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Variation and Deviation in Language Acquisition Some Hypotheses and Preliminary Observations

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A study was made regarding the acquisition of specific word order patterns in Swedish. Three groups of language learners were studied cross-sectionally, viz. children with first (L1) and second (L2) language acquisition and children with disordered language development (LD). The results revealed interesting differences, especially between L1 and L2 children in terms of their word order preferences. The L1 children used a varied word order in declaratives, whereas the L2 children kept a strict word order pattern. The results from the LD children do not give a clear-cut picture and there are great individual differences. This indicates that LD children constitute a more heterogeneous group than the L2 children.

Introduction

A comparison between grammatical development in second language learners and children with grammatical disabilities as a part of a specific, developmental language disorder³ shows striking similarities between the two groups (Nettelbladt & Håkansson 1991). Both groups make errors of omission and overgeneralization; for example, omissions of functional morphemes and overgeneralizations of inflections and word order patterns. In spite of great potentials both theoretically and practically, there have been surprisingly few connections between the two research areas of second language acquisition (henceforth L2) and of developmental language disorders (henceforth LD). An important exception is a study by Hyltenstam and Magnusson 1981.

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³According to Nettelbladt 1983, specific developmental language disorder is a diagnostic term assigned to children who do not develop their language skills in appropriate time as compared to children with normal language development. Such children are usually referred from child welfare centres. Those assessed to have a more severe disorder are given special intervention by speech and language clinicians.

Many of the grammatical phenomena found in these two groups of learners are well-known also from studies of first language acquisition in normal children (henceforth L1). Such phenomena appear to be a characteristic trait of the language acquisition process in general. But in addition, some types of grammatical phenomena or 'errors' found in L2 and LD populations appear to be unique for these two populations.

Theoretical background

In the research project *Variation and deviation in language acquisition*⁴ the issues of similarities and differences between L1, L2 and LD acquisition will be addressed. Focus at the present stage of research is on grammar, and in particular on language-specific aspects of Swedish syntax. Like all Germanic languages except English, Swedish is a so-called Verb Second Language (V/2), which means that the verb must be in second position in declarative main clauses, irrespective of what comes in the first position, the so-called foundation position (Diderichsen 1946). This feature is of potential interest since earlier studies of adult L2 acquisition of Swedish word order have shown that the V/2 rule presents great difficulties (Hyltenstam 1978, Bolander 1988). It is interesting to note that some LD children with grammatical disabilities also exhibit problems in acquiring the V/2 rule (Nettelbladt & Håkansson 1991). It is also worth noting that there is a growing interest internationally of comparing L1 and L2 acquisition of the V/2 rule in other Germanic languages, such as German (e.g. Clahsen & Muysken 1986) and Dutch (e.g. Jordens 1988).

Another important aspect of Swedish word order patterns is the various functions they fulfill. The task of the language learner is not only to acquire the V/2 rule as such but also to discover the important function of the foundation position. The learner has to realize that the foundation position is open not only for the subject but for almost all other sentence elements such as adverbials, objects and predicatives, depending on the thematic structure. This implies that the SV-pattern is not the only important pattern in declaratives. As shown by Jørgensen 1976, the proportion of subject-verb (hence SV) versus verb-subject (hence VS) sentences in adult spoken and written texts is approximately 60% for SV- and 40% for VS-sentences. This variation is characteristic of idiomatic spoken Swedish.

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During the last decades there has been an increased awareness of the importance of functional aspects of syntactic use and of contextual influence on language behaviour. Our future analyses will take such aspects into consideration, since our own earlier research has shown that the conversational partner and type of discourse (for instance dialogic versus monologic speech) influence the syntactic patterns used (Nettelbladt & Hansson 1990, Håkansson 1991a, 1991b).

Hypotheses

The following hypotheses have been the starting point for the present project. Most likely, some of them may be more relevant for syntactic development in a pure sense, whereas some of the other ones may be more adequate for describing language behaviour in more general terms.

1. $L1 = L2 = LD$, i.e. first, second and disordered language development proceed in a similar manner. As indicated by studies on normal language acquisition, some general tendencies are similar across the three groups, presumably due to basic biological and cognitive processes as reflected in a natural acquisition order of particular grammatical structures.

2. $L1 \neq L2 = LD$. The second hypothesis claims that L1 children differ from the other two groups. If successive L2 learners are considered, both these children and LD children have a higher chronological age than L1 children and thus must be expected to be more cognitively and socially mature. In certain respects the language of L2 and LD children may be more advanced. These two groups of children may, for instance, possess a larger vocabulary, produce longer stretches of speech, and use different communicative strategies as compared to the younger L1 children. Thus there is a discrepancy between the cognitive and the linguistic ability.

3. $L1 = L2 \neq LD$, i.e. the language development in LD is different from L1 and L2. Language development in LD children, as defined in the introduction, is either considered to be delayed or deviant in comparison to normally developing children. L1 and L2 children do not have any medical diagnosis of a language disorder and are assumed to be normally developed.

4. $L1 = LD \neq L2$, i.e. language development in L2 children is different from L1 and LD children. L1 and LD children have in common that they

are first language learners. Thus their language learning context and the role of their innate cognitive language learning capacity is different from the L2 learners, who have already passed through a first language acquisition. In terms of parameter setting theory one may hypothesize that L1 and LD children are involved in a parameter setting process, whereas the parameters are already set for the L2 learners (cf. White 1989).

5. $L1 \neq L2 \neq LD$, which indicates that there are substantial differences between the three groups in certain respects. The language learning context is qualitatively different for the three groups of learners and, as a consequence, there are important differences between each of them.

A study of word order preferences in L1, L2 and LD children

Aim of the present study

The aim of the present study is to compare word order preferences in the spontaneous speech of three groups of children, L1, L2 and LD children.

Material

The present study is based on cross-sectional data from 6 dyads from 12 Swedish-speaking children. The dyads are presented in Table 1 below. All children are given code names. In all, seven L1 children are included in the study, two L2 children and three LD children.

Dyad A consists of two L1, monolingual, Swedish children, Erik och Karin. *Dyad B*⁵ consists of Svea, who is a monolingual, Swedish L1 child, and Carmen, who has two first languages, Swedish and Spanish. Carmen is acquiring both Swedish and Spanish simultaneously. In addition to dyads A and B, results from analysis of the three normal peers in dyads D, E and F with LD children (see below) are also included in the study, i.e. peer Alfons, peer Beda and peer Elvis.

Dyad C consists of two L2 children, Helena and Cynthia. These two L2 children are refugees who have arrived in Sweden at about four years of age. This implies that they are successive bilinguals according to McLaughlin's (1978) definition and that they acquire Swedish not as a first but as a second language, since their first languages have already developed. One recording was selected from the recorded material in which there was an MLU match between Erik and Helena.

⁵The data in Dyad B is taken from a study by Askman, Olofsson & Skoglund 1990 and used as a comparison only in Figure 2, the SV-VS analysis.

Dyad A	Erik	2:6	Swedish L1
	Karin	5:2	Swedish L1
Dyad B	Svea	4	Swedish L1
	Carmen	4	Swedish/Spanish L1
Dyad C	Helena	5	Syrian L1, Swedish L2
	Cynthia	5	Turkish/Bulgarian L1, Swedish L2
Dyad D	Alfons	5:11	Swedish LD
	Peer A	5	Swedish L1
Dyad E	Beda	5:3	Swedish LD
	Peer	6	Swedish L1
Dyad F	Elvis	5:4	Swedish LD
	Peer E	4	Swedish L1

Table 1. The six different dyads with L1, L2 and LD children.

Dyads D, E and F consist of three grammatically disordered children, Alfons, Beda and Elvis, and their three linguistically normal peers. The three LD children were diagnosed as grammatically disordered by their speech and language clinicians.

All the children were videorecorded in a free-play situation with another child or while looking at a picture book together. Each dyad lasts approximately 20 minutes. The videotapes from dyads A, C, D, E and F were transcribed by one of the three researchers who were present during the recording.

Results

SV-VS proportion

Word order patterns were analyzed in all utterances which contained both a subject and a verb for all the dyads. The proportion SV (subject-verb order) to VS (verb-subject order) was calculated. The results for the seven L1 children, the two L2 children, and the three LD children are displayed in Figure 1 below.

In Figure 1, the subjects are ordered from left to right according to their relative proportion of SV patterns. As can be seen in the figure, all the L1 children occur together to the left of the rest of the children. The LD children are in the middle and the L2 children to the right, with an almost 100% proportion SV utterances. It is worth noting that the bilingual girl Carmen, who is developing two languages simultaneously, displays the same pattern as the monolingual L1 children, and does not resemble the other bilinguals in the study. On the contrary, these two children, Helena and

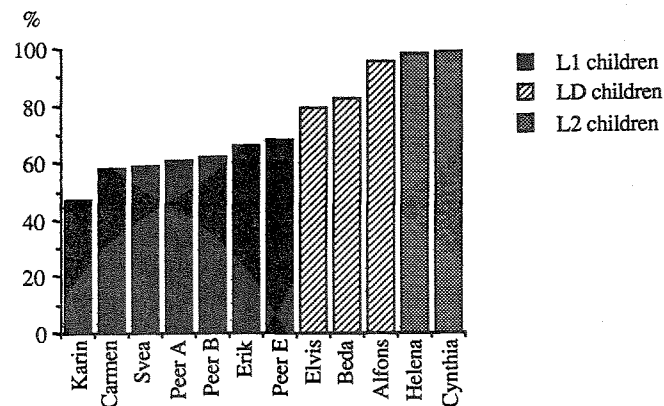


Figure 1. The proportion of declaratives with subject-verb word order in seven L1, three LD, and two L2 children.

Cynthia, show a remarkable preference for a rigid SV pattern. No uniform pattern can be found in the speech of the LD children, since two of them, Elvis and Beda, have around 80% SV pattern, whereas the data from Alfons approach that of the L2 children.

The general tendency is that the L1 children use the variation which is typical for adult Swedish, while the L2 children, with a successive bilingual development, prefer a strict word order.

Foundation position

The type of sentence element in the foundation, or first position, was the next aspect to be studied. The unmarked element in this position is the subject, which appears in the foundation position in about 60% of adult utterances (Jørgensen 1976).

Figure 2 displays a gradual progression from a relatively small proportion of subjects in foundation position in the L1 children, a larger proportion in the LD subjects (except in Alfons), and almost 100% subjects in foundation position in the two L2 children. (Note that data on foundation position does not exist for dyad B.)

A marked foundation position with regard to the canonical SVO-word order pattern is that a sentence element other than the subject occupies the

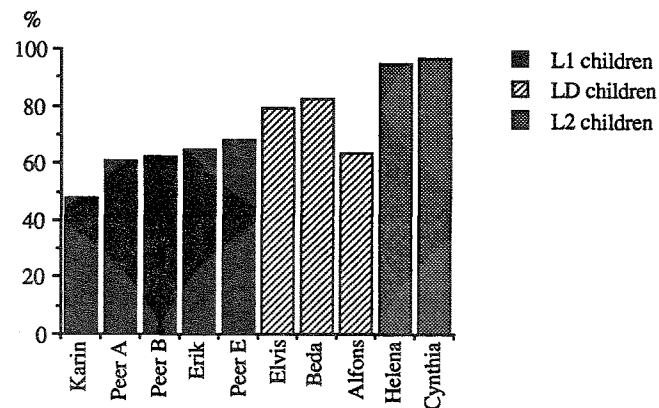


Figure 2. The proportion of declaratives with the subject in first position in five L1, three LD, and two L2 children.

foundation position, i.e. an adverbial, an object or a predicate. This is demonstrated in Figure 3.

When the L1 children for pragmatic reasons use elements other than the subject in foundation position, they always have the verb in the second position; i.e. they do not violate the V/2 rule. The two L2 children, Helena and Cynthia, however, make V/2 errors on the few occasions when they use adverbials in the foundation position, which results in sentences such as examples (1) and (2).

- (1) *nu mamma ska sova
now mother will sleep
- (2) *här hon ska äta
here she will eat

Again Alfons shows a different pattern from the other two LD children. He is more like the L1 children in terms of elements in the foundation position, with approximately 60% subjects and 40% adverbials, objects and predicates. But, in contrast to the L1 children, he violates the V/2 rule by using a strict SV pattern also in utterances with a non-subject in foundation position, i.e. in front of the subject, thus rendering a V/3 pattern. This is not in accordance with the Swedish word order norm (see examples 3

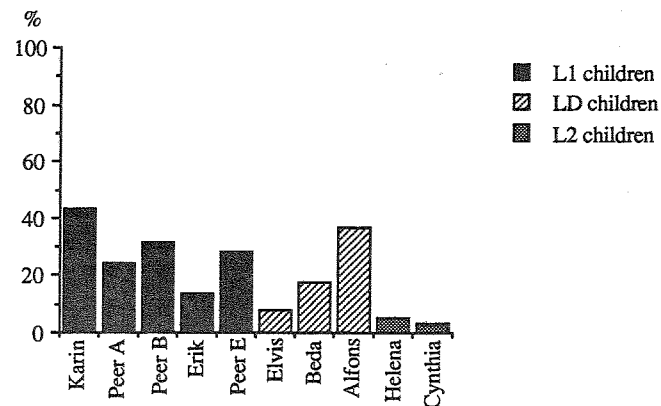


Figure 3. The proportion of declaratives with adverbial/object/predicative in first position in five L1, three LD, and two L2 children.

and 4). The other two LD children, Beda and Elvis, however, only rarely violate the V/2 rule.

(3) *NU jag SKA vinna.
NOW I WILL win.

(4) *DÄR jag inte ska RÄKNA.
THERE I not shall COUNT.

Empty foundation

The existence of sentences with a missing or empty foundation has hardly been studied. This pattern results in verb initial clauses. Verb initial (V/1) clauses are typical for *yes/no* questions, but have, however, been found to occur in declaratives in spoken Swedish (Dahlbäck & Vamling 1983, Håkansson 1991a). In the present study, an empty foundation was one of the alternatives chosen by some children. Figure 4 displays the use of empty foundation.

It is interesting to note that only L1 children and one of the LD children, Elvis, make use of empty foundations. The highest percentage of empty foundation is in the speech of Erik, the child aged 2;6; but Peer A who is 5 years old also uses the empty foundation to quite a great extent. The L2 children do not use the empty foundation at all. Of the LD children, neither Beda nor Alfons make use of empty foundation. In Alfons' speech, however, this is a logical consequence of his rigid V/2 pattern in

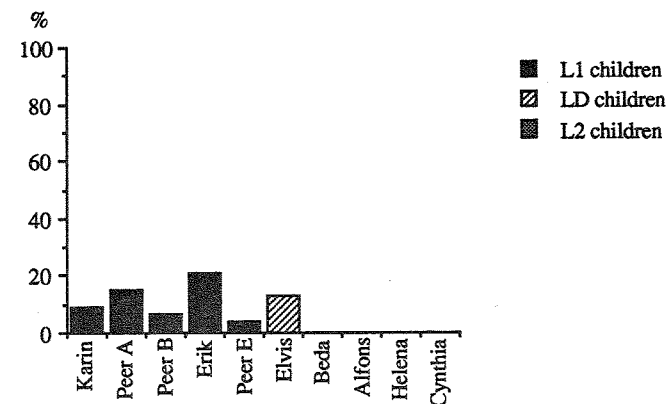


Figure 4. The proportion of declaratives with empty first position in five L1, three LD, and two L2 children.

declaratives with the subject in the foundation position and his rigid V/3 pattern when an element other than the subject fills the foundation position. In Alfons' speech it is thus impossible to allow a V/1 pattern, since the subject must always precede the finite verb.

Wh-questions

As was noted before, a rigid SV pattern does not necessarily lead to errors in declaratives. In *wh*-questions, on the contrary, there is an obligatory subject-verb inversion (except for questions in which the subject is being questioned). The results for *wh*-questions are illustrated in Figure 5.

The word order patterns in the children's questions are quite different from the word order preferences in declaratives. The L1 children display a rigid VS word order, which is the only word order allowed in *wh*-questions. The L2 children, on the contrary, have a variation in word order patterns which is not allowed in *wh*-questions. Examples (5)-(7) illustrate the variation in word order in *wh*-questions by the L2 children. Sentences (5) and (6) are erroneous, whereas (7) is in accordance with the word order norm in questions.

(5) *han sova var?
he sleep where?

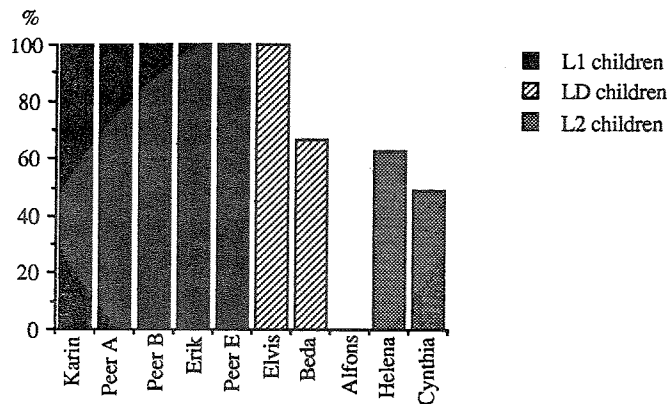


Figure 5. The proportion of *wh*-questions with verb-subject word order in five L1, three LD, and two L2 children. Observe that there are no *wh*-questions at all in Alfons' speech.

- (6) *hon kläderna var är?
she clothes where are?
- (7) vad ska vi göra?
what shall we do?

As regards *wh*-questions in the LD children, extremely few examples are found in the data. Alfons has no *wh*-questions at all. Therefore it is hard to draw any conclusions from these data.

Discussion

The results of the present study will be discussed in the light of the five hypotheses set up in the introduction. The first one, i.e. that the language learning process of the three groups of language learners is similar, can be dismissed on the following grounds. The results from the analyses of word order preferences reveal that there are important differences. The greatest differences are between L1 and L2 children in their use of varied or strict word order, respectively. The L1 children use a much more varied word order in declarative clauses than L2 children do even if they are matched for MLU (as Erik and Helena). The L1 children also make more use of the foundation position, taking the opportunity of thematizing. Even the

youngest child, Erik 2;6, uses adverbials, objects and predicatives in the foundation position, together with inverted subject-verb word order. The finding that the L2 children differ from the L1 children thus supports the second and the fourth hypotheses. This might indicate a preliminary support for recent trends within the parameter setting theory implying that L1 children are involved in a parameter setting process which is not the case for the L2 children.

Interestingly enough, the girl who is considered to be a simultaneous bilingual since she has been addressed in both languages from an early age, displays the word order patterns which seem to be characteristic to L1 children. This suggests that word order preferences can be used as a criterion for first, unordered language acquisition of Swedish.

The analysis of *wh*-questions shows that the L2 children use a more varied word order in questions as compared to declaratives, where they have a strict SV pattern. Again, there is a difference between L1 and L2 children, as suggested in the second hypothesis. Their use of a varied word order in *wh*-questions might be a result of a so-called holistic learning (Peters 1977). Another possible explanation is that the very function of inversion in questions is much more salient than the more obscure information-structural function of inversion in declaratives. Hammarberg & Viberg 1979 suggest that there are two basic principles underlying word order rules in languages: the sentence-structuring functions, which may be used to distinguish between statements and questions, and the discourse-grammatical order, which is used for thematizing. In Swedish, the sentence-structuring functions dominate over the discourse-grammatical functions. This fact might have been observed by the L2 learners, since they first use inverted word order in questions.

The results from the three LD children included in the present study indicate that they represent a rather heterogeneous group or at least two different groups. Two of them, Elvis and Beda, could be placed along a continuum between the L1 and L2 children in all aspects studied, viz. proportion of SV-patterns, types of elements in foundation position, and *wh*-questions. Alfons, on the contrary, exhibits an asynchronous pattern, since he comes close to the L2 children in terms of SV patterns but in his varied use of foundation position he is thematizing in a manner which is similar to the L1 children. In relation to our hypotheses, the findings from the three LD children partly support hypothesis no. 3, i.e. that LD children

show a dissimilar acquisition pattern. The data on SV word order in Alfons however support hypothesis no. 2, i.e. that L2 and LD acquisition is similar.

Because of the limited number of subjects in the present study, no definite conclusions can be made concerning within-group similarities as well as between-group differences. Further, since the data from each child is cross-sectional, developmental tendencies cannot be ascertained. Future work within the present research project will enable us to further scrutinize both group comparisons and aspects of development, since longitudinal data for all three groups of learners are presently being collected.

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