The project described in this report examines the development of Swedish-speaking children's syntax from the appearance of the first two-word sentences until all the basic syntactical rules are mastered. The procedures and techniques for the experiment are described and preliminary findings are discussed. Children practice language by repeating an utterance several times, first single words and later whole sentences. Imitation plays a great part in linguistic development. The most advanced children have parents who talk a great deal with (not to) their children and who listen to them, trying to understand what they say. These parents often "translate" (not correct) and develop what their children say in order to check that they are on line with each other. Such translations or "imitations with expansion" made by the parent seem to be of great importance to strengthen the right structural patterns. (Author/VM)
The aim of this project is to examine the development of Swedish speaking children's syntax from the appearance of the first two-word sentences until all the basic syntactical rules are mastered.

So far no systematic studies of Swedish speaking children's syntax have been carried out. Realizing that every child learning his mother tongue has got his individual language which cannot be interpreted without a thorough knowledge of the child's environment, habits and experience - his "cultural context" - we abandoned the idea of a statistical examination of a great many children where every child is recorded for only a couple of hours. Instead we chose to make a deep study of a few children.

Following Bellugi, Brown, Gvozdev, Lenneberg and others, who state that the first two-word sentences appear at age 1 1/2 to 2 and that the basic syntactical development is finished at age 3 to 4, we decided to start with children 1 1/2 to 2 years old and to follow their linguistic development during two years.

Finally we chose six children, four girls and two boys, all first born. The parents have got university or college education and the children are all nursed in their homes.

The children are recorded in their homes for half an hour every second week. One of the parents or a nurse is present at the recordings, playing and talking with the child. There are normally three of us assisting at these recordings. One is helping the parents to provoke speech and is trying to guide the games in such a way that they give the child an opportunity of talking as much as possible. Another is keeping an eye on the recorders and the microphones, which have often to be moved from one end of the room to the other. The third person is a kind of reporter, commenting in a low voice on what the child is doing, what is happening in the room etc. These comments are recorded on a stereo recorder (Tandberg), channel one. A synchronous recording of the conversation between child and adults is made on channel 2.

To record the conversation between child and adults, our chief aid, however, is a Nagra recorder with two microphones, one of which is reserved for the child.
To elicit as much speech as possible from the children we bring with us toys and pictures. To provoke the children to say full sentences we have tried to choose pictures where something is happening. Otherwise there is a danger that they resort to pointing at the things in the pictures all the time, talking in one-word sentences, either asking "what" or saying "there" or -possibly- the names of the things.

Another way to provoke speech has been to show new toys to the child and to play with these toys when the parents are not present. Then one of the parents is summoned and the child is asked to show mummy or daddy the toys and tell what we have just been doing.

Tests have also been tried - on a very moderate scale - mostly to get an idea of the children's understanding of different syntactic structure (questions, commandments, subject-predicate, subject-predicate-object etc.). Finally we have a very useful and necessary collaboration with the parents, who do not only act as interpreters but also supply us with information about the daily life of their children, what they say and do etc.

The recordings are transcribed as soon as possible after the sessions. The transcriptions are morphematic, except when it is impossible to understand what a child says. Then a phonematic transcription is made of the incomprehensible word.

The transcription is written in two columns: in the left hand column the conversation between child and adults is rendered, in the right hand column the reporter's comment is given.

A very short abstract (in English translation) is the following:

Child: Boil. he puts the coffee-pot on

It is boiling. a saucer turned upside down

Now it boiled.

Adult: You must lay the table.

Child: Mm. I have got no paper. looks towards his mother

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1 The idea of making synchronous comments on a tape recorder I got from Dr Grace Shugar at the conference on child language held in Brno, October 1970.
Two assistants are transcribing the same recording: for greater correctness they are working independently of each other. Then the two versions are compared and every discrepancy between the two is marked. Finally a third person, the editor, listens to the recordings a last time, and based on the two transcriptions makes the final version, trying to decide about the passages where the transcriptions differ. Often it is obvious that one of the transcriptions is the right one, sometimes the right version is a mixture of the two transcriptions. In very problematic cases the editor and the two assistants listen to the passage together and try to make a decision.

The project started on the first of September 1970. We are four persons engaged in it: two full-time assistants who are at the same time preparing their doctoral dissertations, a half-time secretary and myself. Every week three recordings are taken, and to make one single transcription takes about 10 hours. Every recording, then, requires 30 hours' work totally before the manuscript can be handed over to the typist. Under these conditions there is not much time to analyze the material systematically. We will have to leave that until the two-year period is finished.

Nevertheless we have been able to make many useful observations which will be good starting points for our future analyses.

The first thing we observed was that all the children are extremely different from each other in spite of their rather homogeneous social setting. Some are normally very gay and happy, others rather sulky. Some have a steady temper, others a more fluctuating. Most children were willing to collaborate with us and to take part in the games and tests. But in one case we met with a stubborn resistance.

As regards speech, two are extremely talkative (one boy and one girl), three are moderately talkative and one little girl is almost completely silent. This girl, however, had developed a whole system of gestures which she used together with "yes" and "no" and a few nouns. Moreover she turned out to be unusually "social", extremely willing to collaborate, good-humoured and happy. To get something out of this girl we had to test her understanding of language, and therefore constructed questions to find out whether she knew the different types of clauses (declarative, interrogative, imperative), if she understood the subject-object relation, if she knew the meanings of certain prepositions etc. Thanks to the girl's willingness to collaborate, we got rather good results, and we also used the tests with the other children to check if understanding precedes
production. As regards the prepositions we made the following observations:

1. During a certain period the child only understands a few prepositions, such as "in", "behind".

2. Later the child understands most prepositions quite well but uses them incorrectly. Often one single preposition is used in a great many cases, preferably "in".

As an example the following experiment may serve. We hid several toys: one under a pillow, one behind a pillow and one in a handbag. We gave the child instructions where to find the toys, and she succeeded very well, looking behind the pillow (not touching it) to find the toy behind, lifting the pillow to find the toy under etc. Immediately afterwards the mother took the toy which had been under the pillow, asking "Where did you find this?" The girl answered "In the pillow". Her mother tried to make the girl correct herself and said "No, you did not find it in the pillow, did you? You found it in the sofa" the girl cried out happily.

Brown, Bellugi and others have shown that the earliest sentences of the children are "telegraphic", containing only the contentives of the clause, which are also the words with heavy stress. We have noticed the same thing. But we have also observed the development of the unstressed words, and then we have noticed that at certain periods there appear some grumbling sounds where there should be an article, a preposition, a pronoun etc. Some weeks later these sounds are here and there replaced with something very much resembling the correct unstressed word, until finally the word is there. This might be compared with a much earlier stage in the linguistic development of the child, when it is practising intonational patterns with nonsense words. Little by little these patterns are filled out with the first real words.

It also seems evident to us that children practice language. At an early stage our children were practising single words. One of our girls was once trying to say the same word again and again while she was putting her doll to bed: /bəba/ /baba/ etc. The word she tried to say was /bəda/, which means "make the bed".

Later in their linguistic development the children practice sentences. One and the same sentence can be uttered up to ten times with different word order and differentintonation. One or two tries might give a correct result, but this is almost never the last try. The other tries usually give ungrammatical sentences.

It also seems evident that imitation plays a great part in the linguistic
development of the child. Here the communication parent-child is most revealing. Our most advanced children have parents who talk a great deal with (not to) their children and who listen to them, trying to understand what they say. These parents often "translate" (not correct) and develop what their children say in order to check that they are on line with each other. The child right for instance say :"Dolly eat". Then the father says : "Shall Dolly eat? Yes. Here is a saucer and a spoon. Now we let Dolly eat". Such translations or "imitations with expansion" made by the parent seem to be of great importance to strengthen the right structural patterns. As mentioned above the child often practices semantically the same sentence again and again with different syntactic structures. When one or two of these tries are right, the child evidently knows how to produce a correct sentence. Then it is essential to have these potential patterns strengthened.

With the three best speaking children in our group there is mutual communication and understanding parent-child, and parent and child have a rich linguistic and non-linguistic context in common to which they perpetually refer and which we - as visitors - must all the time ask about. One reason for this unusually good communication parents-child is, that in all three cases one of the parents - or both, alternatively - are together with their child most part of the day.

With the children that do not speak so well this common context is lacking and it is evident that parent and child do not talk so much together except for the sessions when the children are recorded. The children are all day nursed by young girls, 17 - 19 years old. In the case of the non-speaking, gesturing child, however, the mutual communication parent-child is quite good, but the child here is left all day with a nurse that is passive and silent.

We have also noticed that the children often try very hard to say what they want to say. Talking is hard work for them, especially when they try to produce sentences longer than two words, if they still belong to the two-word stage. Stuttering seems to be a very common phenomenon. Very often the child breaks off a sentence two to three times and begins anew until he succeeds moderately well.

ENDER

2 We use the term coined by Brown and Bellugi - see Roger Brown and Ursula Bellugi, Three Processes in the Child's Acquisition of Syntax, MIT 1964.
These are some glimpses of such observations as we have been able to make during our first year of recording. Later we shall make a systematical description in terms of phrase structure grammar and transformational grammar. If time permits we shall also try to check some of the results of the longitudinal deep study by making a statistical study of 100 children aged two to four. Such a study is necessary for us to be able to make statements about Swedish speaking children's language in general, although it is not the right way to take if you want an allround picture of the syntactical development of the child from two to four, where extreme attention must be paid to non-linguistic factors, particularly the setting and equipment of each child.