

SVO

*CHI: ngo5 seng4 jat6 waan2 zyu2 faan6 zai2 .

VOO

*CHI: li1 go3 bei2 keoi5 .

*CHI: <maai5> [/] maai5 di1 coi3 heoi3 gaai1si5 .

SVOO

*CHI: maa4maa4 seng4jat6 dou1 tung4 ngo5 zing2 song2san1fan2
gaa3 .

Declaratives-negative

m4

*CHI: m4 Zi1 .

m4hai6

*INV: ze4ze1 le1 , hai6 mai6 tung4 nei5 jat1cai4 fan3 gaau3gaau3
gaa3 ?

*CHI: m4 hai6 .

mou5

*INV: jau5 mou5 cin4 hau6 diu6 Zyun3 zo2 aa3 ?

mei6

*CHI: dou1 mei6 sai2 tau4 .

m4hou2

*CHI: m4 hou2 zing2 di1 hung1hei3 ceot1 lei4 sin1 !

Interrogatives

Intonation question

*CHI: cit3 haa5 di1 jyu2 sin1 .

*CHI: ngaa4gou1 ?

Particle question

*CHI: gam2 ge2 ?

*CHI: zek3 sau2 le1 ?

A-not-A question

*CHI: Jiu3 m4 Jiu3 ceoi4 Saam1 aa3 ?

Wh question

*CHI: soeng2 sik6 mat1 aa3 ?

Other Features

Negative Questions

(negative simple particle question)

*CHI: kei5 m4 wAn2 ge2 ?

(negative wh question)

*CHI: dim2gaai2 gam3 noi6 dou1 mei6 jau5 faan1 gaan2 ge2 ?

Topicalisation

*CHI: li1 go3 bei2 keoi5 .

*CHI: <maai5> [/] maai5 dil coi3 heoi3 gaailsi5 .

Serial Verb Construction

*CHI: <maai5> [/] maai5 dil coi3 heoi3 gaailsi5 .

Embedded Clause

*CHI: go2 dil cung1loeng4 ge3 je5 !

Complex Sentence

*CHI: caat3 Jyun4 ngaa4 maat3 gon1zeng6.

Use of a pronoun to reinforce a noun

*CHI: jil , gaan3hung4 Ge3 dai4dai2 keoi5dei6 dou1 sik1
Zaa1 ce1 ge3 .

Verb used as a noun

*CHI: fan3 gaau3 Hou2 syu1fuk6 aa3 !

Coordination expressed by juxtaposition

*CHI: cung1 loeng4 sai2 tau4 .

*CHI: zoek3 Saam1 zoek3 dai2fu3 !

Self-questioning with answer

*CHI: maat3 bei6tai3 aa4 ?

*CHI: m6 hai6 wo3 !

Syntactic Systems

Here we see how five-year-old children deploy the closed class words that are part of their vocabulary.

Aspect markers

*CHI: ze4ze1 , bun2loi4 ze4ze1 ge2 , daan6hai6 ze4ze1
zau2 zo2 heoi3 feilleot6ban1 dou6 fong3 gaa3 , <
so2ji3 daddy > [/] so2ji3 ji4gaa1 hai6 daddy

- *CHI: ngo5 m4 Zi1 , maalmaa1 mei6 man6 gwo3 ngo5 ge3
bo3
- *CHI: wo3 , fan3 gan2 gaau3 , ngo5 dou1 jau5 gaa3!
- *CHI: cung1 haa5 loeng4 dou1 gEi2 hou2 aa1!

Post-verbal Particles

- *CHI: Hou2 do1 ciuljan4 dou1 zung1ji3 saai3 .
- *CHI: sai2 jyun4 lu4 !

Locatives

- *CHI: <caa4> [/] caa4 soeng6min6 loeng5 zek3 ngaan5 !
- *CHI: soeng6bin6 gwaa3 zyu6 jat1 go3 hou2ci5 go2 di1
tau4sin1 go2 go3 gam2 !
- *CHI: tai2 haa5 haa6min6 .

Negatives

- *CHI: tung1soeng4 aa4 , ngo5 m4 zi1 gaa3 .
- *CHI: mui4mui2 mou5 aa3 !
- *CHI: m4 hou2 bEi2 keoi5 lau4 hau2seoi2
- *CHI: dou1 mei6 sai2 tau4 < zit1 zit1 > [/] zit1 .

Pronouns

- *CHI: keoi5 ziu3gu3 ngo5dei6 .
- *CHI: dim2gaai2 nei5dei6 mou5 geng3 , nei5dei6 +...
- *CHI: Zit1 zo2 keoi5 seng4 faai3 min6 dou1 hai6 .

Connectives

- *CHI: Hai2 lok6seon3toi4 ting4 , bat1gwo3 ngo5 Zyu6 Hai2
wui6seoi3jyun2

- *CHI: ngo5 Tung4maai4 maa1mi4 Tung4maai4 de1di4
Tung4maai4 go4go1 gaan1 fong2 .
- *CHI: daan6hai6 gaalze1 Faan1 gan2 hok6 go2 si4 zau6 m4
ho2ji3 tung4 ngo5 waan2 lu4 !
- *CHI: ze4ze1 , bun2loi4 ze4ze1 ge2 , daan6hai6 ze4ze1
zau2 zo2 heoi3 fei1leot6ban1 dou6 fong3 gaa3 , <
so2ji3 daddy > [/] so2ji3 ji4gaa1

Question words

- *CHI: zing6hai6 jing6 dak1 jung6 zek3 sau2 teoi1 heoi3
bin1 zau6 heoi3 bin1 .
- *CHI: dim2gaa2 gam3 noi6 dou1 mei6 jau5 faan1gaan2
ge2 ?
- *CHI: Jiu3 lo2 hoi1 , Jiu3 bei2 keoi5 jam2 di1 sei2 ,
mat1je5 dou1 ho2ji3 bei2 keoi5 .

Classifiers

- *CHI: kau4kei4 jat1 fun2 ciu1jan4 , Hou2 do1 ciu1jan4
dou1 zung1ji3 saai3
- *CHI: laa2 hei2 tiu4 fu3 o1 aa3 !
- *CHI: duk1 nei5 zek3 ngaan5 !
- *CHI: jin4hau6 le1 , sai2 jat1zan6gaan1 Jung6 di1
faan1gaan2 sai2 saam1saam1 gam2 zau6 dak1 laa3 .
- *CHI: zi6gei2 jat1 gaan1 fong2 .

Developmental errors/non-adult form

Although children have some facility with closed class vocabulary, there are of course still some developmental non-adult-like uses. Most of these are in the category of classifier, where many children use the default forms of *go3* or *zek3* instead of specific classifiers.

(Two different cl used for the same object within an utterance)

*CHI: *zing6 dak1 li1 tiu4 dai2fu3zai2 jat1 zek3 aa4 !*

(Insertion of unrequired cl)

*CHI: *hai2 go3 zung1gaan1 dou6 aa3 di1 goek3 , hai2
zung1gaan1 aa3 !*

Longest utterances

Although the median MLU for age five is 3.97, children do use sentences of much greater length. Some examples are:

*CHI: *<keoi5> [/] nei5 waa6 keoi5 bi4bi1 Le1 Gam2 <keoi5 m4
Sai2> [/] keoi5 m4 sik1 gaau2 keoi5 goek3zai2!*

*CHI: *aa1 , ngo5 le1 uk1kei2 sol jyun4 , ngo5 mok1 saai3 Saam1,
sin1 cung1 loeng4*

*CHI: *cung1 loeng4 sau2sin1 Jiu3 le1 zau6 hai6 sai2
jat1zan6gaan1 , jin4hau6 dak1 laak3*

*CHI: *jung6 faan1gaan2 cung1 loeng4 Tung4maai4 sai2 tau4 ,
gan1zyu6 hei2 san1 jung6 go3 mou4gan1 maat3 san1 ,
gan1zyu6 wun6 Saam1*

*CHI: ji1 , gaan3hung4 Ge3 dai4dai2 keoi5dei6 dou1 sik1
 Zaa1 ce1 ge3

*CHI: zing6hai6 jing6 dak1 jung6 zek3 sau2 teoi1 heoi3 bin1 zau6
 heoi3 bin1

Advanced forms

Children also used some more advanced words forms, for example:

bun2loi4	'originally'
ji5cin4	'in the past'
gan1zyu6	'and then'
zilhau6	'after (in time)'
seng4jat6	'often'
jin4zilhau6	'and then'
zik1hai6	'that is (a term for repair or paraphrasing)'
ci3ci3	'every time, ie always'
sau2sin1...jin4hau6	'first....and then'
jat1zan6gaan1	'a moment later'
....go2 si4	'at the time of'

Vocabulary used by five-year-old children

835 Total number of different word types used

7496 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	259		sfp aa3=SFP
2.	252		neg m4=not
3.	221		sfp gaa3=SFP
4.	212		vf hai6=is
5.	191		nnpr keoi5=he_or_she
6.	156		nnpr ngo5=I_me
7.	133		cl di1=CL
8.	132		det i1=this
9.	116		cl go3=CL
10.	98		aux Jiu3=want
11.	98		vt sik6=to_eat
12.	96		vf jau5=have
13.	93		ctc dak1=CTC
14.	89		vt sai2=to_wash
15.	79		neg mou5=nothing
16.	76		sfp lei4=SFP
17.	70		sfp le1=SFP
18.	69		nn je5=thing
19.	68		vt zoek3=to_wear
20.	64		prep zau6=then
21.	64		sfp laak3=SFP
22.	61		asp zo2=ASP

No.	Frequency	Character	Word-types
23.	60		prt dou2=PRT
24.	59		sfp laa3=SFP
25.	57		adj hou2=good
26.	57		sfp ge2=SFP
27.	56		advf dou1=too
28.	55		advf sin1=first
29.	54		vt cung1=flush
30.	53		advf Hou2=very
31.	52		det go2=that
32.	50		vi fan3=sleep
33.	49		cl Zi1=CL
34.	47		vt jam2=to_drink
35.	44		nn faan1 gaan2=soap
36.	43		nn Saam1=clothes
37.	42		sfp laa1=SFP
38.	41		nn seoi2=water
39.	40		prt jyun4=PRT
40.	39		nn dou6=place
41.	37		vt aa1=lay_against
42.	37		vt heoi3=to_go
43.	36		nnpr nei5=you
44.	36		vt Jung6=to_use
45.	35		adj loeng4=cool
46.	35		sfp ge3=SFP
47.	35		vt caat3=to_brush
48.	34		sfp aa4=SFP
49.	33		sfp aa1=SFP

No.	Frequency	Character	Word-types
50.	33		sfp wo3=SFP
51.	32		aux wui5=would
52.	32		ex heil=EX
53.	31		nn tau4=head
54.	31		q jat1=one
55.	31		sfp lo1=SFP
56.	31		vt maat3=to_wipe
57.	29		vt san1=new
58.	28		adv jin4hau6=then
59.	28		vt hoi1=open
60.	28		wh me1=what
61.	27		prt faan1=PRT
62.	26		adv gam2joeng2=such_way
63.	26		aux Sai2=need
64.	26		vt ceoi4=remove
65.	26		vt sik1=to_know
66.	26		vt zung1ji3=love
67.	25		adv zung6=still
68.	25		conj bat1gwo3=but
69.	25		nn gaau3=sleep
70.	25		nn maa1mi4=mother
71.	25		vt tai2=to_look
72.	25		vt waan2=to_play
73.	24		aux ho2ji3=can
74.	24		neg mei6=not_yet
75.	24		nn ngaa4=teeth
76.	23		prep Hai2=at

No.	Frequency	Character	Word-types
77.	23		prep tung4=with
78.	23		vi soeng2=to_want
79.	23		vt Zit1=squeeze_out
80.	22		adv sin1=only
81.	21		ex gam2=EX
82.	21		prt haa5=PRT
83.	20		conj jan1wai6=because_of
84.	20		nn dai2fu3=underwear
85.	20		nn ji1=aunt
86.	20		vd bei2=give
87.	19		cl zek3=CL
88.	19		det nei1=this
89.	19		nn bi4bi1=baby
90.	18		adj saai3=dry_in_the_sun
91.	18		nn ze4ze1=sister
92.	18		prep jung6=by
93.	18		sfp lu4=SFP
94.	18		vt caa4=spread
95.	18		vt gaau2=to_disturb
96.	17		adj do1=many
97.	17		advf jau6=again
98.	17		dir lok6=down
99.	17		vt zing2=to_make
100.	16		cl gin6=CL
101.	16		cl tiu4=CL
102.	16		ex ailjo3=EX
103.	16		vt fong3=place_onto

No.	Frequency	Character	Word-types
104.	15		conj daan6hai6=but
105.	15		nn mou4gan1=towel
106.	15		nn naai1naai1=milk
107.	15		nn niu6pin2=diaper
108.	15		rfl zi6gei2=self
109.	15		sfp gaa4=SFP
110.	15		vt Faan1=again
111.	15		wh mat1je5=what
112.	14		adj daai6=big
113.	14		adj dim6=okay
114.	14		adj gon1zeng6=clean
115.	14		adv Gam2=in_this_way
116.	14		ex jol1=EX
117.	14		ex waa3=EX
118.	14		vt hei2=up
119.	13		ENG daddy
120.	13		ex jaa1=EX
121.	13		ex jaa3=EX
122.	13		nn jan4=people
123.	13		nn niu6=urine
124.	13		prt Maai4=PRT
125.	13		sfp lu3=SFP
126.	13		vf mai6=not
127.	13		vt ol1=to_go_for_excretments
128.	13		wh dim2gaai2=why
129.	12		asp zyu6=ASP
130.	12		prep bong1=help

No.	Frequency	Character	Word-types
131.	12		vt Dou2=pour
132.	11		adv gam3=so
133.	11		asp gwo3=ASP
134.	11		dir ceot1=out
135.	11		ex e6=EX
136.	11		ex ji2=EX
137.	11		gen Ge3=GEN
138.	11		nn saam1 saam1=clothes
139.	11		vi hai2=present
140.	11		vt jiu3=want
141.	10		prep Tung4maai4=with
142.	10		verg dit3=to_fall_down
143.	10		vt gan1zyu6=follow
144.	10		vt gei3dak1=remember
145.	10		vt hok6=to_learn
146.	10		wh mat1=what
147.	9		adj naan4=difficult
148.	9		adv jat1zan6gaan1=later
149.	9		adv jyu4gwo2=if
150.	9		cl ci3=CL
151.	9		ctc dou3=CTC
152.	9		ex he1=EX
153.	9		nn caang2=orange
154.	9		nn gaa1ze1=elder_sister
155.	9		nn je6maan5=night
156.	9		nn jyu2=fish
157.	9		nn ngaan5=eye

No.	Frequency	Character	Word-types
158.	9		nn zam2tau4=pillow
159.	9		sfp tim1=SFP
160.	9		vi zyun3=rotate
161.	9		vt daa2=hit
162.	9		vt dang2=wait
163.	9		vt gaal=add
164.	9		vt sol=brush
165.	8		advs ji4gaal=now
166.	8		advs tau4sin1=just_now
167.	8		cl zoeng1=CL
168.	8		com Di1=COM
169.	8		dir soeng5=up
170.	8		nn Zap1=juice
171.	8		nn cong4=bed
172.	8		nn fu3=pants
173.	8		nn gung1zai2=doll
174.	8		nn ngaa4caat2=tooth_brush
175.	8		nn ngaa4gou1=tooth_paste
176.	8		nn sai2tau4seoi2=shampoo
177.	8		nn sau2=hand
178.	8		vt diu6=interchange
179.	8		vt mok1=to_take_off
180.	8		vt pou5=hold_in_arm
181.	8		vt sau1=to_hide
182.	8		vt wun6=to_replace
183.	7		adj leng3=pretty
184.	7		adj sai3=small

No.	Frequency	Character	Word-types
185.	7		adj zan1=real
186.	7		advf taai3=too
187.	7		advsljin4zi1hau6=then
188.	7		ex haa2=EX
189.	7		nnloc jap6min6=inside
190.	7		nnpr ngo5dei6=we_us
191.	7		nn Pou5pou5=bubble
192.	7		nn go4go1=elder_brother
193.	7		nn pei5=blanket
194.	7		nn zi2gan1=tissue
195.	7		q loeng5=two
196.	7		sfp maa3=SFP
197.	7		vt dong3=treat_it_as
198.	7		vt gin3=see
199.	7		vt hou2ci5=similar
200.	7		vt zit1=ticket
201.	7		vt zou6=to_do
202.	7		wh bin1dou6=where
203.	6		adj Gaa2=false
204.	6		adj geng1=afriad_of
205.	6		adj wulzou1=dirty
206.	6		advf zoi3=again
207.	6		det gam1=this
208.	6		ins Gwai2=INS
209.	6		nn Dim2=o_clock
210.	6		nn faan6=rice
211.	6		nn goek3=foot

No.	Frequency	Character	Word-types
212.	6		nn jat6=day
213.	6		nn lik6=effort
214.	6		nn maa4maa4=grandmother
215.	6		nn naai5zeon1=milk_bottle
216.	6		nn seoi3=age
217.	6		nn si4=time
218.	6		nn tai4zi2=grape
219.	6		pri maai4=PRT
220.	6		sfp Laa4=SFP
221.	6		sfp e1=SFP
222.	6		verg laan6=rot
223.	6		vi Zyu6=live
224.	6		vi waa6=to_tell
225.	6		vi zi1=know
226.	6		vt baai2=place
227.	6		vt ling2=to_turn
228.	6		vt lo2=to_take
229.	6		vt maai5=to_buy
230.	6		vt mang1=to_push_out
231.	6		vt zong1=to_contain
232.	5		ENG Do
233.	5		ENG candy
234.	5		SND am6
235.	5		adj dak1ji3=cute
236.	5		adj dung3=cold
237.	5		adj faai3=quick
238.	5		adj gon1=dry

No.	Frequency	Character	Word-types
239.	5		adj mei1=the_last
240.	5		adv jau5si4=sometimes
241.	5		adv seng4jat6=always
242.	5		adv zing6hai6=only
243.	5		asp gan2=ASP
244.	5		conj tung4maai4=and
245.	5		ex ai1jaa3=EX
246.	5		ex wai3=EX
247.	5		nn Mei6=taste
248.	5		nn ci4gang1=spoon
249.	5		nn coi3=vegetable
250.	5		nn dip2=plate
251.	5		nn fan2=noodles
252.	5		nn fong2=room
253.	5		nn joek6=medicine
254.	5		nn min6=face
255.	5		nn seoi2gwo2=fruit
256.	5		nn uk1kei2=home
257.	5		nn zeon1=bottle
258.	5		nn ziu1tau4zou2=morning
259.	5		nn zou2caan1=breakfast
260.	5		q saam1=three
261.	5		q sei3=four
262.	5		sfp bo3=SFP
263.	5		sfp lo3=SFP
264.	5		sfp zaa3=SFP
265.	5		vi haam3=cry

No.	Frequency	Character	Word-types
266.	5		vt Bong1=help
267.	5		vt bEi2=allow
268.	5		vt kam2=cover
269.	5		vt laai6=lose_control_in_excretion
270.	5		vt ling1=to_carry
271.	5		wh dim2=how
272.	4		ENG Re
273.	4		adj coeng4=long
274.	4		adj fei4=fat
275.	4		adj syul fuk6=comfortable
276.	4		adj waa16=out_of_order
277.	4		adv gEi2=quite
278.	4		adv mnoi6=for_a_long_time
279.	4		adv gang2hai6=of_couse
280.	4		adv ting1jat6=tomorrow
281.	4		asp zOek6=ASP
282.	4		aux jing1goi1=should
283.	4		cl TOu3=CL
284.	4		cl baa2=CL
285.	4		cl joeng6=CL
286.	4		conj Tung4=and
287.	4		conj so2ji3=therefore
288.	4		dir jap6=enter
289.	4		ex o4=EX
290.	4		ex waa1=EX
291.	4		nnloc haa6min6=below
292.	4		nnloc leoi5min6=inside

No.	Frequency	Character	Word-types
293.	4		nnpp laam4sin1saang1=NNPP
294.	4		nnpp siu2jyun2zi2=NNPP
295.	4		nn Sol=comb
296.	4		nn bei6tai3=nose_mucus
297.	4		nn din6si6=television
298.	4		nn gung1=work
299.	4		nn gung1jan4=maid
300.	4		nn pun4=basin
301.	4		nn saang1gwo2=fruit
302.	4		nn sam1sam1=heart
303.	4		nn seoi2seoi2=water
304.	4		nn si6=matter
305.	4		nn wun6geoi6=toy
306.	4		nn zam1=needle
307.	4		sfp wul1=SFP
308.	4		vi seng2=awake
309.	4		vi si3=to_try
310.	4		vt Cau3=take_care_of
311.	4		vt Tung3=to_be_in_pain
312.	4		vt Wai3=feed
313.	4		vt gong2=say
314.	4		vt jiu4=shake
315.	4		vt mit1=to_open
316.	4		vt tip3=to_stick
317.	3		ENG Mi
318.	3		ENG baby
319.	3		adj baau2=full

No.	Frequency	Character	Word-types
320.	3		adj dai1=low
321.	3		adj gau3=enough
322.	3		adj han4=to_feel_itchy
323.	3		adj hou2jam2=tastful
324.	3		adj hou2sik6=tastful
325.	3		adj hung1=empty
326.	3		adj jit6=hot
327.	3		adj ngaam1≈correct
328.	3		adj ngaan5fan3=sleepy
329.	3		adj siu2siu2=little
330.	3		adj tou5ngo6=hungry
331.	3		advf seng4=whole
332.	3		advf zeoi3=the_most
333.	3		adv ji5cin4=in_the_past
334.	3		adv zi1hau6=after
335.	3		cl gaan1=CL
336.	3		ex ou3=EX
337.	3		nnpp lam4sin1saang1=NNPP
338.	3		nnpp lung4zyu1=NNPP
339.	3		nnpp mak6dong1lou4=NNPP
340.	3		nn b n1=boundary
341.	3		nn bat1=pen
342.	3		nn bol1lo4=pineapple
343.	3		nn bui1=cup
344.	3		nn bui1bui1=cup
345.	3		nn cel=car
346.	3		nn ciul1jan4=superman

No.	Frequency	Character	Word-types
347.	3		nn cyu4fong2=ktichen
348.	3		nn del di4=father
349.	3		nn faan1ke2=tomato
350.	3		nn gOu1=cake
351.	3		nn gaail gaail=street
352.	3		nn geil=machine
353.	3		nn goi3=cover
354.	3		nn hau2seoi2gin1=baby_napkin
355.	3		nn juk6=meat
356.	3		nn kwan4=dress
357.	3		nn m1=faece
358.	3		nn mat6mat6=sock
359.	3		nn naai5=milk
360.	3		nn ping4gwo2=apple
361.	3		nn seoi2ci4=pool
362.	3		nn seoi2hau4=water_pipe
363.	3		nn seoi6ji1=night_shirt
364.	3		nn si4gaan3=time
365.	3		nn tau4tau4=head
366.	3		nn tou5=tummy
367.	3		nn zeoi2zeoi2=mouth
368.	3		prep Bei2=to
369.	3		prep beI2=by
370.	3		prt hOi1=PRT
371.	3		prt sat6=PRT
372.	3		q bun3=half
373.	3		sfp ho2=SFP

No.	Frequency	Character	Word-types
374.	3		vi beng6=ill
375.	3		vi haang4=to_walk
376.	3		vi tUng4=same_as
377.	3		vi zau2=to_go_away
378.	3		vi zi1dou3=understand
379.	3		vt aat3=press_on
380.	3		vt gam6=tp_press
381.	3		vt hap1=cheat
382.	3		vt ji4=move
383.	3		vt kau3=to_clasp
384.	3		vt ngaau5=to_bite
385.	3		vt oi3=use
386.	3		vt se2=to_write
387.	3		vt wan2=find
388.	3		vt zeot1=rub
389.	3		vt zit1zit1=squeeze
390.	3		wh bin1=which
391.	3		wh dim2joeng2=how
392.	2		ENG Okay
393.	2		ENG a
394.	2		ENG bear
395.	2		ENG party
396.	2		SND gu4
397.	2		adj HOu2=enough
398.	2		adj cung5=heavy
399.	2		adj dai6ji6=number_two
400.	2		adj fan2hung4sik1=pink_colour

No.	Frequency	Character	Word-types
401.	2		adj hoi1sam1=happy
402.	2		adj hou2waan2=interesting
403.	2		adj hung4sik1=red_color
404.	2		adj sai1lei6=mavellous
405.	2		adj sai3go3=small
406.	2		adj sap1=wet
407.	2		adj wan6lei1naa2=vanilla
408.	2		adj zing6=quiet
409.	2		advf jat6jat6=everyday
410.	2		advf ngaam1ngaam1=just
411.	2		adv ping4si4=in_usual_days
412.	2		aux ho2nang4=may
413.	2		cl baan1=CL
414.	2		cl lap1=CL
415.	2		cl wai2=CL
416.	2		conj sau2sin1=firstly
417.	2		det ze5=this
418.	2		ex Lei=EX
419.	2		ex aai2=EX
420.	2		ex baai1baai3=EX
421.	2		ex ik1=EX
422.	2		ex m3=EX
423.	2		ex wu3=EX
424.	2		nnloc cin4=front
425.	2		nnloc soeng6bin6=upper_side
426.	2		nnloc zung1gaan1=NNPP
427.	2		nnpp gei6on1=NNPP

No.	Frequency	Character	Word-types
428.	2		nnpp loeng4baak3hin1=NNPP
429.	2		nnpp sou3wong4sin1 fung1=NNPP
430.	2		nnpp waa4naap6dung6waa2tin1dei6=NNPP
431.	2		nnpp wui6seoi3jyun2=NNPP
432.	2		nnpr keoi5dei6=they
433.	2		nnpr nei5dei6=you_plural
434.	2		nn Caa4=tea
435.	2		nn Gaan2=soap
436.	2		nn Min6min6=noodle
437.	2		nn Saan1=hill
438.	2		nn baa4baa1=father
439.	2		nn be1belhung4=bear
440.	2		nn beng2gon1=biscuit
441.	2		nn bui3zek3=back_of_body
442.	2		nn caa4dim2=refreshment
443.	2		nn caa4wu2=kettle_for_making_tea
444.	2		nn caat3zi2gaau1=eraser
445.	2		nn ci3so2=toilet
446.	2		nn dai2fu3zai2=underwear
447.	2		nn dai4dai2=younger_brother
448.	2		nn din6nou5=computer
449.	2		nn gaau3gaau3=sleep
450.	2		nn go1=song
451.	2		nn goek3goek3=foot
452.	2		nn goi3goi3=cover
453.	2		nn gu2zai2=story
454.	2		nn gung1jyun2=graden

No.	Frequency	Character	Word-types
455.	2		nn haai4=shoes
456.	2		nn haai4haai4=shoe
457.	2		nn jUng6=function
458.	2		nn jau4lok6coeng4=playground
459.	2		nn kwan4kwan4=dress
460.	2		nn laam6=cable
461.	2		nn lin5=necklace
462.	2		nn lou6=road
463.	2		nn lung1=hole
464.	2		nn lung1zai2=hole
465.	2		nn man1=mosquito
466.	2		nn man1paa3goul=lotion_to_prevent_mosquito_bite
467.	2		nn naai5naai5=milk
468.	2		nn nau2=button
469.	2		nn ngok6jyu4=crocodile
470.	2		nn pei4=skin
471.	2		nn pin2=diaper
472.	2		nn saang1jat6=birthday
473.	2		nn sai2jilgeil=washing_machine
474.	2		nn sau2zi2=finger
475.	2		nn song2san1fan2=baby_powder
476.	2		nn syut3goul=ice_cream
477.	2		nn tau4faat3=hair
478.	2		nn tong2=candy
479.	2		nn tong4=sugar
480.	2		nn zeoi2=mouth
481.	2		nn zoeng3=seasoning

No.	Frequency	Character	Word-types
482.	2		nn zyu1gu1lik1=chocolate
483.	2		nn zyu2faan6zai2=cooking_utensils
484.	2		prt can1=PRT
485.	2		q cat1=seven
486.	2		q jat1baak3=one_hundred
487.	2		q luk6=six
488.	2		q m5=five
489.	2		sfp e2=SFP
490.	2		sfp le2=SFP
491.	2		sfp lok3=SFP
492.	2		sfp zaa4=SFP
493.	2		vi hang2=to_accept
494.	2		vi juk1=move
495.	2		vi kei5=stand
496.	2		vi syun3=it_is_okay
497.	2		vt Lau2=to_twist
498.	2		vt aau1=scratch
499.	2		vt cil1=stick
500.	2		vt cit3=cut
501.	2		vt dang2dang2=to_wait
502.	2		vt dim2zung1=o_clock
503.	2		vt giu3=call
504.	2		vt gwaa3=hang_up
505.	2		vt jau4=to_swim
506.	2		vt kau1=mix
507.	2		vt laa2=take
508.	2		vt lau4=to_flow

No.	Frequency	Character	Word-types
509.	2		vt teng1=to_hear
510.	2		vt teo1=to_push
511.	2		vt tiul=pick_out
512.	2		vt toi4=carry
513.	2		vt wai4saul=repair
514.	2		vt zam3=to_sleep_on_pillow
515.	2		vt zeon2=to_permit
516.	2		vt zyu2=cook
517.	1		ENG God
518.	1.		ENG Hello+Kitty
519.	1		ENG Oh
520.	1		ENG birthday
521.	1		ENG e
522.	1		ENG happy
523.	1		ENG moon
524.	1		ENG my
525.	1		ENG p
526.	1		ENG sailor
527.	1		ENG to
528.	1		ENG you
529.	1		SND am1
530.	1		SND bet6
531.	1		SND di1
532.	1		SND du4
533.	1		SND gul
534.	1		SND pet6
535.	1		adj Gat1=stinging

No.	Frequency	Character	Word-types
536.	1		adj Jyun4=rounded
537.	1		adj baak3jim3=many_pages
538.	1		adj bin2=flat
539.	1		adj cAu3=bad
540.	1		adj ci5=similar
541.	1		adj co3=wrong
542.	1		adj cyun4=all
543.	1		adj din1=crazy
544.	1		adj dyun2=short
545.	1		adj gui6=tired
546.	1		adj gwaai1=well_behaved
547.	1		adj hak1sik1=black
548.	1		adj hoeng1=giving_good_smell
549.	1		adj jyun4gulung1=circular
550.	1		adj kei4gwaai3=strange
551.	1		adj laam4sik1=blue_colour
552.	1		adj laang5=cold
553.	1		adj loeng4zam3zam3=cool
554.	1		adj luk6sik1=green_colour
555.	1		adj ngo6=hungry
556.	1		adj saM1=heart_shaped
557.	1		adj sap1sap1=wet
558.	1		adj wAn4=mixed_well
559.	1		adj wat6dat6=ugly
560.	1		adj zai6=full
561.	1		adj zeng6=clean
562.	1		adj zik6=straight

No.	Frequency	Character	Word-types
563.	1		adj zing2cai4=tidy
564.	1		advf tung1soeng4=usually
565.	1		advl joeng6joeng6=everything
566.	1		advl zan1hai6=really
567.	1		advl zi3=the_most
568.	1		advn cung5cung5dei2=heavy
569.	1		advn kau4kei4=causally
570.	1		advn mou4dyun1 dyun1=suddenly
571.	1		adv bun2loi4=originally
572.	1		adv dai6ji3si4=next_time
573.	1		adv dai6si4=later
574.	1		adv dim2zi1=unexpectedly
575.	1		adv dong1jin4=of_course
576.	1		adv fung4=whenever
577.	1		adv go2si4=that_time
578.	1		adv go2zan6=that_time
579.	1		adv jat1ding6=sure
580.	1		adv jilgaal=now
581.	1		adv kam4jat6=yesterday
582.	1		adv sing1kei4jat6=Sunday
583.	1		adv zan6gaan1=in_a_short_period_of_time
584.	1		cl Bou6=CL
585.	1		cl Gan1=CL
586.	1		cl Haa5=CL
587.	1		cl Loeng5=CL
588.	1		cl bou6=CL
589.	1		cl coEng4=CL

No.	Frequency	Character	Word-types
590.	1		cl deoi3=CL
591.	1		cl fun2=CL
592.	1		cl gau6=CL
593.	1		cl gong1=CL
594.	1		cl lap1lap1=CL
595.	1		conj Waak6ze2=or
596.	1		conj ceoi4zo2=beside
597.	1		conj lin4=include
598.	1		conj wo4=and
599.	1		det haa6=next
600.	1		ex hik1=EX
601.	1		ex laa4=EX
602.	1		ex m2=EX
603.	1		ex oe3=EX
604.	1		ex zou2tau2=EX
605.	1		nnloc ceot1min6=outside
606.	1		nnloc gaak3lei4=next_side
607.	1		nnloc hau6min6=back
608.	1		nnloc soeng6min6=above
609.	1		nnpp daai6luk6=NNPP
610.	1		nnpp ding1dong1=NNPP
611.	1		nnpp fei1leot6ban1=NNPP
612.	1		nnpp gaalfei1maau1=NNPP
613.	1		nnpp gaalgaal=NNPP
614.	1		nnpp gaalkei4=NNPP
615.	1		nnpp gaalnaa4daai6=NNPP
616.	1		nnpp gaan3hung4=NNPP

No.	Frequency	Character	Word-types
617.	1		nnpp gung1heilong5=NNPP
618.	1		nnpp gung1zeon3git6=NNPP
619.	1		nnpp hing1hing1=NNPP
620.	1		nnpp hung4gaa1kei4=NNPP
621.	1		nnpp jan4jyu4dik1tung4waa2=NNPP
622.	1		nnpp ji4tung4toi4=NNPP
623.	1		nnpp juk1wo4dou6=NNPP
624.	1		nnpp king4ji1=NNPP
625.	1		nnpp lAam4=NNPP
626.	1		nnpp lam4zan3koeng4=NNPP
627.	1		nnpp loeng4loeng4=NNPP
628.	1		nnpp lok6seon3toi4=NNPP
629.	1		nnpp mat6tong4sing1sing1=NNPP
630.	1		nnpp mei5siu3nei5=NNPP
631.	1		nnpp silzi2saan1=NNPP
632.	1		nnpp sing3gung1wui2=NNPP
633.	1		nnpp syu6lam4toi4=NNPP
634.	1		nn Caa4caa4=check
635.	1		nn Caat3=to_brush
636.	1		nn Dou1=knief
637.	1		nn Gau2=dog
638.	1		nn aap3=duck
639.	1		nn aap3zai2=duck
640.	1		nn baa4baa4=father
641.	1		nn baak3=old_man
642.	1		nn baan1fong2=classroom
643.	1		nn baan6faat3=method

No.	Frequency	Character	Word-types
644.	1		nn beng6beng6=sick
645.	1		nn bi4bi1cong4=baby_bed
646.	1		nn biu2go1=cousin
647.	1		nn biu2ze2=cousin
648.	1		nn caal=fork
649.	1		nn caang2zap1=orange_juice
650.	1		nn ceng1ping4gwo2=green_apple
651.	1		nn ci3ci3=everytime
652.	1		nn cin1caul=swing
653.	1		nn coeng1toi4=windowsill
654.	1		nn cong4cong4=bed
655.	1		nn daan6goul=cake
656.	1		nn dai2saam1=underwear
657.	1		nn dang1lung4=lantern
658.	1		nn dei6fong1=place
659.	1		nn din6nou5baan1=computer_class
660.	1		nn doi2=pocket
661.	1		nn fAat3=way
662.	1		nn faai3zi2=chopstick
663.	1		nn gaai1si5=market
664.	1		nn gaan2fan2=washing_powder
665.	1		nn gaan2jik6=liquid_soup
666.	1		nn gaau3tong2=church
667.	1		nn gaau4gaaulzyu1=sleep
668.	1		nn gai1=chicken
669.	1		nn gai1daan2=egg
670.	1		nn gau2zai2=dog

No.	Frequency	Character	Word-types
671.	1		nn geil1an1=gene
672.	1		nn geng3=mirror
673.	1		nn gep6gep6=clip
674.	1		nn ging2caat3=police
675.	1		nn goek3baan2=foot
676.	1		nn goek3baan2dai2=foot
677.	1		nn goek3zai2=foot
678.	1		nn goek3zi2=toe
679.	1		nn gung1fo3=homework
680.	1		nn gung1gung1=grandfather
681.	1		nn gwaal1gwaal1seng1=shouting
682.	1		nn haau6ce1=school_bus
683.	1		nn hau2seoi2=saliva
684.	1		nn ho2lok6=cola
685.	1		nn hoeng1coeng2=sausage
686.	1		nn hung1hei3=air
687.	1		nn jau4hei3geil1=game_machine
688.	1		nn je6maan5hak1=night
689.	1		nn jeon6fulgoul=body_lotion
690.	1		nn jil1sang1=doctor
691.	1		nn ji4tung4=children
692.	1		nn joeng2=appearance
693.	1		nn laang5hei3=air_conditioning
694.	1		nn laap6saap3tung2=rubbish_bin
695.	1		nn leot6zi2baaul=a_kind_of_bread
696.	1		nn lung1lung1=hole
697.	1		nn maal1maal1=mother

No.	Frequency	Character	Word-types
698.	1		nn maa5=horse
699.	1		nn maaulmaaul=cat
700.	1		nn mai5fan2=rice
701.	1		nn mam1mam1=food
702.	1		nn mat6=sock
703.	1		nn mei5=tail
704.	1		nn min6baaul=bread
705.	1		nn min6goul=lotion_for_face
706.	1		nn molseot6gaap3=magic_clip
707.	1		nn mou4gan1hap2=towel_box
708.	1		nn mui4mui2=yonger_sister
709.	1		nn naai5fan2=milk_powder
710.	1		nn naam4zai2=boy
711.	1		nn neoi5zai2=girl
712.	1		nn ngaa4cim1=toothpick
713.	1		nn ngaa4jan3=scar_left_after_bitten_by_tooth
714.	1		nn ngaang5zyu1=eyeball
715.	1		nn ngau4zai2fu3=jeans
716.	1		nn nin4=year
717.	1		nn pei2=quilt
718.	1		nn pei5pei5=blanket
719.	1		nn pin2pin2=diaper
720.	1		nn po4po2=grandmother
721.	1		nn pou4tai4zi2=grape
722.	1		nn pun2=basin
723.	1		nn sam1=heart
724.	1		nn sam1gei1=time_and_effort

No.	Frequency	Character	Word-types
725.	1		nn sam2sam2=aunt
726.	1		nn san1tai2=body
727.	1		nn sau2sau2=hand
728.	1		nn sin1saang1=teacher
729.	1		nn sing2=string
730.	1		nn siu2hok6=primary_school
731.	1		nn siu2leon4=ferry
732.	1		nn syu1baaul=schoolbag
733.	1		nn syu2gaa3=bookshelf
734.	1		nn syut3tiu2=ice_bar
735.	1		nn tin1si6=angel
736.	1		nn tou5ci4=navel
737.	1		nn tung2=bucket
738.	1		nn uk1=house
739.	1		nn waat6tail=slide
740.	1		nn wu1jing1=fly
741.	1		nn wu2beng3=handle_of_kettle
742.	1		nn wun2=bowl
743.	1		nn zai2=son
744.	1		nn zam2tau4zai2=pillow
745.	1		nn zan6=CL_of_time
746.	1		nn zel=umbrella
747.	1		nn zi6=word
748.	1		nn zoek3zai2=bird
749.	1		nn zoeng3zoeng3=jam
750.	1		nn zung1=clock
751.	1		nn zung1tau4=hour

No.	Frequency	Character	Word-types
752.	1		nn zyu1juk6=pork
753.	1		prep Wan2=find
754.	1		prep hoeng2=at
755.	1		prt wAn2=PRT
756.	1		q geI2=quite
757.	1		q ji6=two
758.	1		q ji6sap6=twenty
759.	1		q saam1sap6ji6=thirty_two
760.	1		q sap6jat1=eleven
761.	1		q sap6ji6=twelve
762.	1		sfp Aa6=SFP
763.	1		sfp Sin1=SFP
764.	1		sfp jaa4=SFP
765.	1		sfp laa6=SFP
766.	1		sfp lok1=SFP
767.	1		sfp m6=SFP
768.	1		sfp waa2=SFP
769.	1		sfp zek1=SFP
770.	1		vd Caap3=to_stab
771.	1		vf zik1hai6=that_is
772.	1		vi Co5=sit
773.	1		vi ful1=to_breathe_out
774.	1		vi gau3meng6=rescue
775.	1		vi gwaal gwaal giu3=shouting
776.	1		vi hoi1ci2=start
777.	1		vi jaulsik1=take_a_rest
778.	1		vi lei1=to_hide

No.	Frequency	Character	Word-types
779.	1		vi loi4=to_come
780.	1		vi paa3=to_be_afraid
781.	1		vi san3=tell_others_about_their_difficulties
782.	1		vi sei2=to_die
783.	1		vi seoi6gaau3=sleep
784.	1		vi siu3=to-smile
785.	1		vi taam3jit6=check_the_temperature_of_the_body
786.	1		vi ting4=to_stop
787.	1		vi zo6=to_sit
788.	1		vt Cel=transport
789.	1		vt Cyun1=get_through
790.	1		vt Gam3=to_prohibit
791.	1		vt Lap1=cover_up
792.	1		vt Oi3=love
793.	1		vt Sik1=to_switch_off
794.	1		vt Zaa1=drive
795.	1		vt Zit1zit1=squeeze
796.	1		vt Zyun3=rotate
797.	1		vt aai3=shout
798.	1		vt ceoi1=blow
799.	1		vt co5=sit
800.	1		vt coeng3=sing
801.	1		vt daai3=to_bring
802.	1		vt daap3=to_take
803.	1		vt daap6=put_into_a_pile
804.	1		vt dam2=to_throw_away
805.	1		vt dan3=to_fall

No.	Frequency	Character	Word-types
806.	1		vt doi6tai3=replace
807.	1		vt duk1=to_point_with_effort
808.	1		vt glu3=order
809.	1		vt gaa2baan6=pretend
810.	1		vt gaan2=to_choose
811.	1		vt gam6gam6=to_press
812.	1		vt gep6=clip
813.	1		vt gu3=take_care_of
814.	1		vt guk6=bake
815.	1		vt gwaat3=to_scratch
816.	1		vt haau2=sit_for_exam
817.	1		vt jaap3=put_on_nappy_for_baby
818.	1		vt jing6=to_recognize
819.	1		vt lou1=mix
820.	1		vt maai6=to_sell
821.	1		vt man6=ask
822.	1		vt sai2sai2=to_wash
823.	1		vt sam2=investigate
824.	1		vt sang3=sneeze
825.	1		vt sek3=to_kiss
826.	1		vt seoi1jiu3=need
827.	1		vt soe4=to_slide
828.	1		vt suk6=cooked
829.	1		vt syun2=to_get_hurt
830.	1		vt zaa1=hold
831.	1		vt zaak3=to_lie_on_something
832.	1		vt zai1=put

No.	Frequency	Character	Word-types
833.	1		vt zat1=force
834.	1		vt ziu3=to_illumine
835.	1		vt ziu3gu3=take_care_of

Nouns used by five-year-old children

269 Total number of different word types used

1122 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	69		nn je5=thing
2.	44		nn faan1gaan2=soap
3.	43		nn Saam1=clothes
4.	41		nn seoi2=water
5.	39		nn dou6=place
6.	31		nn tau4=head
7.	25		nn gaau3=sleep
8.	25		nn maai1mi4=mother
9.	24		nn ngaa4=teeth
10.	20		nn dai2fu3=underwear
11.	20		nn ji1=aunt
12.	19		nn bi4bi1=baby
13.	18		nn ze4ze1=sister
14.	15		nn mou4gan1=towel
15.	15		nn naai1naai1=milk
16.	15		nn niu6pin2=diaper
17.	13		nn jan4=people
18.	13		nn niu6=urine
19.	11		nn saam1saam1=clothes
20.	9		nn caang2=orange
21.	9		nn gaalzel=elder_sister
22.	9		nn je6maan5=night

No.	Frequency	Character	Word-types
23.	9		nn jyu2=fish
24.	9		nn ngaan5=eye
25.	9		nn zam2tau4=pillow
26.	8		nn Zap1=juice
27.	8		nn cong4=bed
28.	8		nn fu3=pants
29.	8		nn gung1zai2=doll
30.	8		nn ngaa4caat2=tooth_brush
31.	8		nn ngaa4gou1=tooth_paste
32.	8		nn sai2tau4seoi2=shampoo
33.	8		nn sau2=hand
34.	7		nn Pou5pou5=bubble
35.	7		nn go4go1=elder_brother
36.	7		nn pei5=blanket
37.	7		nn zi2gan1=tissue
38.	6		nn Dim2=o_clock
39.	6		nn faan6=rice
40.	6		nn goek3=foot
41.	6		nn jat6=day
42.	6		nn lik6=effort
43.	6		nn maa4maa4=grandmother
44.	6		nn naai5zeon1=milk_bottle
45.	6		nn seoi3=age
46.	6		nn si4=time
47.	6		nn tai4zi2=grape
48.	5		nn Mei6=taste
49.	5		nn ci4gang1=spoon

No.	Frequency	Character	Word-types
50.	5		nn coi3=vegetable
51.	5		nn dip2=plate
52.	5		nn fan2=noodles
53.	5		nn fong2=room
54.	5		nn joek6=medicine
55.	5		nn min6=face
56.	5		nn seoi2gwo2=fruit
57.	5		nn uk1kei2=home
58.	5		nn zeon1=bottle
59.	5		nn ziu1tau4zou2=morning
60.	5		nn zou2caan1=breakfast
61.	4		nn So1=comb
62.	4		nn bei6tai3=nose_mucus
63.	4		nn din6si6=television
64.	4		nn gung1=work
65.	4		nn gung1jan4=maid
66.	4		nn pun4=basin
67.	4		nn saang1gwo2=fruit
68.	4		nn sam1sam1=heart
69.	4		nn seoi2seoi2=water
70.	4		nn si6=matter
71.	4		nn wun6geoi6=toy
72.	4		nn zam1=needle
73.	3		nn bIn1=boundary
74.	3		nn bat1=pen
75.	3		nn bol1o4=pineapple
76.	3		nn bui1=cup

No.	Frequency	Character	Word-types
77.	3		nn bui1bui1=cup
78.	3		nn ce1=car
79.	3		nn ciul1jan4=superman
80.	3		nn cyu4fong2=ktichen
81.	3		nn de1di4=father
82.	3		nn faan1ke2=tomato
83.	3		nn gOu1=cake
84.	3		nn gaai1gaai1=street
85.	3		nn gei1=machine
86.	3		nn goi3=cover
87.	3		nn hau2seoi2gin1=baby_napkin
88.	3		nn juk6=meat
89.	3		nn kwan4=dress
90.	3		nn m1=faece
91.	3		nn mat6mat6=sock
92.	3		nn naai5=milk
93.	3		nn ping4gwo2=apple
94.	3		nn seoi2ci4=pool
95.	3		nn seoi2hau4=water_pipe
96.	3		nn seoi6ji1=night_shirt
97.	3		nn si4gaan3=time
98.	3		nn tau4tau4=head
99.	3		nn tou5=tummy
100.	3		nn zeoi2zeoi2=mouth
101.	2		nn Caa4=tea
102.	2		nn Gaan2=soap
103.	2		nn Min6min6=noodle

No.	Frequency	Character	Word-types
104.	2		nn Saan1=hill
105.	2		nn baa4baa1=father
106.	2		nn be1be1hung4=bear
107.	2		nn beng2gon1=biscuit
108.	2		nn bui3zek3=back_of_body
109.	2		nn caa4dim2=refreshment
110.	2		nn caa4wu2=kettle_for_making_tea
111.	2		nn caat3zi2gaau1=eraser
112.	2		nn ci3so2=toilet
113.	2		nn dai2fu3zai2=underwear
114.	2		nn dai4dai2=younger_brother
115.	2		nn din6nou5=computer
116.	2		nn gaau3gaau3=sleep
117.	2		nn go1=song
118.	2		nn goek3goek3=foot
119.	2		nn goi3goi3=cover
120.	2		nn gu2zai2=story
121.	2		nn gung1jyun2=graden
122.	2		nn haai4=shoes
123.	2		nn haai4haai4=shoe
124.	2		nn jUng6=function
125.	2		nn jau4lok6coeng4=playground
126.	2		nn kwan4kwan4=dress
127.	2		nn laam6=cable
128.	2		nn lin5=necklace
129.	2		nn lou6=road
130.	2		nn lung1=hole

No.	Frequency	Character	Word-types
131.	2		nn lung1zai2=hole
132.	2		nn man1=mosquito
133.	2		nn man1paa3goul=lotion_to_prevent_mosqu
134.	2		nn naai5naai5=milk
135.	2		nn nau2=button
136.	2		nn ngok6jyu4=crocodile
137.	2		nn pei4=skin
138.	2		nn pin2=diaper
139.	2		nn saang1jat6=birthday
140.	2		nn sai2ji1geil=washing_machine
141.	2		nn sau2zi2=finger
142.	2		nn song2san1fan2=baby_powder
143.	2		nn syut3goul=ice_cream
144.	2		nn tau4faat3=hair
145.	2		nn tong2=candy
146.	2		nn tong4=sugar
147.	2		nn zeoi2=mouth
148.	2		nn zoeng3=seasoning
149.	2		nn zyu1gullik1=chocolate
150.	2		nn zyu2faan6zai2=cooking_utensils
151.	1		nn Caa4caa4=check
152.	1		nn Caat3=to_brush
153.	1		nn Dou1=knief
154.	1		nn Gau2=dog
155.	1		nn aap3=duck
156.	1		nn aap3zai2=duck
157.	1		nn baa4baa4=father

No.	Frequency	Character	Word-types
158.	1		nn baak3=old_man
159.	1		nn baan1fong2=classroom
160.	1		nn baan6faat3=method
161.	1		nn beng6beng6=sick
162.	1		nn bi4bilcong4=baby_bed
163.	1		nn biu2gol=cousin
164.	1		nn biu2ze2=cousin
165.	1		nn caal=fork
166.	1		nn caang2zap1=orange_juice
167.	1		nn ceng1ping4gwo2=green_apple
168.	1		nn ci3ci3=everytime
169.	1		nn cin1caul=swing
170.	1		nn coeng1toi4=windowsill
171.	1		nn cong4cong4=bed
172.	1		nn daan6goul=cake
173.	1		nn dai2saam1=underwear
174.	1		nn dang1lung4=lantern
175.	1		nn dei6fong1=place
176.	1		nn din6nou5baan1=computer_class
177.	1		nn doi2=pocket
178.	1		nn fAat3=way
179.	1		nn faai3zi2=chopstick
180.	1		nn gaailsi5=market
181.	1		nn gaan2fan2=washing_powder
182.	1		nn gaan2jik6=liquid_soup
183.	1		nn gaau3tong2=church
184.	1		nn gaau4gaaulzyul=sleep

No.	Frequency	Character	Word-types
185.	1		nn gai1=chicken
186.	1		nn gai1daan2=egg
187.	1		nn gau2zai2=dog
188.	1		nn gei1jan1=gene
189.	1		nn geng3=mirror
190.	1		nn gep6gep6=clip
191.	1		nn ging2caat3=police
192.	1		nn goek3baan2=foot
193.	1		nn goek3baan2dai2=foot
194.	1		nn goek3zai2=foot
195.	1		nn goek3zi2=toe
196.	1		nn gung1fo3=homework
197.	1		nn gung1gung1=grandfather
198.	1		nn gwaal1gwaal1seng1=shouting
199.	1		nn haau6ce1=school_bus
200.	1		nn hau2seoi2=saliva
201.	1		nn ho2lok6=cola
202.	1		nn hoeng1coeng2=sausage
203.	1		nn hung1hei3=air
204.	1		nn jau4hei3gei1=game_machine
205.	1		nn je6maan5hak1=night
206.	1		nn jeon6fulgou1=body_lotion
207.	1		nn ji1sang1=doctor
208.	1		nn ji4tung4=children
209.	1		nn joeng2=appearance
210.	1		nn laang5hei3=air_conditioning
211.	1		nn laap6saap3tung2=rubbish_bin

No.	Frequency	Character	Word-types
212.	1		nn leot6zi2baaul=a_kind_of_bread
213.	1		nn lung1lung1=hole
214.	1		nn maalmaal=mother
215.	1		nn maa5=horse
216.	1		nn maaulmaaul=cat
217.	1		nn mai5fan2=rice
218.	1		nn mamlmaml=food
219.	1		nn mat6=sock
220.	1		nn mei5=tail
221.	1		nn min6baaul=bread
222.	1		nn min6goul=lotion_for_face
223.	1		nn molseot6gaap3=magic_clip
224.	1		nn mou4gan1hap2=towel_box
225.	1		nn mui4mui2=yonger_sister
226.	1		nn naai5fan2=milk_powder
227.	1		nn naam4zai2=boy
228.	1		nn neoi5zai2=girl
229.	1		nn ngaa4cim1=toothpick
230.	1		nn ngaa4jan3=scar_left_after_bitten_by_tooth
231.	1		nn ngaang5zyul=eyeball
232.	1		nn ngau4zai2fu3=jeans
233.	1		nn nin4=year
234.	1		nn pei2=quilt
235.	1		nn pei5pei5=blanket
236.	1		nn pin2pin2=diaper
237.	1		nn po4po2=grandmother
238.	1		nn pou4tai4zi2=grape

No.	Frequency	Character	Word-types
239.	1		nn pun2=basin
240.	1		nn sam1=heart
241.	1		nn sam1gei1=time_and_effort
242.	1		nn sam2sam2=aunt
243.	1		nn san1tai2=body
244.	1		nn sau2sau2=hand
245.	1		nn sin1saang1=teacher
246.	1		nn sing2=string
247.	1		nn siu2hok6=primary_school
248.	1		nn siu2leon4=ferry
249.	1		nn syu1baau1=schoolbag
250.	1		nn syu2gaa3=bookshelf
251.	1		nn syut3tiu2=ice_bar
252.	1		nn tin1si6=angel
253.	1		nn tou5ci4=navel
254.	1		nn tung2=bucket
255.	1		nn uk1=house
256.	1		nn waat6tai1=slide
257.	1		nn wuljing1=fly
258.	1		nn wu2beng3=handle_of_kettle
259.	1		nn wun2=bowl
260.	1		nn zai2=son
261.	1		nn zam2tau4zai2=pillow
262.	1		nn zan6=CL_of_time
263.	1		nn zel=umbrella
264.	1		nn zi6=word
265.	1		nn zoek3zai2=bird

No.	Frequency	Character	Word-types
266.	1		nn zoeng3zoeng3=jam
267.	1		nn zung1=clock
268.	1		nn zung1tau4=hour
269.	1		nn zyuljuk6=pork

Verbs used by five-year-old children

188 Total number of different word types used

1787 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	212		vt hai6=is
2.	98		vt sik6=to_eat
3.	96		vt jau5=have
4.	89		vt sai2=to_wash
5.	68		vt zoek3=to_wear
6.	54		vt cung1=flush
7.	50		vi fan3=sleep
8.	47		vt jam2=to_drink
9.	37		vt aai1=lay_against
10.	37		vt heoi3=to_go
11.	36		vt Jung6=to_use
12.	35		vt caat3=to_brush
13.	31		vt maat3=to_wipe
14.	29		vt san1=new
15.	28		vt hoi1=open
16.	26		vt ceoi4=remove
17.	26		vt sik1=to_know
18.	26		vt zung1ji3=love
19.	25		vt tai2=to_look
20.	25		vt waan2=to_play
21.	23		vi soeng2=to_want
22.	23		vt Zit1=squeeze_out

No.	Frequency	Character	Word-types
23.	20		vd bei2=give
24.	18		vt caa4=spread
25.	18		vt gaau2=to_disturb
26.	17		dir lok6=down
27.	17		vt zing2=to_make
28.	16		vt fong3=place_onto
29.	15		vt Faan1=again
30.	14		vt hei2=up
31.	13		vf mai6=not
32.	13		vt ol=to_go_for_excretments
33.	12		vt Dou2=pour
34.	11		dir ceot1=out
35.	11		vi hai2=present
36.	11		vt jiu3=want
37.	10		verg dit3=to_fall_down
38.	10		vt gan1zyu6=follow
39.	10		vt gei3dak1=remember
40.	10		vt hok6=to_learn
41.	9		vi zyun3=rotate
42.	9		vt daa2=hit
43.	9		vt dang2=wait
44.	9		vt gaa1=add
45.	9		vt sol=brush
46.	8		dir soeng5=up
47.	8		vt diu6=interchange
48.	8		vt mok1=to_take_off
49.	8		vt pou5=hold_in_arm

No.	Frequency	Character	Word-types
50.	8		vt saul=to_hide
51.	8		vt wun6=to_replace
52.	7		vt dong3=treat_it_as
53.	7		vt gin3=see
54.	7		vt hou2ci5=similar
55.	7		vt zit1=ticket
56.	7		vt zou6=to_do
57.	6		verg laan6=rot
58.	6		vi Zyu6=live
59.	6		vi waa6=to_tell
60.	6		vi zil=know
61.	6		vt baai2=place
62.	6		vt ling2=to_turn
63.	6		vt lo2=to_take
64.	6		vt maai5=to_buy
65.	6		vt mang1=to_push_out
66.	6		vt zong1=to_contain
67.	5		vi haam3=cry
68.	5		vt Bong1=help
69.	5		vt bEi2=allow
70.	5		vt kam2=cover
71.	5		vt aa6=lose_control_in_excretion
72.	5		vt ling1=to_carry
73.	4		dir jap6=enter
74.	4		vi seng2=awake
75.	4		vi si3=to_try
76.	4		vt Cau3=take_care_of

No.	Frequency	Character	Word-types
77.	4		vt Tung3=to_be_in_pain
78.	4		vt Wai3=feed
79.	4		vt gong2=say
80.	4		vt jiu4=shake
81.	4		vt mit1=to_open
82.	4		vt tip3=to_stick
83.	3		vi beng6=ill
84.	3		vi haang4=to_walk
85.	3		vi tUng4=same_as
86.	3		vi zau2=to_go_away
87.	3		vi zil1dou3=understand
88.	3		vt aat3=press_on
89.	3		vt gam6=tp_press
90.	3		vt hap1=cheat
91.	3		vt ji4=move
92.	3		vt kau3=to_clasp
93.	3		vt ngaau5=to_bite
94.	3		vt oi3=use
95.	3		vt se2=to_write
96.	3		vt wan2=find
97.	3		vt zeot1=rub
98.	3		vt zit1zit1=squeeze
99.	2		vi hang2=to_accept
100.	2		vi juk1=move
101.	2		vi kei5=stand
102.	2		vi syun3=it_is_okay
103.	2		vt Lau2=to_twist

No.	Frequency	Character	Word-types
104.	2		vt aau1=scratch
105.	2		vt ci1=stick
106.	2		vt cit3=cut
107.	2		vt dang2dang2=to_wait
108.	2		vt dim2zung1=o_clock
109.	2		vt giu3=call
110.	2		vt gwaa3=hang_up
111.	2		vt jau4=to_swim
112.	2		vt kau1=mix
113.	2		vt laa2=take
114.	2		vt lau4=to_flow
115.	2		vt teng1=to_hear
116.	2		vt teoi1=to_push
117.	2		vt tiu1=pick_out
118.	2		vt toi4=carry
119.	2		vt wai4sau1=repair
120.	2		vt zam3=to_sleep_on_pillow
121.	2		vt zeon2=to_permit
122.	2		vt zyu2=cook
123.	1		vd Caap3=to_stab
124.	1		vf zik1hai6=that_is
125.	1		vi Co5=sit
126.	1		vi ful=to_breathe_out
127.	1		vi gau3meng6=rescue
128.	1		vi gwaa1gwaa1giu3=shouting
129.	1		vi hoi1ci2=start
130.	1		vi jau1sik1=take_a_rest

No.	Frequency	Character	Word-types
131.	1		vi lei1=to_hide
132.	1		vi loi4=to_come
133.	1		vi paa3=to_be_afraid
134.	1		vi san3=tell_others_about_their_difficultie
135.	1		vi sei2=to_die
136.	1		vi seoi6gaau3=sleep
137.	1		vi siu3=to-smile
138.	1		vi taam3jit6=check_the_temperature_of_the_body
139.	1		vi ting4=to_stop
140.	1		vi zo6=to_sit
141.	1		vt Ce1=transport
142.	1		vt Cyun1=get_through
143.	1		vt Gam3=to_prohibit
144.	1		vt Lap1=cover_up
145.	1		vt Oi3=love
146.	1		vt Sik1=to_switch_off
147.	1		vt Zaa1=drive
148.	1		vt Zit1zit1=squeeze
149.	1		vt Zyun3=rotate
150.	1		vt aai3=shout
151.	1		vt ceoi1=blow
152.	1		vt co5=sit
153.	1		vt coeng3=sing
154.	1		vt daai3=to_bring
155.	1		vt daap3=to_take
156.	1		vt daap6=put_into_a_pile
157.	1		vt dam2=to_throw_away
158.	1		vt dan3=to_fall

No.	Frequency	Character	Word-types
159.	1		vt doi6tai3=replace
160.	1		vt duk1=to_point_with_effort
161.	1		vt glu3=order
162.	1		vt gaa2baan6=pretend
163.	1		vt gaan2=to_choose
164.	1		vt gam6gam6=to_press
165.	1		vt gep6=clip
166.	1		vt gu3=take_care_of
167.	1		vt guk6=bake
168.	1		vt gwaat3=to_scratch
169.	1		vt haau2=sit_for_exam
170.	1		vt jaap3=put_on_nappy_for_baby
171.	1		vt jing6=to_recognize
172.	1		vt lou1=mix
173.	1		vt maai6=to_sell
174.	1		vt man6=ask
175.	1		vt sai2sai2=to_wash
176.	1		vt sam2=investigate
177.	1		vt sang3=sneeze
178.	1		vt sek3=to_kiss
179.	1		vt seoiljiu3=need
180.	1		vt soe4=to_slide
181.	1		vt suk6=cooked
182.	1		vt syun2=to_get_hurt
183.	1		vt zaa1=hold
184.	1		vt zaak3=to_lie_on_something
185.	1		vt zail=put

No.	Frequency	Character	Word-types
186.	1		vt zat1=force
187.	1		vt ziu3=to_illumine
188.	1		vt ziu3gu3=take_care_of

Adjectives used by five-year-old children

76 Total number of different word types used

347 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	57		adj hou2=good
2.	35		adj loeng4=cool
3.	18		adj saai3=dry_in_the_sun
4.	17		adj dol=many
5.	14		adj daai6=big
6.	14		adj dim6=okay
7.	14		adj gon1zeng6=clean
8.	9		adj naan4=difficult
9.	7		adj leng3=pretty
10.	7		adj sai3=small
11.	7		adj zan1=real
12.	6		adj Gaa2=false
13.	6		adj geng1=afriad_of
14.	6		adj wulzou1=dirty
15.	5		adj dak1ji3=cute
16.	5		adj dung3=cold
17.	5		adj faai3=quick
18.	5		adj gon1=dry
19.	5		adj mei1=the_last
20.	4		adj coeng4=long
21.	4		adj fei4=fat
22.	4		adj syulfuk6=comfortable

No.	Frequency	Character	Word-types
23.	4		adj waa16=out_of_order
24.	3		adj baau2=full
25.	3		adj dail=low
26.	3		adj gau3=enough
27.	3		adj han4=to_feel_itchy
28.	3		adj hou2jam2=tastful
29.	3		adj hou2sik6=tastful
30.	3		adj hung1=empty
31.	3		adj jit6=hot
32.	3		adj ngaam1=correct
33.	3		adj ngaan5fan3=sleepy
34.	3		adj siu2siu2=little
35.	3		adj tou5ngo6=hungry
36.	2		adj HOu2=enough
37.	2		adj cung5=heavy
38.	2		adj dai6ji6=number_two
39.	2		adj fan2hung4sik1=pink_colour
40.	2		adj hoi1sam1=happy
41.	2		adj hou2waan2=interesting
42.	2		adj hung4sik1=red_color
43.	2		adj sai1lei6=mavellous
44.	2		adj sai3go3=small
45.	2		adj sap1=wet
46.	2		adj wan6lei1naa2=vanilla
47.	2		adj zing6=quiet
48.	1		adj Gat1=stinging
49.	1		adj Jyun4=rounded

No.	Frequency	Character	Word-types
50.	1		adj baak3jim3=many_pages
51.	1		adj bin2=flat
52.	1		adj cAu3=bad
53.	1		adj ci5=similar
54.	1		adj co3=wormg
55.	1		adj cyun4=all
56.	1		adj din1=crazy
57.	1		adj dyun2=short
58.	1		adj gui6=tired
59.	1		adj gwaai1=well_behaved
60.	1		adj hak1sik1=black
61.	1		adj hoeng1=giving_good_smell
62.	1		adj jyun4gul1lung1=circular
63.	1		adj kei4gwaai3=strange
64.	1		adj laam4sik1=blue_colour
65.	1		adj laang5=cold
66.	1		adj loeng4zam3zam3=cool
67.	1		adj luk6sik1=green_colour
68.	1		adj ngo6=hungry
69.	1		adj saM1=heart_shaped
70.	1		adj sap1sap1=wet
71.	1		adj wAn4=mixed_well
72.	1		adj wat6dat6=ugly
73.	1		adj zai6=full
74.	1		adj zeng6=clean
75.	1		adj zik6=straight
76.	1		adj zing2cai4=tidy

Adverbs used by five-year-old children

51 Total number of different word types used

430 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	56		advf dou1=too
2.	55		advf sin1=first
3.	53		adv Hou2=very
4.	28		adv jin4hau6=then
5.	26		adv gam2joeng2=such_way
6.	25		advf zung6=still
7.	22		adv sin1=only
8.	17		advf jau6=again
9.	14		adv Gam2=in_this_way
10.	11		adv gam3=so
11.	9		adv jat1zan6gaan1=later
12.	9		adv jyu4gwo2=if
13.	8		adv ji4gaa1=now
14.	8		adv tau4sin1=just_now
15.	7		advf taai3=too
16.	7		adv jin4zi1hau6=then
17.	6		advf zoi3=again
18.	5		adv jau5si4=sometimes
19.	5		adv seng4jat6=always
20.	5		adv zing6hai6=only
21.	4		adv gEi2=quite
22.	4		adv noi6=for_a_long_time

No.	Frequency	Character	Word-types
23.	4		adv gang2hai6=of_couse
24.	4		adv ting1jat6=tomorrow
25.	3		adv seng4=whole
26.	3		adv zeoi3=the_most
27.	3		adv ji5cin4=in_the_past
28.	3		adv zi1hau6=after
29.	2		adv jat6jat6=everyday
30.	2		adv ngaam1ngaam1=just
31.	2		adv ping4si4=in_usual_days
32.	1		adv tung1soeng4=usually
33.	1		adv joeng6joeng6=everything
34.	1		adv zan1hai6=really
35.	1		adv zi3=the_most
36.	1		adv m cung5cung5dei2=heavy
37.	1		adv m kau4kei4=causally
38.	1		adv m mou4dyun1dyun1=suddenly
39.	1		adv bun2loi4=originally
40.	1		adv dai6ji3si4=next_time
41.	1		adv dai6si4=later
42.	1		adv dim2zil=unexpectedly
43.	1		adv dong1jin4=of_course
44.	1		adv fung4=whenever
45.	1		adv go2si4=that_time
46.	1		adv go2zan6=that_time
47.	1		adv jat1ding6=sure
48.	1		adv ji1gaal=now
49.	1		adv kam4jat6=yesterday

No.	Frequency	Character	Word-types
50.	1		adv sing1kei4jat6=Sunday
51.	1		adv zan6gaan1=in_a_short_period_of_time

Closed Class categories use by five-year-old children

Aspect Marker used by five-year-old children

- 5 Total number of different word types used
93 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	61		asp zo2=ASP
2.	12		asp zyu6=ASP
3.	11		asp gwo3=ASP
4.	5		asp gan2=ASP
5.	4		asp zOek6=ASP

Locative used by five-year-old children

- 10 Total number of different word types used
25 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	7		nnloc jap6min6=inside
2.	4		nnloc haa6min6=below
3.	4		nnloc leoi5min6=inside
4.	2		nnloc cin4=front
5.	2		nnloc soeng6bin6=upper_side

6.	2		nnloc zung1gaan1=NNPP
7.	1		nnloc ceot1min6=outside
8.	1		nnloc gaak3lei4=next_side
9.	1		nnloc hau6min6=back
10.	1		nnloc soeng6min6=above

Negative used by five-year-old children

3 Total number of different word types used

355 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	252		neg m4=not
2.	79		neg mou5=nothing
3.	24		neg mei6=not_yet

Connective used by five-year-old children

9 Total number of different word types used

56 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	17		conj tung4maai4=and
2.	14		conj jan1wai6=because_of
3.	7		conj daan6hai6=but
4.	5		conj bat1gwo3=but
5.	4		conj Waak6ze2=or
6.	3		conj Tung4=and
7.	3		conj ding6=or

8.	2		conj so2ji3=therefore
9.	1		conj sau2sin1=firstly

Pronouns used by five-year-old children

- 6 Total number of different word types used
- 394 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	191		nnpr keoi5=he_or_she
2.	156		nnpr ngo5=I_me
3.	36		nnpr nei5=you
4.	7		nnpr ngo5dei6=we_us
5.	2		nnpr keoi5dei6=they
6.	2		nnpr nei5dei6=you_plural

Question words used by five-year-old children

- 8 Total number of different word types used ,
- 84 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	28		wh me1=what
2.	15		wh mat1je5=what
3.	13		wh dim2gaai2=why
4.	10		wh mat1=what

5.	7		wh bin1dou6=where
6.	5		wh dim2=how
7.	3		wh bin1=which
8.	3		wh dim2joeng2=how

Classifier used by five-year-old children

26 Total number of different word types used

398 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	133		cl di1=CL
2.	116		cl go3=CL
3.	49		cl Zi1=CL
4.	19		cl zek3=CL
5.	16		cl gin6=CL
6.	16		cl tiu4=CL
7.	9		cl ci3=CL
8.	8		cl zoeng1=CL
9.	4		cl TOu3=CL
10.	4		cl baa2=CL
11.	4		cl joeng6=CL
12.	3		cl gaan1=CL
13.	2		cl baan1=CL
14.	2		cl lap1=CL
15.	2		cl wai2=CL
16.	1		cl Bou6=CL
17.	1		cl Gan1=CL
18.	1		cl Haa5=CL
19.	1		cl Loeng5=CL
20.	1		cl bou6=CL
21.	1		cl coEng4=CL

22.	1		cl deoi3=CL
23.	1		cl fun2=CL
24.	1		cl gau6=CL
25.	1		cl gong1=CL
26.	1		cl lap1lap1=CL

Post-Verbal Particles used by five-year-old children

- 10 Total number of different word types used
 176 Total number of words (tokens)

No.	Frequency	Character	Word-types
1.	60		prt dou2=PRT
2.	40		prt jyun4=PRT
3.	27		prt faan1=PRT
4.	21		prt haa5=PRT
5.	13		prt Maai4=PRT
6.	6		prt maai4=PRT
7.	3		prt hO1=PRT
8.	3		prt sat6=PRT
9.	2		prt can1=PRT
10.	1		prt wAn2=PRT

Chapter 6 Growth Points in the Pre-school Years

In this final section we point to some of the major growth points across the pre-school years which are revealed by our year-by-year analysis from the age of two. We will examine general quantitative measures first of all, and then move on to open class vocabulary, closed class vocabulary, and syntax -- essentially following the same structure as in the individual chapters.

6.1 General language measures

Table 6.1. General language measures for median children
two to five years.

<u>Age</u>	<u>MLU</u>	<u>MLU5</u>	<u>VOCD</u>	<u>RDLS-R</u>
Two	2.22		41.35	-----
Three	2.85	7.5	41.06	42.5
Four	3.72	13.10	60.94	52.5
Five	3.92	14.2	70.67	58

From this table we can see increases in all measures over time, though the measures appear to increase at different rates at different times. The major increase in MLU comes between two and four. This is true both for MLU overall, and for the MLU of the five longest utterances. Remember that MLU will reflect the child's ability to combine words into grammatical sequences. So noun phrase modification, verb phrase modification, the use

of serial verb constructions, or the combination of clauses into longer sequences, would all be reflected in this length measure. The lexical diversity measure, VOCD, shows most growth between three and five. This presumably reflects two factors in the later part of the pre-school period: a larger vocabulary of open class words, and a greater flexibility in the ability to deploy these words in conversation.

6.2 Vocabulary

Table 6.2. Proportional distribution of word-types – Median children two to five years.

<u>Age</u>	<u>Closed</u>	<u>Adverb</u>	<u>Adjective</u>	<u>Noun</u>	<u>Verb</u>
Two	34%	4%	9%	24%	25%
Three	35%	4%	8%	30%	23%
Four	33%	6%	6%	30%	25%
Five	27%	9%	11%	31%	22%

Table 6.2 shows proportions of word types in each of five classes, closed, adverb, adjective, noun and verb. The differences are not dramatic: we can point to some change in the proportions of nouns and verbs over time, with the proportion of nouns increasing between two and three. Adverb and adjective types increase between four and five. This change is reflected in decrease in closed types at the same time. Overall the categories reflected in Table 6.2 show stability over time.

This is not true if we look at word-tokens in the same categories, represented in Table 6.3.

Table 6.3. Proportional distribution of word-tokens – Median children two to five years.

<u>Age</u>	<u>Closed</u>	<u>Adverb</u>	<u>Adjective</u>	<u>Noun</u>	<u>Verb</u>
Two	39%	19%	4%	17%	21%
Three	54%	4%	6%	21%	15%
Four	49%	5%	5%	17%	24%
Five	44%	6%	7%	17%	26%

The growth in closed class tokens, in particular, over the third year of life, reflects a period of remarkable growth in grammatical systems at this time. And it is only at age 4 that the frequency distribution settles down to a relatively stable pattern.

Open Classes

In this section we will examine only three, four and five year old use of new open class words, as the data for these children was collected differently to that of the two year olds, and open class words are much more sensitive to elicitation context than closed class words. Complete lists of open class words used by the children at each age, separated into noun, verb, adverb and adjective, are provided at the end of chapters 3 to 5. Table 6.4a lists types and tokens for nouns, summarized from three lists.

Nouns

Table 6.4a. Nouns: total types and tokens, shared and unique new nouns, three to five years

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	198	236	269
TOKENS	677	880	1122
Shared	198	112	160
Unique		124	109

Table 6.4a shows that types of nouns decreases slightly in proportion to number of tokens over the period from three to five from 29% to 24%.

Taking the nouns used at three years as a baseline, we find that nearly 60% of the noun-types are shared by age three and four (112) and 160 noun-types are commonly shared by all three age groups. Moreover, we can identify new nouns that are uniquely introduced and added at four years (124 in total) and again uniquely introduced at five years (109). These nouns are listed in Table 6.4b.

Table 6.4b. New nouns at four and five years.

No.	Age 4	Age 5
1.	nn Bin1=pigtail	nn Caa4=tea
2.	nn Gaan2=soap	nn Caa4caa4=check
3.	nn Hung4=bear	nn Pou5pou5=bubble
4.	nn Saan1=hill	nn baa4baa4=father
5.	nn aap3=duck	nn baak3=old_man
6.	nn bin1=boundary	nn baan1fong2=classroom
7.	nn baa4baa1=father	nn baan6faat3=method
8.	nn baak6baak6=shower	nn bei6tai3=nose_mucus
9.	nn baak6lo4baak6=white_carrot	nn beng6beng6=sick
10.	nn baan1dim2gau2=spotted_dog	nn bi4bil cong4=baby_bed
11.	nn bel1belhung4=bear	nn biu2gol=cousin
12.	nn bel1ei2=pear	nn biu2ze2=cousin
13.	nn bei6=nose	nn bui1bui1=cup
14.	nn beng2gon1=biscuit	nn caa4dim2=refreshment
15.	nn bi4bi4=baby	nn caat3zi2gaau1=eraser
16.	nn bol1lo4=pineapple	nn ceng1ping4gwo2=green_apple
17.	nn bou3bou3=cloth	nn ci3ci3=everytime
18.	nn caang2zap1=orange_juice	nn ci3so2=toilet
19.	nn cel1=car	nn ciul1jan4=superman
20.	nn cel1cel1=car	nn coeng1toi4=windowsill
21.	nn cel1ei4zi2=cherry	nn dai2fu3zai2=underwear
22.	nn coeng2coeng2=sausage	nn dai4dai2=younger_brother
23.	nn coi3coi3=vegetable	nn dang1lung4=lantern
24.	nn cung4cung2=worm	nn dei6fong1=place
25.	nn cyu4fong2=ktichen	nn din6nou5=computer
26.	nn daai6gaa1=altogether	nn din6nou5baan1=computer_class
27.	nn daan6gou1=cake	nn doi2=pocket
28.	nn dai2saam1=underwear	nn fAat3=way
29.	nn dai6=ordinal_number	nn gOu1=cake
30.	nn dang1=lamp	nn gaai1gaai1=street

No.	Age 4	Age 5
31.	nn dau2dau2=bean	nn gaai1si5=market
32.	nn dau4dau2=bean	nn gaan2fan2=washing_powder
33.	nn din6si6=television	nn gaau3gaau3=sleep
34.	nn dip2=plate	nn gaau3tong2=church
35.	nn faai3zi2=chopstick	nn gaau4gaau1zyu1=sleep
36.	nn faan1gaan2pou5=bubbles_made_from_soap	nn gai1=chicken
37.	nn faan1ke2=tomato	nn gau2zai2=dog
38.	nn fan2=noodles	nn gei1=machine
39.	nn fo2=fire	nn gei1jan1=gene
40.	nn fo3gwai6ce1=cargo_lorry	nn gep6gep6=clip
41.	nn gaai1ze1=elder_sister	nn ging2caat3=police
42.	nn gaildaan2=egg	nn goek3baan2=foot
43.	nn gang1gang1=spoon	nn goek3baan2dai2=foot
44.	nn geng2=neck	nn goek3zai2=foot
45.	nn goek3goek3=foot	nn goi3goi3=cover
46.	nn goek3zi2=toe	nn gung1gung1=grandfather
47.	nn goi3=cover	nn gwaa1gwaa1seng1=shouting
48.	nn gu2zai2=story	nn hau2seoi2=saliva
49.	nn gung1=work	nn ho2lok6=cola
50.	nn gung1fo3=homework	nn hung1hei3=air
51.	nn gung1jyun2=graden	nn jUng6=function
52.	nn gwo2zap1=juice	nn jau4hei3gei1=game_machine
53.	nn haam2=things_inside	nn jau4lok6coeng4=playground
54.	nn haau6ce1=school_bus	nn je6maan5hak1=night
55.	nn hau2=mouth	nn jeon6fulgou1=body_lotion
56.	nn hei3seoi2=soft_drink	nn ji4tung4=children
57.	nn hoi2=sea	nn joek6=medicine
58.	nn hok3=shell	nn joeng2=appearance
59.	nn hon3bou2baau1=hamberger	nn jyu2=fish
60.	nn hung4lo4baak6=carrot	nn jaap6saap3tung2=rubbish_bin

No.	Age 4	Age 5
61.	nn jat6=day	nn leot6zi2baau1=a_kind_of_bread
62.	nn jau3zi6jyun2=kindergarten	nn lik6=effort
63.	nn je5sik6=food	nn lin5=necklace
64.	nn ji1ji1=aunt	nn lung1=hole
65.	nn ji1sang1=doctor	nn lung1zai2=hole
66.	nn ji3daai6lei6fan2=spaghetti	nn maa5=horse
67.	nn jik1=advantage	nn maau1maau1=cat
68.	nn joeng4cung1=onion	nn mai5fan2=rice
69.	nn juk6=meat	nn man1paa3goul=lotion_to_prevent_mosquito_bite
70.	nn juk6seoi3zuk1=congee_with_chopped_meat	nn min6goul=lotion_for_face
71.	nn jyu4daan2=fish_ball	nn molseot6gaap3=magic_clip
72.	nn kwan4zai2=dress	nn mou4gan1hap2=towel_box
73.	nn laang1saam1=wollen_fabrics	nn nau2=button
74.	nn laang5hei3=air_conditioning	nn ngaa4cim1=toothpick
75.	nn lau4tai1=stairs	nn ngaa4jan3=scar_left_after_bitten_by_tooth
76.	nn lei6=tongue	nn ngaang5zyu1=eyeball
77.	nn lei5=female	nn ngau4zai2fu3=jeans
78.	nn loi1jau2=hip	nn ngok6jyu4=crocodile
79.	nn lo4baak6=carrot	nn nin4=year
80.	nn lou6=road	nn pin2pin2=diaper
81.	nn lung1lung1=hole	nn po4po2=grandmother
82.	nn m1=faece	nn pou4tai4zi2=grape
83.	nn mei5=tail	nn sai2ji1gei1=washing_machine
84.	nn min6min6=face	nn sam1gei1=time_and_effort
85.	nn naai5fan2=milk_powder	nn sam2sam2=aunt
86.	nn ngaa4ngaa4=tooth	nn sau2zi2=finger
87.	nn ngaau4naai5=milk	nn seoi2ci4=pool
88.	nn ngau4juk6=beef	nn seoi2gwo2=fruit
89.	nn ning4mung1=lemon	nn si4gaan3=time
90.	nn nung4fu1=farmer	nn sing2=string

No.	Age 4	Age 5
91.	nn paau2ce1=racing_car	nn siu2hok6=primary_school
92.	nn pang4jau5zai2=friends	nn siu2leon4=ferry
93.	nn ping4gwo2zap1=apple_juice	nn syu1baau1=schoolbag
94.	nn pun2=basin	nn syu2gaa3=bookshelf
95.	nn saan1lung1=cave	nn syut3tiu2=ice_bar
96.	nn sai1gwaai=water_melon	nn tin1si6=angel
97.	nn san1tai2=body	nn tou5=tummy
98.	nn sau2zi2gung1=thumb	nn tung2=bucket
99.	nn seoi2seoi2=water	nn juk1=house
100.	nn si4hak1=moment	nn wuljing1=fly
101.	nn si4hau6=time	nn wu2beng3=handle_of_kettle
102.	nn si6jau4=soy_sauce	nn zai2=son
103.	nn sin3tiu4=stripe	nn zam2tau4zai2=pillow
104.	nn sing1sing1beng2=star_shaped_biscuit	nn zeoi2zeoi2=mouth
105.	nn soe4waat6tai1=a_slide	nn zi6=word
106.	nn suk1mai2=corn	nn zoeng3=seasoning
107.	nn suk1mai2pin2=corn_fries	nn zoeng3zoeng3=jam
108.	nn syu1=book	nn zung1=clock
109.	nn syu4syu2=excret_the_urine	nn zyu1juk6=pork
110.	nn syu6hung4=koala	
111.	nn syun1=grandchildren	
112.	nn tong1=soup	
113.	nn wan6dung6=physical_exercise	
114.	nn wun6geoi6=toy	
115.	nn zi2=paper	
116.	nn zUk1=congee	
117.	nn zam1=needle	
118.	nn zan6=CL_of_time	
119.	nn ze4ze2=sister	
120.	nn zi2gan1=tissue	

No.	Age 4	Age 5
121.	nn ziul=banana	
122.	nn zou2=early	
123.	nn zuk1zuk1=bamboo	
124.	nn zyul=pig	

Note: Age 4 new wordlist was generated by subtracting age 3 wordlist only.

Age 5 new wordlist was generated by subtracting the combined age 3 and age 4 wordlists.

Verbs

Table 6.5a. Verbs: total types and tokens, shared and unique new verbs, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	130	162	188
TOKENS	1042	1393	1787
Shared	130	87	122
Unique	-	75	66

Table 6.5a lists types and tokens for verbs. It is clear from the table that types increase more or less proportionally with tokens. However new verbs are added as the children get older.

Taking the verbs used at three years as a baseline, we find that nearly 70% of the verbs-types are shared by age three and four (87) and 122 verb-types are commonly shared by all three age groups. Moreover, we can identify 75 new verbs that are added between three and four, and 66 at age five. The actual verbs are listed in Table 6.5b.

Table 6.5b. New verbs at four and five years.

No.	Age 4	Age 5
1.	dir ceot1=out	vd Caap3=to_stab
2.	verg dam3=hang	vi beng6=ill
3.	verg laan6=rot	vi ful=to_breathe_out
4.	verg wai4=to_surround	vi gau3meng6=rescue
5.	vi ceot1sai3=born	vi gwaa1gwaa1giu3=shouting
6.	vi kat1kat1=to_cough	vi haam3=cry
7.	vi loi4=to_come	vi hang2=to_accept
8.	vi man4=to_smell	vi hoi1ci2=start
9.	vi seng2=awake	vi jau1sik1=take_a_rest
10.	vi tan3=move	vi lei1=to_hide
11.	vi zyun3=rotate	vi san3=tell_others_about_their_difficulties
12.	vt Bou1=to_boil	vi seoi6gau3=sleep
13.	vt Caan2=to_uproot	vi syun3=it_is_okay
14.	vt Gam3=to_prohibit	vi taam3jit6=check_the_temperature_of_the_body
15.	vt Hoi1=activate	vi ting4=to_stop
16.	vt Jau4=to_paint	vi zau2=to_go_away
17.	vt Laam2=hug	vi zo6=to_sit
18.	vt Lap1=cover_up	vt Cel=transport
19.	vt Lou6=expose	vt Zaa1=drive
20.	vt Nau2=to_twist	vt Zit1zit1=squeeze
21.	vt Siu2sam1=careful	vt Zyun3=rotate

No.	Age 4	Age 5
22.	vt Soeng5=attend_lesson	vt aat3=press_on
23.	vt Zam1=to_pour_liquid	vt aaul=scratch
24.	vt aai3=shout	vt bEi2=allow
25.	vt au3=generate	vt daap6=put_into_a_pile
26.	vt cAa4=check	vt dan3=to_fall
27.	vt dam2=to_throw_away	vt dang2dang2=to_wait
28.	vt deoi2=point_with_force	vt diu6=interchange
29.	vt deu6=throw	vt doi6tai3=replace
30.	vt duk1=to_point_with_effort	vt dong3=treat_it_as
31.	vt fan1=divide	vt glu3=order
32.	vt fong3=place_onto	vt gaa2baan6=pretend
33.	vt fu4=lend_a_hand	vt gaan2=to_choose
34.	vt gei3=remeber	vt gam6=tp_press
35.	vt gin3=see	vt gam6gam6=to_press
36.	vt gong2=say	vt gei3dak1=remember
37.	vt gu3=take_care_of	vt gep6=clip
38.	vt gyun1=donate	vt guk6=bake
39.	vt jaap6=call_sb	vt gwaa3=hang_up
40.	vt kik1=kick	vt gwaat3=to_scratch
41.	vt kul1=to_tie_up	vt haau2=sit_for_exam
42.	vt laa2=take	vt jaap3=put_on_nappy_for_baby
43.	vt laai6=lose_control_in_excretion	vt ji4=move
44.	vt lam2=think	vt jing6=to_recognize
45.	vt lam4=pour_liquid_on	vt jiu4=shake
46.	vt long2=to_rinse_the_mouth	vt kau1=mix
47.	vt lou1=mix	vt kau3=to_clasp
48.	vt maak3=to_make_open	vt ling1=to_carry
49.	vt mak6=dictate	vt maai6=to_sell
50.	vt mok1=to_take_off	vt man6=ask
51.	vt mong6=to_look	vt mang1=to_push_out

No.	Age 4	Age 5
52.	vt naau6=to_scold	vt ngaau5=to_bite
53.	vt paai4=to_queue	vt sang3=sneeze
54.	vt pou1=place	vt se2=to_write
55.	vt saan1=close	vt seoiljiu3=need
56.	vt sai2sai2=to_wash	vt syun2=to_get_hurt
57.	vt sam2=investigate	vt teoil=to_push
58.	vt sek3=to_kiss	vt tiul=pick_out
59.	vt suk6=cooked	vt toi4=carry
60.	vt taan1=wait_for	vt wai4saul=repair
61.	vt tip3=to_stick	vt zaak3=to_lie_on_something
62.	vt wan2=find	vt zail=put
63.	vt zaal=hold	vt zat1=force
64.	vt zaang1=lack	vt zeon2=to_permit
65.	vt zaat3=to_tie	vt ziu3=to_illumine
66.	vt zaat6=make	vt ziu3gu3=take_care_of
67.	vt zailzail=put_into	
68.	vt zam3=to_sleep_on_pillow	
69.	vt zap1=to_pick_up	
70.	vt ze3=to_lend	
71.	vt zin2=to_cut_with_scissor	
72.	vt zit1zit1=squeeze	
73.	vt zoek6=to_switch	
74.	vt zong1=to_contain	
75.	vt zuk1=catch	

Note: Age 4 new wordlist was generated by subtracting age 3 wordlist only.

Age 5 new wordlist was generated by subtracting the combined age 3 and age 4 wordlists.

Adjectives

Table 6.6a. Adjectives: total types and tokens, shared and unique new adjectives, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	70	71	76
TOKENS	294	329	347
Shared	70	37	51
Unique	-	34	25

Types and tokens for adjectives are listed in table 6.6a. The proportion of adjectives introduced in conversations does not seem to vary much between three and five years. Taking the adjectives used at three years as a baseline, we find that over half of the adjectives-types are commonly shared by age three and four (37) and over 70% are shared by age three and five (51). Once again we can however identify new forms being introduced at four years of age, and again at five years. These new words are listed in Table 6.6b.

Table 6.6b. New adjectives at four and five years.

No.	Age 4	Age 5
1.	adj Fu3=vice	adj HOu2=enough
2.	adj Gaa2=false	adj baak3jim3=many_pages
3.	adj Gau6=old	adj bin2=flat
4.	adj Gou1=tall	adj cAu3=bad
5.	adj Haai4=rough	adj cung5=heavy
6.	adj Jyun4=rounded	adj cyun4=all
7.	adj Zoek6=on	adj din1=crazy
8.	adj ai2=short	adj han4=to_feel_itchy
9.	adj baau2baau2=full	adj hou2jam2=tastful
10.	adj ceng1=green	adj hung1=empty
11.	adj daai6daai6=big	adj jyun4gullung1=circular
12.	adj dak1haan4=free	adj kei4gwaai3=strange
13.	adj gwaai1gwaai1=well_behaved	adj loeng4zam3zam3=cool
14.	adj haam4haam2dei6=salty	adj ngo6=hungry
15.	adj hou2tai2=good_to_watch	adj saM1=heart_shaped
16.	adj Yu2=bruised	adj sai3go3=small
17.	adj jat1joeng6=the_same	adj sap1sap1=wet
18.	adj je1=grandfather	adj waa16=out_of_order
19.	adj jyun5=far_away	adj wan6lei1naa2=vanilla
20.	adj laat6=hot_and_spicy	adj wat6dat6=ugly
21.	adj lau6=to_leak	adj zai6=full
22.	adj ngaan5fan3=sleepy	adj zeng6=clean
23.	adj nyun5=warm	adj zik6=straight
24.	adj sak1=to_stuff	adj zing2cai4=tidy
25.	adj sau3=thin	adj zing6=quiet
26.	adj siu2sam1=be_careful	
27.	adj siu2siu2=little	

No.	Age 4	Age 5
28.	adj soeng1=injured	
29.	adj song2=dry	
30.	adj syu4=outdated	
31.	adj tim4=sweet	
32.	adj wAn4=mixed_well	
33.	adj wong4sik1=yellow_color	
34.	adj zan1=real	

Note: Age 4 new wordlist was generated by subtracting age 3 wordlist only.

Age 5 new wordlist was generated by subtracting the combined age 3 and age 4 wordlists.

Adverbs

Table 6.7a. Adverbs: total types and tokens, shared and unique new adverbs, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	27	36	51
TOKENS	195	255	430
Shared	27	19	29
Unique	-	17	22

Adverb types also increase proportionally with tokens (Table 6.7a). Table 6.7b lists new adverbs (again using adverbs from three year olds as a

baseline) at four and five years. What is noticeable about these forms is how many of them have temporal meanings.

Table 6.7b. New adverbs at four and five years.

No.	Age 4	Age 5
1.	advf seng4=whole	advf jat6jat6=everyday
2.	advf zaal1maa3=only	advf ngaam1ngaam1=just
3.	advf faai3faai3=quickly	advf tung1soeng4=usually
4.	advf cam4jat6=yesterday	advf gBi2=quite
5.	advf go2si4=that_time	advf zi3=the_most
6.	advf go2zan6=that_time	advf cung5cung5dei2=heavy
7.	advf jat1zan6=later	advf kau4kei4=causally
8.	advf jau5zan6si4=sometimes	advf mou4dyun1dyun1=suddenly
9.	advf je6maal1maal1=at_night	advf bun2loi4=originally
10.	advf jin4zil1hau6=then	advf dai6ji3si4=next_time
11.	advf m4tung1=unexpectedly	advf dai6si4=later
12.	advf ping4si4=in_usual_days	advf dim2zil1=unexpectedly
13.	advf sIn1=only	advf dong1jin4=of_course
14.	advf si4si4=always	advf fung4=whenever
15.	advf tin1gwong1=dawn	advf gang2hai6=of_couse
16.	advf ting1jat6=tomorrow	advf jat1ding6=sure
17.	advf zil1hau6=after	advf ji1gaa1=now
18.		advf ji5cin4=in_the_past
19.		advf jin4hau6=then
20.		advf kam4jat6=yesterday
21.		advf sing1kei4jat6=Sunday
22.		advf zan6gaan1=in_a_short_period_of_time

Note: Age 4 new wordlist was generated by subtracting age 3 wordlist only.

Age 5 new wordlist was generated by subtracting the combined age 3 and age 4 wordlists.

Closed Class

We can make similar comparisons across the three, four and five year olds for the eight closed classes which have been, the focus of our attention in previous chapters.

Table 6.8a. Types and tokens for aspect markers, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	6	6	5
TOKENS	57	71	93

Table 6.8b. New aspect markers at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
	(none)	(none)

Table 6.8a and 6.8b between them reveal that there is no change in types of aspect markers used between three and five years. There is an increase in tokens in Table 6.8a. This however has to be considered in the light of the number of verbs used in the same samples. When we relate aspect marker tokens to the verb tokens from Table 865a, we find that the proportion of

verbs followed by aspect markers remains constant, at around 5%, at least for the elicitation context from which these numbers were drawn.

Classifiers

Table 6.9a. Types and tokens for classifiers, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	17	15	26
TOKENS	275	323	398

Table 6.9b. New classifiers at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
1.	cl Gan1=CL	cl Bou6=CL
2.		cl Haa5=CL
3.		cl TOu3=CL
4.		cl baan1=CL
5.		cl bou6=CL
6.		cl coEng4=CL
7.		cl fun2=CL
8.		cl gaan1=CL
9.		cl gau6=CL
10.		cl gong1=CL
11.		cl lap1lap1=CL
12.		cl wai2=CL

Table 6.9a shows a big increase in types of classifiers between four and five, and the lists in Table 6.9b show the new classifiers that appear at this age. If we relate the apparent increase in classifier tokens to the total tokens for nouns, the open class with which these forms co-occur, we find in fact that there is a slight decrease in the occurrence of classifiers and nouns from three years to four years (from .40 to .36 -- Table 6.4a).

Connectives

Table 6.10a. Types and tokens for connectives, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	5	8	11
TOKENS	37	35	79

Table 6.10b. New connectives at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
1.	conj Tung4=and	conj ceoi4zo2=beside
2.	conj Waak6ze2=or	conj lin4=include
3.	conj ding6=or	conj sau2sin1=firstly
4.	conj wo4=and	

The lists of connectives represent a variety of ways for children to link clauses together. These lists, as we would expect, show a consistent increase across the three age points (tables 6.10a and 6.10b).

Negatives

Table 6.11a. Types and tokens for negative morphemes, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	4	4	3
TOKENS	115	259	355

Table 6.11b. New negative morphemes at four and five years.

<i>No.</i>	<u>Age 4</u>	<u>Age 5</u>
	(none)	(none)

Learning how to signal negation appears to be an early achievement in Cantonese, as it is in other languages. Negative morphemes are available from 3 years (Table 6.11a).

Locatives

Table 6.12a. Types and tokens for locatives, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	4	11	10
TOKENS	10	16	25

Table 6.12b. New locatives at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
1.	nnloc Jau6=right	nnloc ceot1min6=outside
2.	nnloc cin4=front	nnloc gaak3lei4=next_side
3.	nnloc cin4bin6=front_side	nnloc haa6min6=below
4.	nnloc cin4min6=front_side	nnloc jap6min6=inside
5.	nnloc hau6=back	nnloc soeng6bin6=upper_side
6.	nnloc hau6bin6=back_side	nnloc soeng6min6=above
7.	nnloc ji1dou6=here	nnloc zung1gaan1=NNPP
8.	nnloc leoi5min6=inside	

Question words

Table 6.13a. Types and tokens for question words, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	10	10	8
TOKENS	77	98	84

Table 6.13b. New question words at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
1.	wh mat1=what	(none)

Auxiliary/Modal

Table 6.14a. Types and tokens for auxiliaries/modals, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	5	5	6
TOKENS	53	109	186

Table 6.14b. New auxiliaries/modals at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
1.	aux jinglgoil=should	(none)

Post verbal particle

Table 6.15a. Types and tokens for post-verbal particles, three to five years.

	<u>Three</u>	<u>Four</u>	<u>Five</u>
TYPES	8	11	10
TOKENS	77	102	176

Table 6.15b. New post-verbal particles at four and five years.

<i>No.</i>	<i>Age 4</i>	<i>Age 5</i>
1.	prt gWo3=PRT	prt wAn2=PRT
2.	prt hOi1=PRT	
3.	prt sat6=PRT	

6.3 Syntax

In the syntax section we include comparisons from 2 years to 5 years, highlighting from our list of structures phrase and clause structures which are new at a particular age level, or which show new features from one age to another.

Phrase structure

Noun phrases

Basic NP structure found at age 2 and continue to appear at age 5 are:

Nn

Pr

D.cl

Adj.n

Dn

New NP structure that emerge at age 3 and continue at age 5 are:

D.cl.n

Q.cl.n

cl.n

q.cl

New NP structure that emerge at age 4 are:

- Q
- Rfl
- N.n. (coordination by juxtaposition)
- N. conj.n

New NP structure that emerge at age 5 are:

- Prn.gen.n
- N.gen.n
- Adj.n
- Nnn.conj.pr

Table 6.16. Emergence of Noun Phrase Categories.

Age	Nn	Pr	D.cl	Adj.n	Dn	D.cl.n	Q.cl.n	Cl.n	Q.cl
2	√	√	√	√	√				
3	√	√		√		√	√	√	√
4	√	√	√	√	√	√	√	√	
5	√	√	√	√	√	√	√	√	√

Age	Q	Rfl	n.n	nconjn	Prngen.n	Ngen.n	Adjn	Nnnconj.pr
2								
3								
4	√	√	√	√				
5		√			√	√	√	√

Examples**Nn -- Noun only**

- Age 2: *CHI: <ze4zel> [<] # sik1 aa3 ##.
 *CHI: cel
- Age 3: *CHI: bi4bi1.
- Age 4: *CHI: ailjo3 -: niu6pin2.
 *CHI: maat3 haa5 hau6min6.
- Age 5: *CHI: faan1gaan2.

Pr -- pronoun

- Age 2: *CHI: dam2 zo2 keoi5 o3.
- Age 3: *CHI: keoi5 zaam2 ngaan5 aa3!
- Age 4: *CHI: dar1, dang2 nei5.
- Age 5: *CHI: tip3 keoi5 gaa3.

D.cl -- determiner + classifier

- Age 2: *CHI: tai2 neil go3.
- Age 4: *CHI: bat1jyu4 m4 jiu3 li1 go3 laa3.
- Age 5: *CHI: go2di1 cung1 loeng4 ge3 je5!

Adj.n -- adjective + noun

- Age 2: *CHI: daai6 jyu5 03.
- Age 3: *CHI: jau5 daai6 cin1 caul.
- Age 4: *CHI: Gaa2 Dou1 aa3.
- Age 5: *CHI: Jiu3 Jung6 sam1sam1 faan1gaan2.

Cl.n -- classifier + noun

- Age 3: *CHI: zou6 di1 so1so1.
 Age 4: *CHI: laa1, zek3 caa1.
 Age 5: *CHI: zek3 goek3

D.n -- determiner + noun

- Age 2: *CHI: co5 go2 dou6 aa3.
 Age 3: *CHI: sai2 nei1 dou6 sin1 laa1!
 Age 5: *CHI: nei1 dou6

D.cl.n -- determiner + classifier + noun

- Age 3: *CHI: e6, li1 go3.
 Age 4: *CHI: li1 zek3 je5.
 *CHI: Jiu3 sai2 zo2 li1 gin6 Saam1 keoi5.
 Age 5: *CHI: ngo5 hai1, e1, soeng6bin6 ngo5 baan1fong2,
 ngo5 gin3 dou2 li1 di1 je5.

Q.cl -- quantifier + classifier + noun

- Age 3: *INV: jau5 gei2 do1 Saam1 hai6 luk6sik1 gaa3?
 *CHI: loeng5 zil.
 Age 5: *CHI: sei3 zil.

Q.cl.n -- quantifier + classifier + noun

- Age 3: *CHI: go2 tiu4 kwan4 lo1.

q

Age 4: *CHI: cyun4bou6 dou1 hai6 sai2 je5 ge3.

rfl

Age 4: *CHI: zi6 gei2 zoek3 laang1saam1.

Age 5: *CHI: zi6gei2 fan3.

n.n

Age 4: *INV: gam2 bin1go3 Bong1 nei5 gaa3.

*CHI: de1di4 maal mi4.

n.conj.n

Age 4: *INV: dou1 wui5 gaa4, bin1go3 bong1 nei5 sai2
baak6baak6 gaa3?

*CHI: de1di4 Waak6ze2 maa1mi4.

pr.n.gen.n

Age 4: *CHI: ngo5 zung1ji3 tai2 ngo5 uk1kei2 Ge3
din6si6.

pr.n

Age 5: *CHI: ngo5 hai2, e1, soeng6bin6 ngo5 baan1fong2,
ngo5 gin3 dou2 li1 di1 je5.

n.gen.n

Age 5: *CHI: ji1, gaan3hung4 Ge3 dai4dai2 keoi5dei6
dou1 sik1 Zaa1 cek ge3,

a.adj.n

Age 5: *CHI: ailjaa3 ailjaa3 jau5 Hou2 do1 bei6tai3 tim1!

n.n.n.n.conj.pr (list coordinated)

Age 5: *CHI: maalmi4, deldi4, go4go1, ze4ze1,
tung4maai4 ngo5.

Verb phrase

Basic VP structure emerge at age 2 and continue to develop later.

V

Cop

V.asp

A.v

Aux

Vs.asp.part (appear only at age2)

Other VP structures that emerge at age 3 are:

V.prt

New VP structures that emerge at age 4 are:

A.aux

A.cop

Aux.v.asp

New VP structures that emerge at age 5 are:

A.aux.v

Table 6.17. Emergence of Verb Phrase Categories.

<u>Age</u>	<u>Categories within a verb phrase</u>						
	<u>V</u>	<u>Cop</u>	<u>V.asp</u>	<u>A.v</u>	<u>V.prt</u>	<u>V.asp.prt</u>	<u>Aux</u>
2	√	√	√	√			√
3	√	√	√		√		√
4	√	√	√	√	√		
5		√	√	√	√		√

<u>Age</u>	<u>Categories within a verb phrase</u>					
	<u>Aux.V</u>	<u>Vs.asp.prt</u>	<u>A.Aux</u>	<u>A.Coop</u>	<u>Aux.v.asp</u>	<u>Aux.V</u>
2		√				
3	√					
4	√		√	√	√	
5	√			√	√	√

Examples

v -- verb

Age 2: *CHI: waan2waan2 aa3.

*CHI: lo2 je5 aa3.

*CHI: jau5 aa3.

Age 3: *CHI: sik6 aa1!

Age 4: *CHI: zin2 aa3 [= pretending to put powder into a box].

Cop -- copula verb

Age 2: *CHI: <hai6 aa3 ##>[<]

Age 3: *CHI: hai6.

Age 4: *CHI: hai6 lo1.

*CHI: nei5 di1 hai6 naai1naai1 mei1?

Age 5: *CHI: hai6 aa3!

*INV: waa3, nei5 zung1(ji3) m4 zung1ji3

hung4sik1 gaa3?

*CHI: zung1ji3!

V.asp -- main verb + aspect marker

Age 2: *CHI: lo2 zyu6.

*CHI: tyun5 zo2.

A.v -- adverb + verb

Age 2: *CHI: zung6 jau5 aa3.

Age 4: *CHI: ngo5 dou1 jau5 song2san1fan2.

*CHI: gam2joeng2 zing2.

Age 5: *CHI: ngo5 seng4jiat6 waan2 zyu2faan6zai2.

V.prt -- verb + particle

Age 3: *CHI: Co5 dai1 gaa3!

*CHI: cung1 jyun4.

Age 4: *CHI: Jung6 maai4 li1 go3.

Age 5: *CHI: caat3 Jyun4 ngaa4 maat3 gon1zeng6.

V.asp -- verb + aspect marker

Age 3: *CHI: waan2 zo2 cung1 loeng4.

Age 4: *CHI: deu6 zo2 keoi5.

*CHI: ngo5 sai2 gan2.

Age 5: *CHI: zyu2 gan2 faan6.

*CHI: tip3 zyu6.

V.asp.prt -- verb + aspect marker + particle

Aux. -- auxiliary verb

Age 2: *CHI: <ze4ze1> [<] # sik1 aa3 ##.

Age 3: *INV: Sai2 m4 Sai2 ceoi4 Saam1 gaa3?

*CHI: Sai2.

Age 5: *CHI: wui5.

Aux.v -- auxiliary verb + main verb

Age 3: *CHI: Jiu3 zoek3 Saam1.

Age 4: *CHI: ngo5 sik1 gaa3.

Age 4: *CHI: ngo5 soeng2 zoek3.

Age 5: *CHI: nei5 Jiu3 sai2 tau4 aa3!

Vs.asp.part -- v1 + asp + v2

Age 2: *CHI: mang1 zo2 ceot1 lei4 aa3.

a.aux

- Age 4: *CHI: dou1 wui5 ge3.
 *INV: hai6 wo3, hou2 laa1 wing6wing6 aa4 nei5
 zung1(ji3) m4 zung1ji3.
 *CHI: Hou2 zung1 ji3.

a.cop

- Age 4: *CHI: cyun4bou6 dou1 hai6 sai2 je5 ge3.
 Age 5: *CHI: li1 bIn1 dou1 hai6.

aux.v.asp

- Age 4: *CHI: Jiu3 sai2 zo2 li1 gin6 Saam1 keoi5.
 *CHI: Jiu3 sai2 haa5 go3 min6
 Age 5: *CHI: jing1 goi1 sai2 zo2 san1 sin1 laa1!

a.aux.v

- Age 5: *CHI: ji1, gaan3hung4 Ge3 dai4dai2 keoi5dei6
dou1 sik1 Zaa1 ce1 ge3.

Prepositional phrase

Prepositional phrase starts to emerge at age 3.

Table 6.18. Emergence of Prepositional Phrase Categories.

Age	Categories within a prepositional phrase
	<u>Prep.n</u>
2	
3	✓
4	✓
5	✓

Examples

Prep.n -- preposition + noun phrase

Age 3: *CHI: Jiu3 Co5 Hai2 nei1 dou6.

Age 4: *CHI: <sai2> [/] ngo5 Hai2 uk1kei2 sai2 tau4 sin1
gaa3.

Age 5: *CHI: ngo5 hai2, e1, soeng6bin6 ngo5
baan1fong2, ngo5 gin3 dou2 li1 di1 je5.

Major sentence structures

Declarative-affirmative structures

The following clause structures emerge at age 2:

V

VO

VC

SC

SV

SVO

The following clause structures appear at age 3:

SVC

VOO

SVOO

Table 6.19. Emergence of Declarative Structures.

Age	V	VO	VC	SC	SV	SVO	SVC	VOO	SVOO
2		√	√	√	√	√			
3	√	√	√	√	√	√	√		√
4	√	√		√	√	√	√		
5	√	√	√	√	√	√	√	√	√

Examples

Declaratives -- affirmative

cop

Age 4: *CHI: hai6 wo3.

V -- main verb appearing without noun arguments (though often with a sentence final particle)

Age 3: *CHI: hai6.

*CHI: fan3gaau3 aa3!

Age 4: *CHI: jau5 ge3.

Age 5: *CHI: hai6 aa3!

*CHI: wui5.

VO -- verb + object

- Age 2: *CHI: lo2 neil go3.
 *CHI: tai2 neil go3.
- Age 3: *CHI: ceoi4 saamlsaaml.
 *CHI: zung6 jau5 e6 syun4syun4 aa3!
- Age 3: *INV: ping4si4 ceot1 gaail Le1, nei5 zi6gei2
 gaan2 saamlsaaml zoek3 ding6 maa4maa1 gaan2
 aa3?
 *CHI: <ze4ze1 ze4ze1>{[/] ze4ze1 fu3 lo1.
- Age 4: *CHI: zoek3 Saaml laa3.
 *CHI: wai4 zyu6 keoi5 laa1.
- Age 5: *CHI: ceoi4 Saaml.
 *CHI: zou6 gan2 je5 lo3.

VOO – verb + object + object

- Age 5: *CHI: li1 go3 bei2 keoi5.

VC -- verb + complement

- Age 2: *CHI: co5 go2 dou6 aa3.
- Age 3: *INV: Hai2 uk1kei2 bin1go3 tung4jin4jin2 cung1
 loeng4 gaa3?
 *CHI: hai6 li1 go3.
- Age 5: *CHI: sik6 dou3 Hou2 fei4 aa3!

SC -- subject + complement (no copula verb)

- Age 2: *CHI: &m4&m1 cau3.
- Age 3: *CHI: li1 go3 faan1 gaan2.
- Age 4: *CHI: li1 go3 song2san1fan2 lei4 gaa3.
 *CHI: ji1 go3 Gau6 zo2 laa3.
- Age 5: *CHI: go2 di1 coun1 loeng4 ge3 je5!
 *CHI: li1 go3 go2 di1.
 *CHI: fan3 gaau3 Hou2 syu1fuk6 aa3!

SV -- subject + verb

- Age 2: *CHI: <ze4ze1> [<] # sik1 aa3 ##.
 *CHI: nei5 zing2.
- Age 3: *CHI: keoi5 fan3gaau3 laak3, keoi5.
- Age 4: *CHI: ji1ji1 Wai3 gaa3.
 *CHI: li1 go3 sai2baak6baak6.
- Age 5: *CHI: li1 bli1 dou1 hai6.

SVO -- subject + verb + object

- Age 2: *CHI: baalbaal hoil &dzin1 aa3.
- Age 3: *CHI: gung1 zai2 zaam2 ngaan5.
- Age 4: *CHI: ngo5 dou1 jau5 song2san1fan2.
 *CHI: ngo5 so1 jyun4 tau4 laak3.
 *CHI: <sai2> [/] ngo5 Hai2 uk1kei2 sai2 tau4 sin1
 gaa3.
- Age 5: *CHI: ngo5seng4jat6 waan2 zyu2faan6zai2.

SVC -- subject + verb + complement

Age 3: *CHI: li1 go3 hai6 li1 go3 Le1!

Age 4: *CHI: li1 go3 sIn1 hai6 sai2tau4seoi2 aa3.

Age 5: *CHI: li1 go3 hai6 gaan2fan2 aa3!

SVOO -- subject + verb + indirect object + direct object

Age 3: *INV: heoi3 gaail aa4, nei5 daai3 keoi5 heoi3
bin1 dou6 aa3?

*CHI: daai3 keoi5 heoi3 hoi2joeng4gung1jyun2.

Age 5: *CHI: maa4maa4 seng4jat6 dou1 tung4 ngo5
zing2 song2san1fan2 gaa3.

Declarative-negative

Sentences with negative adverbial *m4* appear at age 2

Sentences with other negative adverbials *mou5* and *mei6* appear
at age 3.

Sentences with negatives *m4hai6* and *m4hou2* appear at age 4.

Table 6.20. Emergence of Negatives.

Age	m4	mou5	mei6	m4hai6	m4hou2
2	√				
3	√	√	√		
4	√	√	√	√	√
5	√	√	√	√	√

Examples

Declaratives -- negatives

m4

- Age : 2 *CHI: m4 hoi1 dou2 o3.
 *CHI: m4 gin3 aa3 ##.
 *CHI: m4 Oi3 go2 go3 aa3.
- Age 3: *CHI: mit1 m4 dou2 aa3!
- Age 4: *CHI: m4 Zi1 aa3.
- Age 5: *CHI: m4Zi1.

mou5

- Age 3: *CHI: aa1 jo1, mou5laak3!
 *CHI: keoi5 mou5 aa3!
- Age 4: *CHI: li1, mou5 zoek3 dai2fu3.
 *CHI: lei5min6 mou5 naai1naai1 aa3.
- Age 5: *INV: jau5 mou5 cin4hau6 diu6 Zyun3 zo2 aa3?
 *CHI: mou5 aa3!

mei6

- Age 3: *INV: cung1 jyun4?
 *CHI: mei6 aa3.
- Age 4: *CHI: o1, ai1jo3 mei6 lok6 song2san1(fan2) mei6.
- Age 5: *CHI: dou1 mei6 sai2 tau4.

m4 hai6Age 4: *CHI: m4 hai6.Age 5: *INV: ze4ze1le1, hai6 mai6 tung4 nei5
jat1cai4fan3 gaau3gaau3 gaa3?*CHI: m4hai6.**m4 hou2**Age 4: *CHI: m4 hou2 jiu3 li1 go3 aa1.Age 5: *CHI: m4hou2 zing2 di1 hung1hei3 ceot1 lei4
sin1!**Interrogative**

Particle Question, A-not-A Question and Wh-Question appear at age 3
Intonational Question appears at age 5.

Table 6.21. Emergence of Interrogative Structures.

<u>Age</u>	<u>Types of interrogative sentences</u>			
	<u>Intonational Q</u>	<u>Particle Q</u>	<u>A-not-A Q</u>	<u>Wh Q</u>
2				
3		√	√	√
4		√	√	√
5	√	√	√	√

Examples

Interrogatives

Intonation question

- Age 5: *CHI: cit3 haa5di1 jyu2 sin1.
 *CHI: Dou1?
 *INV: hai6 wo3, cit3 haa5 di1 jyu2 sin1 aa3.
 *INV: ngaa4gou1 lei4 gaa3 li1 go3!
 *CHI: ngaa4gou1?

Particle question

- Age 3: *CHI: li1 go3 Le1?
 *CHI: li1 go3 le1?
 *CHI: wai3 -: nei5 tung4 keoi5 Zip3 Saam1 aa4?
 *CHI: ceoi4 zo2 Saam1 Laa4?
 *CHI: gam2 ge2?
 *CHI: zek3 sau2 le1?

A-not-A question

- Age 3: *CHI: hai6 mai6 gam2joeng2 gaa3?
 *CHI: hai6 m4 hai6 gam2joeng2 aa3?
 *CHI: jau5 inou5 je5 zong1 zyu6 aa3?
 *CHI: hai6 m4 hai6 bei2 keoi5 zoek3 gaa3?
 *CHI: Jiu3 m4 Jiu3 ceoi4 Saam1 aa3?

Wh question

- Age 3: *CHI: dim2gaai2 aa3?
 *CHI: zou6 mat1je5 mei1 Maai4 go3 ngaan5 ge2?
- Age 4: *CHI: bin1 go3 cung1 aa3?
 *CHI: li1 go3 me1 lei4 gaa3?
- Age 5: *CHI: li1 zil mat1je5 lei4 gaa3?
 *CHI: soeng2 sik6 mat1 aa3?

Imperative

Imperative sentences appear at age 3.

Table 6.22. Emergence of Imperatives.

Age	Imperative sentences
2	
3	✓
4	
5	

Age 3: *CHI: heoi3 gaai1 laa1!

Other features

Below we list other interesting sentence types found in our data.

Table 6.23. Emergence of Other Sentence Types.

Age	Serial V.	Topicalization	Complex S.	Comparative	Negative	Embedded
	(a)	(b)	(c)	(d)	(e)	(f)
2						
3	√	√	√	√		
4	√	√	√		√	
5	√	√	√		√	√

Serial verb constructions

Serial verb constructions start to appear at age 3.

Age 3: *CHI: jung6 li1 go3 sai2 aa1!

Age 4: *CHI: bat1jyu4 ngo5dei6 heoi3 zoek3 dai2fu3 lo3.

*CHI: bong1 ngo5 ceoi4.

*CHI: bei2 keoi5 zoek3 ge3.

Age 5: *CHI: <maai5> [/] maai5 di1 coi3 heoi3 gaai si5.

Topicalisation

Age 3: *CHI: mou5 si6 aa3 nei5?

*INV: nei5 uk1kei2 Le1, nei5 uk1kei2 jau5 bin1go3
tung4nei5 jat1cai4 Zyu6 aa3?

*CHI: nei1 dou6 Zyu6.

Age 4: *CHI: zong1 song2san1 fan2 gaa3, ngo5 soeng2.

Age 5: *CHI: li1 go3 bei2 keoi5.

*CHI: <maai5> [/] maai5 di1 coi3 heoi3 gaaisi5.

Complex Sentence

- Age 3: *CHI: cung1 loeng4 zi1 cin4, Jiu3 jung6 faan1 gaan2.
 *CHI: sai2 gon1 zeng6 <gam2 zau6> [/] gam2 zau6 bin3
 zo2 naam4 zai2 aa3?
- Age 4: *CHI: sai2 jyun4 tau4 sin1 jiu3.
 *CHI: cung1 jyun4 loeng4 sin1 Jung6 gaa3.
- Age 5: *CHI: caat3 Jyun4 ngaa4 maat3 gon1 zeng6.

Comparative

- Age 3: *CHI: faai3 Di1 aa3!
 *CHI: Co5 hou2 Di1 sin1 laa1!

Negative Questions

Negative questions appear at ages 4 and 5.

- Age 4: (negative mature particle question)
 *CHI: aai1, mou5 je5 zong1 zyu6 gaa3 mei1.
 (negative simple particle question)
 *CHI: zoek3 zyu6 li1 go3 mei6 aa3 [=picking up
 diaper]?
 *CHI: mei6 aa4?
 *INV: mei6 aa3, dou1 m4 Sai2 zoek3 lo3 gam3 daai6
 go3, hou2 mou5 aa3.
 Again, (negative simple particle question)
 *CHI: mou5 je5 ge2?
- Age 5: (negative simple particle question)
 *CHI: kei5 m4 wAn2 ge2?

(negative wh question)

*CHI: dim2gaai2 gam3 noi6 dou1 mei6 jau5 faan1gaan2
ge2?

Embedded Clause

Embedded clause is found at age 5.

Age 5: *CHI: go2 di1 cung1loeng4 ge3 je5!

Non-adult form (developmental error)

A number of non-adult forms (developmental errors) found in the data are listed below.

The following occur at age 2.

Word Order (negative)

Age 2: *CHI: m4hoi1 dou2 o3.
(should be hoi1 m4 hou2)

Verb reduplication

Age 2: *CHI: lo2lo2 aa3.
*CHI: Dou2 aa3, dou2dou2 aa3.

Unusual neg

Age 2: *INV: me1 lei4 ge3 &dzek1?

*CHI: m4 me1 lei4.

*INV: din6si6 lo1.

*CHI: m4 din6 si6.

Wrong answer/response to a suggestion

Age 2: *INV: ngo5 bong1 nei5 zing2 aa1.

*Chi: m4 zing2.

The following developmental errors occur at age 4.

Unnecessary word repetition

Age 4: *CHI: o1, ailjo3 mei6 lok6 song2san1(fan2) mei6.

(the neg "mei6" was repeated unnecessarily)

Error in forming coordinated sentence by juxtaposition

Age 4: *INV: jiu3 li1 go3?

*CHI: li1 go3 m4 hai6, jiu3 go2 go3.

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