Subject Omission and Discourse Anchorage in Early Swedish Child Language

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ABSTRACT

This paper addresses the question whether a connection exists between subject omission and discourse anchorage in early Swedish child language. By analysing data from three Swedish children, I investigate whether previous mentioning in the discourse affects the occurrence of subject omission. A Danish study by Hamann & Plunkett (1998) reported that no connection between subject omissions and discourse anchorage could be established for Danish. My study partly contradicts their results: in finite utterances, the majority of the omissions found were anchored to the discourse. Furthermore, the results indicate that the development of a Theory of Mind might be of importance for the decrease of subject omission in child language.

1. Introduction

In the early stages of language development, children tend to produce sentences lacking both a finite verb and an overt subject. These phenomena are well known and well discussed in the literature; the period is sometimes referred to as the *optional infinitive stage* or OI-stage (Wexler 1992, 1994). Previous studies of subject omission indicate that the phenomenon might be universal, since it even occurs in languages where the target grammar disallows pro-drop, such as English, Swedish and Danish[1].

A thorough study of subject omission in early Danish was carried out by Hamann & Plunkett (1998), based on recordings of two Danish children. The

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[1] See for example Hyams 1986 (English), Josefsson 2004b (Swedish) and Hamann 2002 (Danish).

underlying hypothesis was that the children only would omit the subject if it was previously mentioned or actualised in the discourse. Somewhat surprisingly, a connection between discourse anchorage and subject omission could not be established (Hamann & Plunkett 1998:69). Instead, the results indicated quite a different connection: both children were more apt to include the subject if it previously had been actualised in the discourse (Hamann & Plunkett 1998:58). From these results, Hamann concludes that children during the OI-stage only arbitrarily anchor their utterances to the discourse (Hamann 2002:312).

The purpose of this paper is to conduct a similar study on Swedish. By analysing first position subject omissions in three child corpora, I will try to establish what impact, if any, discourse has on subject omission. My results partly contradict the Danish study. According to my results, the majority of the children's subject omissions in finite utterances are anchored to the discourse. In non-finite utterances, subject omission seems to occur more arbitrarily. Thus, a connection between discourse anchorage and subject omission in non-finite clauses cannot be established by my results either. But the results do indicate a connection between finiteness and discourse anchorage, a connection that has also been observed in previous studies (e.g. Svensson 1999:37).

The paper is divided into four sections. In the first section (chapter 2) I will give a short introduction to the Minimalist Program, focusing on the C-domain, and also a short presentation of the linguistic phenomena dependent on the C-domain in Swedish. In chapters 3 and 4 the data is presented as well as the method used for conducting the survey. The results of the survey are presented in chapter 5, and in chapter 6 the results are summarised.

Even though the underlying hypothesis presupposes a universal grammar according to Chomsky's minimalist program (1995), it has been a conscious effort to conduct this survey without specifically relating it to a grammatical theory.

2. Background

2.1 The C-domain

The human language is syntactically made up from phrases. All phrases share the same structure: a head, a complement and a specifier. The internal relations between the phrase head and its specifier and complement can be illustrated by a tree structure:

(1)

```
          VP
         /  \
        /    V'
    spec    / \
         V°  compl.
```
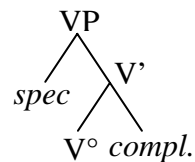
All languages are built up in the same way. Phrases combine with phrases, which eventually combine to sentences. The lowest section of the structure is represented by the *verb phrase* (VP). The event expressed in the sentence is introduced as verb + actors (subject, object). To express inflection additional phrases are needed above the VP. The event, or some parts of it, is modified and specified for mood and tense (among other things) by the information of the higher structure, the so-called *inflectional phrase* (IP). In the highest part of the tree structure, the *complementizer phrase* (CP), the utterance gets bound to the discourse by being anchored to the speaker's here and now. Thus, sentences can structurally be divided into three domains, illustrated in (2): the V-domain, the I-domain and the C-domain.

(2)

```
                CP
              /\
          spec  \C'
            /   /\
              C°  \IP°
             /\   /\
               spec \I'
                 /  /\
                 I° \VP
                /\  /\
                  spec \V'
                    /  /\
                    V° compl.
```
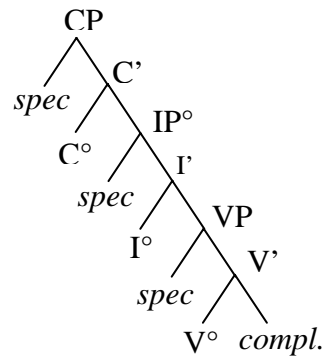
All three domains can be divided into more detailed structures: for example, the I-domain contains phrases for tense, modality, aspect, etc. However, the above presentation is sufficient for the understanding of this paper.

Observations made in previous studies indicate that the C-domain plays a vital role in language development (see for example Hansson 1998, Svensson 1999 and Platzack 2001). Several syntactic phenomena in Swedish are dependent on the C-domain:

(3)

a) *Obligatory finite verb*. In Swedish, every main clause must contain a finite verb. Since Swedish in addition is a V2-language, the verb must move up to C° in order to anchor the event to the speaker's here and now.

b) *Obligatorily filled Spec-CP*. In Swedish declarative main clauses, the finite verb must be preceded by one and only one phrase. Apparent exceptions to this generalization are V1 direct *yes/no*-questions, which have an invisible operator in Spec-CP, and V1 declaratives (topic drop, diary drop), where the element in Spec-CP is deleted, see Mörnsjö (2002).

c) *Obligatory subject*. In Swedish, an overt subject is obligatorily present in all main clauses.

Platzack (2001) reports that very young children as well as children with specific language impairments (SLI-children) have difficulties mastering the C-domain. Among other things, this is made obvious by the large number of non-finite utterances produced by these children. However, both groups seem to master the lower sentence structures (the I- and V-domains), indicated by the fact that neither SLI-children nor very young normally developed children make mistakes concerning the internal order of non-finite verbs and objects. The verb always precedes the object, as in *Han kan öppna dörren* ('He can open the door'). All language errors found in my survey are due to a malfunctioning C-domain: omitted finite verbs, omitted subjects and the occurrences of V1 and V3 sentences.

2.2. Obligatory overt subjects in Swedish

In Swedish, all clauses must contain an overt subject, similar to other Germanic languages. Omission of the subject in Spec-CP is allowed in short answers to direct *yes/no*-questions (topic drop), as in (4a), or in so called "diary language" (diary drop, see (3b) above), as in (4b):

(4a) Vad gör   du?   – Ø   Skriver   uppsats
    what do+pres. 2.pers.sing.   null write+pres essay
    What are you doing?   – Ø writing an essay

(4b) Ø   Sitter   på   restaurangen. Ø Har   precis beställt   mat.
    null sit+pres   on   restaurant+det null have+pres just   order+perf. food
    Ø Sitting on the restaurant. Ø Have just ordered food.

V1-sentences lacking an overt subject do occur in both written and spoken Swedish, in adult as well as child language. However, there is also a non-target like type of subject omission in early child language. As is seen in Platzack & Josefsson's investigation (2000) children also omit the subject from its inverted

position, i.e. when it is preceded by the finite verb. Omission from the inverted position, as in (5), is impossible in adult Swedish.

(5) nu kan se
    now can see
                 (Markus 2;2.05)

Hamann & Plunkett (1998:37) reject the idea that subject omission in child language should be regarded as the child's attempt to imitate the target grammar of the adult language. Support for their rejection is easy to find in Danish, since Danish disallows pro-drop in the target grammar. As a consequence, the occurrence of subject omission in child Danish cannot be explained in terms of imitation. For Swedish, subject omission does occur in adult language, but quite infrequently (only in 6% of the utterances in my survey).

3. Presentation of the data

My survey is based on video recordings of three Swedish children: Markus, Sara and Harry. For every session, the child has been recorded with its parents, grandparents or brothers and sisters. To be able to conduct a survey on subject omission it is an absolute prerequisite that the child has entered the two-word stage, which normally happens at about two years of age. This prerequisite has provided a natural point in time for the onset of the analysis.

The Markus corpus consists of 16 recordings, made between 1;10.14 up to 2;6.20[2]. The recording interval varies; the shortest being 5 days, the longest 2 months. The average interval, though, is 14 days. The length of the recordings varies from 30 to 60 minutes. Markus displays the most rapid language development of the three children

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[2] The child's age is represented like this throughout the paper, and should be read out: yy;mm.dd

The Sara corpus consists of 13 recordings, conducted in a monthly interval. The first recording is made at 1;11, the last one at 2;11. The duration of these recordings is approximately 30 minutes each.

The Harry corpus consists of 16 recordings; the first at 2;0.16 and the last at 3;1.21. The duration varies from 30 to 60 minutes. Compared to the other two children, Harry displays a considerably slower language development. In fact, I have been compelled to exclude Harry's first three recordings (2;0.16, 2;1.10 and 2;2.0). During these recordings, it is obvious that Harry still has not entered the two-word stage (see below, chapter 4.1); it is furthermore almost impossible to interpret his utterances. Therefore, only 13 out of 16 recordings have been analysed.

Detailed presentations of the corpora are available in Richthoff 2000 (Markus), Santelmann 1995 (Sara) and Plunkett & Strömqvist 1992 (Harry). The same three corpora have also been used in several previous studies (Josefsson 1999 and 2004a and 2004b, Platzack & Josefsson 2000). A thorough survey is presented in Josefsson 2004a. Even though the total corpus may be criticised for being rather limited – consisting only of three children – the results can still be considered valid. Child language development is rather predictable, i.e. it follows a strict pattern. The most obvious difference is the children's development in time: for some children, the development is very rapid, for others, it takes a bit more time.

4. The Survey

4.1 Method Used

My analysis has been carried out on transcriptions of video recordings. For the Sara corpus, I have had access to the video recording as well, but for Markus and Harry I have only had access to the transcriptions. I am aware that this might have led to some errors in my analysis. There is always the possibility of

the transcribers misunderstanding an utterance, or me misunderstanding an utterance by not being able to check with the video recording. What is more, children many times produce more or less inarticulate sentences. If a plausible reading could not be established, the utterance has not been included in the survey.

I have analysed every declarative sentence consisting of (at least) a verb and an overt or covert subject in the first position. I have not taken into account interrogative or imperative sentences[3], nor utterances lacking a verb. Utterances consisting of single verbs have also been excluded from the survey, since it is in most cases impossible to analyse a single verb in terms of subject omission. Exceptions are rare, but exist nevertheless. An utterance consisting of a single verb has been included when it a) answers a question (6) b) is an exclamation (7):

(6) [Dad and Sara are watching pictures]
D: men titta vem som – vad är – vad gör   Sara där?
   but   look   who   what is   what is-doing Sara there
S: gråter
   is-crying
                    (Sara 2;10)

(7) M: va   ligger de i   barnvagnen då?
       what is-lying it in pram-the   then
    H: hn bäbos
       a   baby
    M: hm [agrees]
    H: tittar!
       is-looking
                    (Harry 2;7.4)

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[3] In Swedish interrogative sentences the subject is positioned after the finite verb, unless the subject is a wh-word. In Swedish imperative sentences, an overt subject is not obligatory. If a subject is present, it must be positioned after the finite verb (*Spring du!*, 'Run, you!'). As a consequence, no subject omission can occur from the first position in interrogative or imperative sentences.

Subject omissions have been analysed with regards to the linguistic discourse. For the purpose of comparison, the adults recorded while speaking with the children have been analysed as well, although only in the Sara and Markus corpora.

I have decided to exclude many verbs from the 1st conjugation from this survey. This might seem as quite a drastic limitation, since quite a few basic and/or common verbs belong to this conjugation. However, inflection might sometimes be inarticulate for these verbs, since the past and the present tense are sometimes pronounced as the infinitive. Thus, e.g. *bada* ('take a bath') may be the infinitive form of the verb, but also the present tense form (the correct form is *badar*), the past tense (correctly pronounced *badade*), or the imperative form (*bada!*). As this study, among other things, investigates a connection between non-finite utterances and subject omission, as suggested by Wexler (1992, 1994), verbs from the 1st conjugation might thus constitute a possible source of error, and examples like (8) below are therefore excluded from my material. Verbs from the 1st conjugation have been included on condition that inflection is unambiguous. Since the recorded material has been inaccessible, the accuracy of the transcription has been trusted in these cases. However, unambiguous utterances containing 1st conj. verbs are few, and almost exclusively occur in the Markus-material. These utterances have had no significant impact on the result as a whole.

Furthermore, verbs belonging to other conjugations have been omitted when it has been impossible to assess whether the verb is finite or not (for example the auxiliaries *ha* 'have' and *få* 'get', see (9). It goes without saying that auxiliaries, as well as main verbs, have been included when inflection is unambiguous, see (10):

(8) [Markus is drawing]
    M: *rita*   där   (1st conj., ambiguous – excluded)
       draw+?   there
                 (Markus 2;0.25)

(9) [Markus is fingering on the recording equipment]
    M: den *få* stå   här   (auxiliary, ambiguous – excluded)
        it   may   stand   here
                (Markus 2;0.9)

(10) [Harry runs around with a toy airplane]
    H: ja *kö*   fygpane   (unambiguous finite verb – included)
      I   drive   airplane-the
                (Harry 2;9.26)

My method is to some extent different from that used by Hamann & Plunkett (1998)[4]. As a consequence, their results are not fully comparable with mine.

4.2 Criteria for subject omission

In order to avoid ambiguity in the analysis I have set up several criteria, defining how to interpret every single subject omission. For all utterances where the allusion of the omitted subject is ambiguous, the omission has been analysed as non-anchored to the discourse.

     Below is a list of all set criteria:

- A subject omission has been analysed as anchored to the discourse if the omitted subject corresponds to the first person, i.e. *jag*, 'I', *man*, 'man', or *vi*, 'we'. In (11) we find such an example:

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[4] In Hamann & Plunkett's study (1998) the occurrence of subject omission is compared to the total number of verbal utterances in their corpora. Since my study is limited to subject omissions from the first position in declarative sentences, I have a potentially lower number of subject omissions per verbal utterance than Hamann & Plunkett.

(11) [Dad and Markus decorate the Christmas tree. Markus wants to hang brownie goblins in the tree]

    M: (--) ska hänga små tomtar i granen
               will hang   little goblins in tree-the

             (Markus 2;3.9)

- A subject omission has been analysed as anchored to the discourse if it may refer to something in the child's direct neighbourhood (12):

(12) [Dad and Sara are playing with dolls]

    S: docka där
       doll   there

    S: Pappa!
       dad

    S: (--) är din   [gives daddy a doll]
           is   yours

    P: är det min?
       is it   mine

    S: Ja
       yes

             (Sara 1;11)

- Short answers containing only a verb have been analysed as anchored to the discourse, whether the verb is finite or non-finite. This kind of omission is also common in adult language. See example (6) above.

- A subject omission has been analysed as non-anchored if the subject has not been mentioned earlier in the discourse or has been made obvious by the discourse, as in (13):

(13) [Harry is playing with a fire truck]

    H: den bambile va flin
       that fire truck was nice

    M: tycker du det?
       think you that

    H: ö kan ä öppna dää   (ambiguous omitted subject *jag/du/man/den*)
       x can x open   there

             (Harry 2;10.18)

- In the early stages of language development, children tend to repeat their sentences over and over again. If the child repeats one and the same utterance more than 3 times without being interrupted, only one utterance has been included in the survey.

- Repetition and imitation are natural phases in child language development. Often, the child repeats what the adult speaker just has said. Repetitive utterances have not been included in this survey, since they hardly activate the child's own grammar. An example of this can be found in (14):

(14) (Harry and Mom are reading)
    M: han vågar inte gå dit
        he   dares not go there
    H: han vågal inte gå dlit
        he   dare   not go there
                          (Harry 2;10.18)

5. Results

Section 5.1 offers an overview of the analysed data; section 5.2 accounts for the connection between discourse anchorage and subject omission in finite clauses, and section 5.3 for non-finite clauses. In section 5.4 the data is compared to the results from a corresponding study of the adult language in the corpora.

5.1 An overview of the analysed material

The Sara corpus is the largest one of the three – consisting of 943 utterances – while the Harry corpus is the smallest one, approximately 140 utterances shorter than the Sara corpus. This is mainly due to the fact that Harry's first three recordings were excluded from the survey, as mentioned above. The Markus corpus is also smaller than the Sara corpus. Some recordings of Markus con-

tained a significant number of utterances with verbs from the 1st conjugation; these have been excluded according to the limitations mentioned above.

Even though there are some differences regarding the number of included utterances, the three corpora can still be said to be equivalent in size. The age differences, however, are important for this survey, and may have had some impact on the results: Harry is 7 months older than Markus and 2 months older than Sara at the last recording session. As we will see later on, Harry differs in many ways from the other two children with regards to his cognitive development.

5.1.1. Total number of utterances

Table 1 presents an overview of the analysed data. Note that I present expletive pronouns separately to avoid a possible source of error[5]. As is made evident from table 1, the percentage of omitted formal subjects is low, at most 5% in the Sara corpus. I have therefore chosen not to discuss the occurrence of formal subjects. More detailed aspects of the survey can be found in table 2 and 3. A complete overview is available in appendix 1.

Table 1: Overview of the total number of utterances for Markus, Sara and Harry

	Markus (1;10-2;6)		Sara (1;11-2;11)		Harry (2;2-3;1)	
	Number	%	Number	%	Number	%
Total number of utterances	**835**	**100**	**943**	**100**	**799**	**100**
Finite	674	81	727	77	682	85
Non-finite	161	19	216	23	117	15
Utterances with overt subjects	**630/835**	**75**	**695/943**	**74**	**714/799**	**89**
Det as overt subject[6]	104	12	150	16	87	11
Finite	480	57	457	48,5	548	68
Non-finite	46	6	88	9,5	79	10
Utterances lacking overt subjects:	**205/835**	**25**	**248/943**	**26**	**85/799**	**11**
Det as omitted subject	4	<1	49	5	15	2
Finite	86	10	71	7,5	32	4
Non-finite	115	14	128	13,5	38	5

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[5] It is difficult to discern whether a formal subject should be regarded as discourse anchored or not, since it is often vaguely specified (see for example Mörnsjö 2002:53).
[6] Every occurrence of the formal subject *det* is followed by a finite verb.

For all children, the majority of the utterances are finite. Even during the OI-stage, children do not exclusively produce non-finite utterances. Hamann & Plunkett (1998:59) make the same observation. We find the highest percentage of finite utterances in the Harry corpus: 85%. At the last recorded session, both Harry and Markus almost exclusively use finite verb forms, 97% and 96% respectively. Sara differs from the other two, with only 92% of her utterances being finite in the last recording. See appendix 2 for a more detailed presentation.

Both Markus and Sara omit the subject in approximately 25% of their utterances. This corresponds well with the results from Hamann & Plunkett's study. During approximately the same period in time, 25% of Anne's utterances and 30% of Jens' utterances lacked an overt subject (Hamann & Plunkett 1998:54). In this respect, Harry differs from the other children, having only 11% of his utterances without an overt subject.

5.1.2. Non-finite utterances and subject omission

I have while conducting the survey made a distinction between finite and non-finite utterances. There are several good reasons to do this, some of which have been accounted for earlier. During the OI-stage, non-finite utterances as well as subject omissions occur frequently. Furthermore, both phenomena disappear roughly at the same time. A possible connection between the occurrence of non-finite utterances and subject omission has been discussed in Wexler (1992, 1994). The results of my survey indicate that such a connection might exist in Swedish, although it seems as though non-finite utterances disappear more rapidly than subject omissions.

In table 2, the number of subject omissions per recording is presented for each child. Note that Harry is approx. 4 months older than Markus at the first recording and about 3 months older than Sara. At the last recording Harry is approx. 7 months older than Markus and 2 months older than Sara.

Table 2: Subject omission per recording session

Markus			Sara			Harry		
Age	**Number**	**%**	**Age**	**Number**	**%**	**Age**	**Number**	**%**
1;10.14	12/15	80	1;11	46/65	71	2;2.18	8/22	36
1;10.25	13/18	72	2;0	17/40	43	2;3.9	7/36	19
1;11.0	22/39	56	2;1	13/64	20	2;4.23	10/102	10
1;11.12	16/27	59	2;2	16/50	32	2;5.17	7/57	12
1;11.25	12/20	60	2;3	19/46	41	2;6.10	7/57	12
2;0.9	10/49	20	2;4	8/61	13	2;7.4	3/96	3
2;0.16	11/34	32	2;5	27/51	53	2;7.23	7/55	13
2;0.25	4/28	14	2;6	22/68	32	2;8.27	8/56	14
2;2.5	12/61	20	2;7	18/71	25	2;9.26	6/55	11
2;2.10	15/60	25	2;8	13/87	15	2;10.18	13/82	16
2;2.17	6/31	19	2;9	16/63	25	2,11.29	3/61	5
2;3.9	21/56	38	2;10	15/91	16	3;0.26	2/69	3
2;3.28	16/110	15	2;11	18/186	10	3;1.21	4/51	8
2;4.9	15/63	24	**Total:**	**248/943**	**M 25**	**Total:**	**85/799**	**M 12**
2;4.18	13/100	13						
2;6.20	7/124	6						
Total:	**205/835**	**M 25**						

Markus displays the single highest percentage of subject omission (1;10.14), and also the most apparent change. In the first recording, 80% of his utterances lack an overt subject, in the last one only 6% (the same percentage as in the adult language, see table 10). As is evident in table 2, a drastic change in Markus' language development occurs at 2;0.9. In his three previous recordings, Markus omits the subject in approx. 60% of his utterances (1;11.0, 1;11.12 and 1;11.25). When the recordings recommence after a gap of 1,5 months, this percentage has been considerably lowered: by that time Markus is down at 20%. For the rest of the recordings, Markus' percentage of subject omissions is approx. 25% or less.

The development is irregular for all three children, but is made most obvious in the Sara material. By the third recording (2;1), she omits the subject in 20% of her utterances, only to increase the omissions up to 53% a few sessions later (2;5). At 2;7 the omissions have decreased again down to 25%, and from that on continue to decrease. Sara displays a higher percentage than the other two children at the last recording, although admittedly the difference is not huge.

For Harry, the subject omissions are quite few even to begin with. His highest percentage is 36% (at 2;2.18), and it decreases to about 20% for the rest

of the sessions. At two occasions, Harry only omits the subject in 3% and 5% respectively (at 2;11.29 and 3;0.26). These values are very low even compared to the adult material, see table 10 below. Harry also displays a considerably lower median value than both Markus and Sara.

If we go on to look at the number of non-finite utterances the children produce, we see from table 3 a steady decline as the children grow older:

Table 3: Number/percentage of non-finite utterances per recording session.

Markus			Sara			Harry		
Age	**Number**	**%**	**Age**	**Number**	**%**	**Age**	**Number**	**%**
1;10.14	10/15	67	1;11	39/65	60	2;2.18	10/22	45
1;10.25	10/18	56	2;0	13/40	32,5	2;3.9	20/36	56
1;11.0	15/39	38	2;1	25/64	39	2;4.23	14/102	14
1;11.12	20/27	74	2;2	12/50	24	2;5.17	24/57	42
1;11.25	7/20	35	2;3	22/46	48	2;6.10	4/57	7
2;0.9	7/49	14	2;4	18/61	29,5	2;7.4	8/96	8
2;0.16	13/34	38	2;5	17/51	33	2;7.23	9/55	16
2;0.25	5/28	18	2;6	9/68	13	2;8.27	4/56	7
2;2.5	19/61	31	2;7	8/71	11	2;9.26	12/55	22
2;2.10	23/60	38	2;8	5/87	6	2;10.18	7/82	8,5
2;2.17	6/31	19	2;9	15/63	24	2,11.29	1/61	2
2;3.9	7/56	12,5	2;10	18/91	20	3;0.26	2/69	3
2;3.28	9/110	8	2;11	15/186	8	3;1.21	2/51	4
2;4.9	2/63	3	**Total**	**216/943**	**M 24**	**Total**	**682/799**	*M 8,5*
2;4.18	4/100	4						
2;6.20	4/124	3						
Total	**161/835**	**M 25**						

As expected, we find the highest frequency of non-finite utterances in the earliest recordings. Markus and Harry both have very few non-finite utterances during the last recordings. Interestingly enough, Harry displays a considerably lower median value than Sara and Markus, both with regards to his subject omissions and his non-finite utterances. At the last recording, Harry is a few months older than Markus and Sara, so we might consider age a plausible explanation for his lower percentage numbers.

At Sara's last recording, she still produces a greater number of non-finite utterances than either of the boys. From the Sara corpus, we can discern a link between subject omission and non-finite utterances; at her last recording, Sara

also displays a higher percentage of subject omission than the other children, see table 2 above.

However, it is difficult to establish an immediate connection between the disappearance of non-finite utterances and subject omission. As we saw from table 2, all children produced utterances lacking overt subjects during the last recordings, as well as non-finite utterances. It seems as though non-finite utterances disappear more rapidly than the subject omissions.

It is also important to emphasize that the disappearance of both phenomena might in part result from the child's mental and cognitive development. Since Harry displays the slowest language development, one would also expect him to omit the subject to a higher extent than the other two, if omissions were due to grammatical reasons. Since that is not the case, we have to look for other explanations.

At about 3 years of age, children develop a so-called *Theory of Mind*, i.e. an ability to understand other people's world of ideas[7]. Before the child has developed a Theory of Mind, it has a rather egocentric conception of the world. This might in part explain the obvious tendency to omit the subject (as well as objects), since the child does not yet realize the need to specify what or whom his/her utterance refers to. Hamann & Plunkett (1998:69) present a similar hypothesis:

> (--) the general anchoring problem we found with respect to subject omission and the use of third person pronouns and past tense is not incompatible with a pragmatic account. It may indicate that initially, the child's discourse universe is essentially deictic (--) We suggest that grammatical accounts that relate discourse grounding to use of infinitives and subject omission may offer a fruitful line of enquiry. This will require a careful analysis of the shift from deictic to discourse anchoring in child language.

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[7] "Theory of mind is defined as the ability to assign a mental state to oneself and others and be able to make predictions about other people's beliefs, desires and actions. A large body of research has focused on the lack of a theory of mind, that is impairment of social cognition in children with autism" (Reuterskiöld Wagner 1999:28)

It follows that it is important to separate the child's cognitive and linguistic development from each other. There is a possibility that Harry, who enters the two-word stage quite late, might have passed several cognitive stages during this time. When he finally starts to produce interpretable utterances, his cognitive development is more advanced than both Markus' and Sara's. There are quite a few indications that this might be the case. For example, Harry produces more finite sentences in the past tense than Sara and Markus do[8]. Harry's imagination is also richer and more varied: he tells vivid imaginary tales, and also refers to or accounts for previous events.

On the other hand, at the last recording session Harry is still grammatically at a less advanced level than both Sara and Markus. During their later record-ings, Sara and Markus produce distinctively longer sentences than Harry and – more importantly – do so with correct grammar and pronunciation.

5.1.3. The development of discourse anchorage

We saw from table 2 and 3 that both non-finite utterances and subject omission decrease as the children grow older. With that in mind, one could presume that discourse anchorage follows the same pattern, i.e. that non-anchored omissions decrease in favour of anchored omissions as the children grow older. As table 4 shows, the development is not quite that regular or easy to predict. The percent-age of anchored omissions varies from recording to recording.

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[8] During the earliest recordings, utterances in the past tense occur quite infrequently. It is a well-known fact that very young children only produce finite verb forms in the present tense and/or non-finite verb forms. Thus, the use of the past tense indicates a rather advanced stage in the child's development. Whether it is due to linguistic or cognitive factors is not clear. See Christensen (2004) for a more in-depth discussion of the acquisition of tense.

Table 4: Discourse anchored subject omissions per recording session[9]

Markus				Sara				Harry		
Age	**Number**	**%**		**Age**	**Number**	**%**		**Age**	**Number**	**%**
1;10.14	11/12	92		1;11	19/30	63		2;2.18	5/8	63
1;10.25	3/13	23		2;0	11/12	92		2;3.9	4/4	100
1;11.0	12/22	55		2;1	5/12	42		2;4.23	3/7	43
1;11.12	8/16	50		2;2	12/14	86		2;5.17	2/6	33
1;11.25	5/11	45		2;3	5/14	36		2;6.10	0/2	0
2;0.9	4/10	40		2;4	6/8	75		2;7.4	1/3	33
2;0.16	9/11	82		2;5	18/26	69		2;7.23	6/7	86
2;0.25	4/4	100		2;6	10/15	67		2;8.27	5/7	71
2;2.5	6/12	50		2;7	12/15	80		2;9.26	4/5	80
2;2.10	12/15	80		2;8	9/13	69		2;10.18	10/13	77
2;2.17	4/6	67		2;9	9/15	60		2,11.29	2/2	100
2;3.9	14/20	70		2;10	3/11	27		3;0.26	2/2	100
2;3.28	10/16	59		2;11	9/14	64		3;1.21	3/4	75
2;4.9	11/14	79		**Total**	**128/199**			**Total**	**47/70**	
2;4.18	8/13	62								
2;6.20	3/6	50								
Total	**125/201**									

For Markus and Sara it is not possible to establish a certain point in time when non-anchored omissions start to decrease. For Harry, however, something seems to happen between 2;7.4 and 2;7.23. Notice also that his omissions during the last three recordings almost exclusively are anchored to the discourse. However, all children display high values early on in the survey: Markus 92% at 1;10.14, Sara 92% at 2;0 and Harry 100% 2;3.9. For the next but last recording with Sara (2;10), she displays the lowest number of anchored omissions for all her recordings. At their last recordings, all children display a very high percentage of finite utterances (see appendix 2). Thus it seems as though non-anchored subject omissions do not automatically disappear when the child ceases to produce non-finite main utterances. Furthermore, the decrease in subject omissions on the whole is not dependent on the loss of non-anchored subject omissions.

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[9] Note that only anchored or non-anchored subject omissions are included. Omissions of the formal subject *det* are excluded in table 4.

5.2 Discourse anchorage in finite utterances

If we narrow down the material to only include finite utterances, we find that a majority of the utterances have an overt subject. Furthermore, in those cases where subject omission occur, the majority of the omissions are anchored, as is made evident from table 5:

Table 5: Number/percentage of discourse anchored subject omissions in finite utterances[10].

	Markus		Sara		Harry	
	Number	%	Number	%	Number	%
Finite clauses in the corpora	**566**	**100**	**528**	**100**	**580**	**100**
with overt subjects	480	85	457	87	548	94
lacking overt subjects	86	15	71	13	32	6
Finite clauses lacking overt subjects:	**86**	**100**	**71**	**100**	**32**	**100**
Anchored to the discourse	66	77	64	90	26	81
Non-anchored to the discourse	20	23	7	10	6	19

None of the children omit the subject in more than 15% of the finite utterances; for Harry, the figure is only 6%. As a consequence, Harry's figures for discourse anchorage are not fully comparable with the figures for the other two children, since his total number of omissions in finite utterances is so small. We find the largest difference if we compare Sara to Markus. Both children have approximately the same rate of subject omission in finite clauses (13% for Sara and 15% for Markus). But Markus' non-anchored omissions are more than twice as many as Sara's; approx. 20% of his omissions are non-anchored, while the corresponding figure for Sara is 10%.

I give a few examples of discourse anchored omissions in (15-17):

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[10] Finite utterances with the expletive subject *det* have not been included in table 5.

(15) [Markus and dad are about to lay the table]
    D: så ska Markus ha   en tallrik
      so shall Markus have a   plate
    D: vill du   ha den blåa?
      want you have the   blue one
    M: vill ha den
      want have that
             (Markus 2;4.9)

(16) [Sara is playing with her doll house]
    S: Lägger på denna (S. picks up the chimney and puts in on the roof)
      put   on this
            (Sara 2;5)

(17) M: var har du dina toffler?
      where have you your slippers
   H: ää på mäj
     are on me
          (Harry 2;10.18)

In example (15) and (16) the omitted subject corresponds to the 1st person singular (*jag*, 'I'), and in (17) the subject is previously mentioned in the discourse. However, the omissions in (15-16) are grammatically correct in adult language, while (17) is not. Notice that the acceptance of an omission in the target grammar has not been a criterion for classifying an omission as anchored to the discourse.

An example of a non-anchored omission in a finite utterance is presented in (18):

(18) [Sara and her brother talk about trains]
    B: tåget   är ganska långt borta
      train-the is quite   far   away
    S: jo
      yes
    S: e e måtte åka   bil
      x x must go (by) car
    B: ja, man måste åka   bil, ja
      yes you   must   go (by) car yes
           (Sara 2;9)

A substantial majority of the finite verbs are in the present tense; verbs in the paste tense occur rarely in my survey. According to Wexler's principle of UCC[11] subject omission should not be possible in the past tense. This prediction was at large contradicted in a study by Platzack & Josefsson (2000). Their study, based on the same corpora as my study, showed that one of the children, Markus, omitted the subject (from the inverted position) even in the past tense. My study contradicts Wexler's principle as well, since all three children omit the subject from the first position in the past tense, even though only Markus does so to a higher extent. Table 6 presents the number of subject omissions in the past tense.

Table 6: Number/percentage of utterances in the past tense and number/percentage of subject omissions in the past tense.

	Markus		**Sara**		**Harry**	
	Number	%	Number	%	Number	%
Total number of finite utterances:	**674**	**100**	**727**	**100**	**682**	**100**
Present tense	586	87	680	94	585	86
Past tense	88	13	47	6	97	14
Finite utterances in the past tense:	**88**	**100**	**47**	**100**	**97**	**100**
with an overt subject	68	77	44	94	94	97
lacking an overt subject	20	23	3	6	3	3

Harry displays the most frequent use of the past tense; still past tense utterances constitute only 14% of his total number of finite utterances. For Sara the corresponding figure is distinctly lower (6%).

As was mentioned above, the past tense indicates certain maturity in the child's development, see Christensen (2004). Because of this, the past tense occurs rarely in the first recordings. But we find an interesting phenomenon when we compare Harry to Markus. Both children have approximately the same amount of utterances in the past tense; however, only 3% of Harry's utterances in the past tense lack an overt subject. For Markus, the corresponding figure is

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[11] Wexler (1998) proposes *The Unique Checking Constraint* (UCC): "At the Optional Infinitive stage, the D-feature of DP can only check against one functional category". For a more detailed presentation of the principle of UCC and its impact on the Scandinavian languages, see Platzack & Josefsson 2000:85-87.

almost eight times as high (23%); of a total of 88 utterances in the past tense, 20 lack an overt subject. These results do not support Wexler's hypothesis that the past tense blocks the possibility to omit the subject.

I found only three occurrences of subject omission in the past tense in the Sara and Harry corpora. For both Sara and Harry, one out of three was non-anchored to the discourse. For Markus, one out of 20 utterances was non-anchored. All non-anchored utterances are presented below:

(19) [Markus is talking to himself]
  M: bojen   ska   först
    buoy-the   will   first
  M: boj   ska
    buoy   will
  M: dök
    dived
  M: dök
    dived
       (Markus 2;4.18)

(20) [Sara wants to spray water on her dolls]
  S: vatten
    water
  D: Jaha [reluctantly agrees]
  S: nej.
    no
  S: fick   det   inte.
    allowed   that   not
       (Sara 2;6)

(21) M: va   gjorde dom då?
    what did   they   then
  H: fick   lägga   mi   kompis p   mina ungar på ett på s på sängen
    got (to) put   my   pal   ?   my   kids   on one on ? on bed-the
  M: va   de kompisen som fick   lägga ungarna på sängen?
    was it   pal-the   who got (to) put   kids-the   on bed-the
  H: Ja
    yes
       (Harry 3;1.21)

Admittedly, the examples are somewhat ambiguous; that is also why they have been analysed as not anchored to the discourse. The non-anchored omissions in utterances in the present tense have been easier to distinguish. Examples (19-21) should perhaps best be considered as exceptions, especially since the total number is so small.

In conclusion, my results show that the majority of subject omissions in finite utterances are anchored to the discourse. Markus displays the highest number of non-anchored omissions (23%), a number twice as high as that for Sara. Harry has very few omissions in finite utterances on the whole, but of these few omissions 19% were non-anchored (6/32).

These findings confirm a relation between finiteness and discourse anchorage. If we relate the results to the previous discussion of the C-domain, it is clear that the children by this stage have a functional C-domain. If the C-domain is activated, the verb has to move up from VP to C°; furthermore, the subject must be overt and the verb must be placed in the second position (see chapter 2.1).

However, there are reasons to believe that the finite verb sometimes remains in the VP, i.e. has not been attracted to the C-domain. All three children produce non-target like utterances where the negation or other sentence adverbials are placed before the verb. These ungrammatical utterances occur both with overt as well as omitted subjects:

(22) [Sara and daddy are playing with the doll house]
    S: jag inte kan det
      I   not can that
    D: är det inte han? var det inte till honom?
       is it not him was it   not to him
    S: nej, inte kan det
       no   not   can that
    S: jag inte kan det
      I   not can that
    D: du inte kan det?
       you not can that
                   (Sara 2;2)

(23) [Harry and mom are reading]
    M: va   gör han på natten?
        what does he   at night-the
    H: sover
        sleeps
    M: hmm
    H: hanne facki   sover
        he (?) 'actually' sleeps
    M: han sover faktiskt på natten
        he   sleeps actually at night-the
                  (Harry 2;7.4)

Note that the verb in question in (22) is an irregularly inflected modal, and it could naturally be the case that such verbs get a special treatment (see e.g. Håkansson & Dooley Collberg (1994)). Nevertheless, example (23) cannot be explained in this way. For the moment we cannot explain these sentences, only accept the fact that children produce a certain number of non-target like utterances.

5.4 Discourse anchorage in non-finite utterances

Previous studies on child language have proved that the majority of subject omissions occur in non-finite clauses. The result from Hamann & Plunkett's study (1998) is no exception: both Jens and Anne omit subjects more often in non-finite utterances than they use overt subjects (Hamann & Plunkett 1998:59). This fact gives additional support to the hypothesis that there is a connection between the occurrence of root infinitives and subject omission. As is evident from table 7, subject omissions are more common in non-finite utterances in my material also:

Table 7: Number/percentage of subject omissions in finite and non-finite utterances[12].

	Markus		Sara		Harry	
	Number	%	Number	%	Number	%
Finite clauses in the corpora:	**566**	**100**	**528**	**100**	**580**	**100**
with overt subjects	480	85	457	87	548	94
lacking overt subjects	86	15	71	13	32	6
Non-finite clauses in the corpora:	**161**	**100**	**216**	**100**	**117**	**100**
with overt subjects	46	29	88	41	79	68
lacking overt subjects	115	71	128	59	38	32

As was evident from table 5, Harry differs from the other two children with respect to subject omissions in finite clauses; only 6% of his omissions occur in finite utterances, whereas the corresponding figures for Sara and Markus are 13% and 15% respectively. The same is true for Harry's omissions in non-finite clauses – 32% of his non-finite utterances lack an overt subject. For Sara, the corresponding figure is 59% and for Markus 71%. Regardless of this difference, the tendency is clear: all three children omit the subject more frequently in non-finite utterances than in finite ones.

As we can see from table 8, the omitted subjects in non-finite clauses are anchored to the discourse in no more than around 50% of the cases – compare the considerably higher proportion in finite utterances, reported in table 6 above. This result is in accordance with the findings reported for Danish in Hamann & Plunkett (1998)[13]:

Table 8: Number/percentage of subject omissions in non-finite utterances.

	Markus		Sara		Harry	
	Number	%	Number	%	Number	%
Non-finite clauses in the corpora:	161	100	216	100	117	100
with overt subjects	46	29	88	41	79	68
lacking overt subjects	115	71	128	59	38	32
Non-finite clauses lacking overt subjects:	115	100	128	100	38	100
Anchored to the discourse	59	51	64	50	22	58
Non-anchored to the discourse	56	49	64	50	16	42

[12] Utterances with the expletive subject *det* are not included in table 7.
[13] As Lisa Christensen (p.c.) pointed out for me, adult speakers may unconsciously tend to analyse subject omission in non-finite utterances as non-anchored. If both the finite verb and the subject is lacking, the adult speaker may regard a subject omission as non-anchored, since too much information is missing. This may be of some consequence for the figures in table 8.

Both Markus and Sara show a 50/50 result. Although Harry has a dominance of discourse anchored omissions in non-finite utterances, the difference between anchored and non-anchored omissions is not as dramatic as in his finite utterances. This result is also in accordance with the observation made in Hamann & Plunkett (1998); discourse anchorage has no obvious impact on subject omissions in non-finite utterances.

In my study, I have not made a distinction between root infinitives that seem to be the result of omitted auxiliary and other instances of root infinitives. I have however noted every single occurrence of root supines (i.e. utterances where the verb is in the supine[14], see examples (24-25)). Root supines only occur marginally in the studied material, as we can see from table 9.

Table 9: Number/percentage of non-finite verbs in the supine.

	Markus		Sara		Harry	
	Number	%	Number	%	Number	%
Non-finite clauses in the corpora:	**161**	**100**	**216**	**100**	**117**	**100**
root infinitives	143	89	194	90	107	91
root supines	18	11	22	10	10	9
Root supines:	**18**	**100**	**22**	**100**	**10**	**100**
with overt subjects	5	28	18	82	7	70
lacking overt subjects	13	72	4	18	3	30
Root supines lacking overt subjects:	**13**	**100**	**4**	**100**	**3**	**100**
Anchored omissions	10	77	4	100	3	100
Non-anchored omissions	3	23	0	-	0	-

Interestingly enough, only approx. 10% of the total number of non-finite utterances are root supines. Markus differs from the other two children, since 13 of his 17 root supines lack the subject, i.e. 72%. True, the total number of root supines is quite small, but the difference is nevertheless remarkable. Considering also discourse anchorage, Markus again differs from the other two. In those few cases where Harry and Sara omit the subject with verbs in the supine, it is

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[14] The supine is a non-finite verb form, which combines with the perfective auxiliary *ha* 'have' to express past tense. Morphologically, the supine is related to the past participle, but differs in certain respects. The supine always ends in –*t* and is non-agreeing, unlike the past participle, which agrees with the subject in number and gender. For a more thorough discussion of the supine in Swedish, see Platzack (1989).

always anchored. But Markus also has non-anchored omissions in these kind of non-finite utterances. These two occurrences are given below:

(24) [Markus is looking for drum sticks for his xylophone]
    M: dom ligger inte på trappan
        they lie   not on stairs-the
    M: xxx slängt ner pinnarna
        ? thrown down sticks-the
                (Markus 2;3.28)

(25) [Markus is talking about a balloon]
    M: pappa ska fåtta [?] hit ballongen
        daddy will 'fåtta'   here balloon-the
    D: fåtta?
    M: hit
        here
    M: fått
        got
    M: lagt dä
        put there
                (Markus 2;6.20)

In conclusion, the frequency difference between anchored and non-anchored subject omissions in finite and non-finite utterances seems to support analyses of children's root infinitives as lacking the C-domain; consider e.g. Rizzi's (1994) truncation hypothesis. Omissions in finite utterances, on the other hand, would rather be analysed as a kind of topic drop, since the raising of the finite verb indicates that the C-domain is accessed. However, an account based on structural differences between children's root infinitives and finite utterances does not explain why subject omissions disappear in both finite and non-finite utterances after a certain period in time. If the C-domain is not activated, the question still remains: how much structure does the child have access to? The fact that the subject always appears before sentence adverbials indicates that it must have moved out of the VP into some higher functional projection, maybe at least into Spec-TP.

5.5 Adult language in the survey

To check the results, I have also analysed subject omissions in the adult language of the three corpora studied, mainly to verify earlier findings that subject omission of the topic-drop/ diary-drop types occurs in spoken Swedish. Hamann & Plunkett (1998) refers to the theory that children often exaggerate tendencies in adult language, showing that subject omission in early Danish cannot be understood in terms of this theory, since adult Danish never allows omission of the subject in the pre-verbal position[15]. As mentioned in section 2.2 above, Swedish is not restricted in the same way.

Table 10 presents an overview of the adult language in my corpora[16]. Please note that verbs belonging to the first conjugation are included, since the adult speakers investigated do not display the reduction of forms in this conjugation, mentioned above.

Table 10: The adult language in the Markus, Sara and Harry corpora[17].

	Markus, adult		Sara, adult		Harry, adult	
	Number	%	Number	%	Number	%
Total number of utterances						
Finite	1193	97	669	98	2070	97
Non-finite	33	3	14	2	55	3
Total	**1226**	**100**	**683**	**100**	**2125**	**100**
Utterances w. overt subject						
Finite	1147	94	645	95	1939	91
Non-finite	7	<1	4	<1	15	1
Total	**1154**	**94**	**649**	**95**	**1954**	**92**
Utterances lacking the subject						
Finite	46	4	24	3,5	131	6
Non-finite	26	2	10	1,5	40	2
Total	**72**	**6**	**35**	**5**	**132**	**8**

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[15] This presupposition might in fact be incorrect. It is a matter of some discussion whether subject omissions occur in Danish or not. However, Platzack & Josefsson (2000:86) substantiate this argument by referring to some examples of subject omissions found in written Danish (Peter Hoeg's *Frøken Smilles følelse for snee*).
[16] A more detailed account is given in Josefsson 2004a.
[17] The calculations in table 11 are based on the numbers presented in Josefsson 2004a.

As is clearly evident from table 10, the three corpora differ remarkably in size: the Harry corpus is more than three times as big as the Sara corpus, and almost twice as big as the Markus corpus. Despite this, the frequency figures are strikingly similar.

On the whole, the adults in this survey omit the subject in 6% of their utterances; almost exclusively this happens in finite clauses. The omissions can partly be explained by the relaxed recording situations, partly because the adults often fill in the gaps in the children's utterances. Unfortunately, we do not know of any investigation of the frequency of subject omission in pre-verbal position in conversation between adults. Recordings done of adults in less relaxed surroundings would probably result in lower values.

Only 3% of all adult utterances are non-finite, and more often that not the subject is omitted. In conclusion, the result gives an indication of how the language surrounding the children is structured.

Examples of omissions of subjects in preverbal position are given in (26-28):

(26) [Markus and dad is playing]
    M: den ska ner där
        it   shall down there
    D: hmm
    D: ska sätta fast den där lite bättre så
        will stick   it   there little better like that
              (Markus 2;2.5)

(27) [Dad has gone to fix the camera]
    S: kom då!
       come then
    D: kommer
       come
            (Sara 2;0)

(28) [Mum and Harry is eating. The food is too hot for Harry]
  M: får blåsa lite på det!
    get (to) blow little on it
  H: [blåser]
   [blows]
       (Harry 2;8.27)

To check whether or not the omissions were anchored to the discourse, I ana-lysed the utterances in the Sara and Markus recordings. All cases of omitted subject were anchored according to the criteria set up in section 4.2. In the Sara corpus, I found one ambiguous case, (29):

(29) [Sara and Dad is playing with dolls]
  D: Har du nu den där… dockan
    have you now that doll
  S: Jag har den.
    I have it
  D: Ja, tappar skon
    yes drop(s) shoe-the

Most likely, the subject in (29) is subdued, or simply not pronounced loud enough for the microphone to catch it. Since the Markus and the Sara corpora were very consistent regarding anchored omissions, I did not check the Harry corpus. There is no reason to assume that the Harry corpus would show any significant differences from the other two.

6. Conclusion

This survey was inspired by a study by Hamann & Plunkett (1998), in which it was established that discourse had no obvious impact on subject omission in early Danish child language. My study of three Swedish children in part contra-dicts the Danish results. It seems as though discourse anchorage might be of importance for subject omission in finite utterances in Swedish, contrary to Danish. The majority of the omissions in finite utterances were anchored to the

discourse. However, I could not establish a connection between discourse anchorage and subject omission in non-finite utterances. In a control study I analysed the adult language in the studied corpora, finding that approx. 6% of the adult utterances lacked an overt subject. In all these cases, the omissions were anchored to the discourse.

For all three children, I found a distinct decrease of non-finite utterances over age. Such a pattern could also be discerned for subject omission, although to a lesser degree. One would perhaps presume that discourse anchorage would follow the same pattern, i.e. that non-anchored omissions would decrease in favour of anchored omissions as the children grew older. Such a pattern could not be established, however. The occurrence of anchored/non-anchored omissions varied throughout the recordings; the children displayed very low numbers at early stages and vice versa. At their last recordings, both Markus and Sara leave out non-anchored subjects in approx. 40% of their utterances. By then, both their non-finite utterances and their subject omissions on the whole have decreased significantly. From this finding, we can draw the conclusion that the decrease in subject omission on the whole is not dependent on the loss of non-anchored subject omissions.

I have also been able to confirm the observation made in Hamann & Plunkett (1998) that subject omissions occur more frequently in non-finite clauses than in finite ones. This tendency was obvious for all three children, although Harry's subject omissions in non-finite utterances were distinctively less prominent than Markus' and Sara's. If we only consider non-finite utterances, both Sara and Markus more often than not omit the subject from their sentences. For Harry, it is the other way around; the majority of his non-finite utterances have an overt subject. From the results of this survey, a connection between discourse anchorage and subject omission in non-finite utterances could not be established; I can only verify Hamann's conclusion that anchorage in non-finite utterances seem to occur arbitrarily (Hamann 2002:312).

The observations made in this survey indicate that to understand subject omission, we also have to take the child's cognitive development into consideration. This is obvious from the Harry corpora, where we can spot quite a big discrepancy between his linguistic and cognitive development. At the last recording, Harry is linguistically behind the other two children, despite the fact that he is seven months older than Markus and two months older than Sara. Even though he is slow in his language development, Harry displays the fewest subject omissions of the three children. Since he is older than the other two, it is likely that his cognitive development is at a more advanced level. He may even have developed a Theory of Mind, which might explain why Harry understands the need to specify a subject (or an object).

The fact that my results partly contradict Hamann & Plunkett's findings is interesting in itself, especially since Swedish and Danish are syntactically very similar. However, as we have mentioned, Topic-drop/diary-drop seem to be a more common phenomenon in adult Swedish than in adult Danish. We should also take into consideration that only few children are studied, which opens the possibility that some of our findings are accidental.

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Appendix 1

In the following section, the complete figures of my survey are presented. The results from each child are presented in two tables. Table 1 accounts for the frequency of subject omissions per recording session; in table 2 the frequency of utterances with an overt subject is presented.

Table 1: Number of omitted subjects per recording session, Markus

Age	Discourse anchored omissions				Non-anchored omissions				*Expletive 'det'* as omitted subject			
	Pres.	Past	N-fin.	Sup.	Pres.	Past	N-fin.	Sup.	Pres.	Past	Non-f.	Total
1;10.14	2	1	7	1			1					12
1;10.25	1		2		2		7	1				13
1;11.0	2	4	5	1	1		9					22
1;11.12	1		4	3			8					16
1;11.25	3			2	1		5		1			12
2;0.9		3	1				6					10
2;0.16	2		6	1	1		1					11
2;0.25			4									4[18]
2;2.5	1		5				6					12
2;2.10		5	7		1		2					15
2;2.17		2	2				2					6
2;3.9	9	2	3		3		3		1			21
2;3.28	7		1	2	2		3	1				16
2;4.9	10		1		3					1		15
2;4.18	8	1			3	1						13
2;6.20	2		1		1	1		1	1			7
Total:	**48**	**18**	**49**	**10**	**18**	**2**	**53**	**3**	**3**	**1**	**0**	**205**

Table 2: Number of overt subjects in the first position per recording session, Markus

Age	Overt subject – not the expletive *'det'*				Overt subject - *det*			
	Pres.	Past	N-fin.	Sup.	Pres.	Past	N-fin.	Total
1;10.14	2		1					3
1;10.25	5							5
1;11.0	17[19]							17
1;11.12	4		3	2	2			11
1;11.25	8							8
2;0.9	31	5			1	2		39
2;0.16	14	1	4	1	3			23
2;0.25	13	4	1		6			24
2;2.5	25	1	8		15			49
2;2.10	20	5	14		3	3		45
2;2.17	17	1	2		4	1		25

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[18] The low figure is due to the occurrence of verbs from the 1st conj.

[19] 17 of which 12 occurrences of *den surrar*, 'it hums'.

117

2;3.9	16	1	1		16	1		35
2;3.28	53	17	1	1	21	1		94
2;4.9	41	3	1		3			48
2;4.18	66	10	4		5	2		87
2;6.20	97	3	1	1	9	6		117
Total	**429**	**51**	**41**	**5**	**88**	**16**	**0**	**630**

Table 3: Number of omitted subjects per recording session, Sara

	Discourse anchored omissions				Non-anchored omissions				*Expletive 'det'* as omitted subject			
Age	**Pres.**	**Past**	**N-fin.**	**Sup.**	**Pres.**	**Past**	**N-fin.**	**Sup.**	**Pres.**	**Past**	**N-fin.**	**Total**
1;11	2		17				11		16			46
2;0	5		6				1		5			17
2;1	1		4				7		1			13
2;2	6		6		1		1		2			16
2;3	2	1	2				9		5			19
2;4	1		5		1		1					8
2;5	13		5				8		1			27
2;6	5		5		1	1	3		7			23
2;7	9			3			3		3			18
2;8	8		1				4					13
2;9	3		6		1		5		1			16
2;10	2		1				8		4			15
2,11	6		2	1	1	1	3		4			18
Total	63	1	60	4	5	2	64		49	0	0	248

Table 4: Number of overt subjects in the first position per recording session, Sara

	Overt subject – not the expletive *'det'*				Overt subject – *'det'*			
Age	Pres.	Past	N-fin.	Sup.	Pres.	Past	N-fin.	Total
1;11	2		11		6			19
2;0	15	2	4	2				23
2;1	30		11	3	7			51
2;2	18		3	2	11			34
2;3	9	2	7	4	5			27
2;4	22	2	11	1	14	3		53
2;5	13		4		7			24
2;6	27		1		16	2		46
2;7	32	2	1	1	17			53
2;8	54	3			17			74
2;9	35	2	4		6			47
2;10	54	1	9		12			76
2;11	107[20]	25[21]	4	5	27			168
Total	**418**	**39**	**70**	**18**	**145**	**5**	**0**	**695**

[20] varav 26 st "jag vet inte"
[21] varav 14 st "vade"

Table 5: Number of omitted subjects per recording session, Harry

Age	Discourse anchored omissions				Non-anchored omissions				*Expletive 'det'* as omitted subject			Total
	Pres.	Past	N-fin.	Sup.	Pres.	Past	N-fin.	Sup.	Pres.	Past	N-fin.	
2;2.18	2		3				3					8
2;3.9	1		2	1					3			7
2;4.23	1		2				4		3			10
2;5.17	1		1		1		3		1			7
2;6.10							2		5			7
2;7.4	1				2							3
2;7.23	4		2		1							7
2;8.27	4	1			1		1		1			8
2;9.26			4				1		1			6
2;10.18	5	1	3	1	1		2					13
2;11.29	2								1			3
3;0.26	1		1									2
3;1.21	1		1	1		1						4
Total	**23**	**2**	**19**	**3**	**6**	**1**	**16**	**0**	**15**	**0**	**0**	**85**

Table 6: Number of overt subjects in the first position per recording session, Harry

Age	Overt subject – not the expletive *'det'*				Overt subject – *'det'*			Total
	Pres.	Past	N-fin.	Sup.	Pres.	Past	N-fin.	
2;2.18	9		4		1			14
2;3.9	2	1	15	2	9			29
2;4.23	61	5	7	1	18			92
2;5.17	25	3	20		2			50
2;6.10	33	2	2		10	3		50
2;7.4	60	17	8		6	2		93
2;7.23	36		5	2	5			48
2;8.27	38	4	2	1	3			48
2;9.26	34	6	7		1	1		49
2;10.18	56	2	1		7	3		69
2;11.29	42	10	1		4	1		58
3;0.26	47	14		1	4	1		67
3;1.21	25	16			3	3		47
Total	**468**	**80**	**72**	**7**	**73**	**14**	**0**	**714**

Appendix 2

The following tables present an overview of the children's use of finite/non-finite utterances per recording session.

Table 1: Number of finite utterances per recording session.

Markus			Sara			Harry		
Age	**Number**	**%**	**Age**	**Number**	**%**	**Age**	**Number**	**%**
1;10.14	5/15	33	1;11	26/65	40	2;2.18	12/22	55
1;10.25	8/18	44	2;0	27/40	68	2;3.9	16/36	44
1;11.0	24/39	62	2;1	39/64	61	2;4.23	88/102	86
1;11.12	7/27	26	2;2	38/50	76	2;5.17	33/57	58
1;11.25	13/20	65	2;3	24/46	52	2;6.10	53/57	93
2;0.9	42/49	86	2;4	43/61	70	2;7.4	88/96	92
2;0.16	21/34	62	2;5	34/51	67	2;7.23	46/55	84
2;0.25	23/28	82	2;6	59/68	87	2;8.27	52/56	93
2;2.5	42/61	69	2;7	63/71	89	2;9.26	43/55	78
2;2.10	37/60	62	2;8	82/87	94	2;10.18	75/82	91
2;2.17	25/31	81	2;9	48/63	76	2,11.29	60/61	98
2;3.9	49/56	88	2;10	73/91	80	3;0.26	67/69	97
2;3.28	101/110	92	2;11	171/186	92	3;1.21	49/51	96
2;4.9	61/63	97	**Total**	**727/943**		**Total**	**682/799**	
2;4.18	96/100	96						
2;6.20	120/124	97						
Total	**674/835**							

Table 2: Number of non-finite utterances per recording session.

Markus			Sara			Harry		
Age	**Number**	**%**	**Age**	**Number**	**%**	**Age**	**Number**	**%**
1;10.14	10/15	67	1;11	39/65	60	2;2.18	10/22	45
1;10.25	10/18	56	2;0	13/40	33	2;3.9	20/36	56
1;11.0	15/39	38	2;1	25/64	39	2;4.23	14/102	14
1;11.12	20/27	74	2;2	12/50	24	2;5.17	24/57	42
1;11.25	7/20	35	2;3	22/46	48	2;6.10	4/57	7
2;0.9	7/49	14	2;4	18/61	30	2;7.4	8/96	8
2;0.16	13/34	38	2;5	17/51	33	2;7.23	9/55	16
2;0.25	5/28	18	2;6	9/68	13	2;8.27	4/56	7
2;2.5	19/61	31	2;7	8/71	11	2;9.26	12/55	22
2;2.10	23/60	38	2;8	5/87	6	2;10.18	7/82	9
2;2.17	6/31	19	2;9	15/63	24	2,11.29	1/61	2
2;3.9	7/56	13	2;10	18/91	20	3;0.26	2/69	3
2;3.28	9/110	8	2;11	15/186	8	3;1.21	2/51	4
2;4.9	2/63	3	**Total**	**216/943**		**Total**	**682/799**	
2;4.18	4/100	4						
2;6.20	4/124	3						
S:a	**161/835**							