

# Frequency and economy in the acquisition of variable word order

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Recent years have seen a renewed interest in the study of the effect of the input in language acquisition, largely as a result of the development of constructivist theories, which regard the acquisition process as heavily influenced by input frequencies (see e.g. Tomasello 2003, Lieven et al. 2003). This has also had an effect on generative studies, which have increasingly started considering the potential effect of frequency on language acquisition. However, the two traditions remain far apart, as the results of generative investigations so far suggest that, even though input frequency appears to have an impact, this effect is indirect. Frequency does not seem to straightforwardly predict the order of acquisition, nor does it appear to provide an explanation for non-target-consistent structures found in child language. The present paper represents a case in point, as it investigates two contexts in which two word orders are possible, but where one is considerably more frequent in the input than the other. In both constructions, children are shown to prefer the order which is the least frequent one in the input.

The two contexts are subject positions and possessive structures in Norwegian, illustrated in (1) and (2). In (1), the word order with a high subject is assumed to be the result of movement of an informationally light element across the negation/adverb, while in (2), the former order has a contrastive interpretation and is taken to involve movement of the noun past the possessor to attach to the definite suffix. A comparison between adult and child data (Tables 1 and 2) reveals that pronominal subjects occur in the high position much more frequently than in the low position in the input. Nevertheless, the children start out preferring the low one. A comparison between Tables 3 and 4 reveals that Norwegian children are exposed to a much higher proportion of postnominal possessives. Nevertheless, all the three children in this investigation produce their first pronominal possessive construction before they produce their first postnominal one, and these are typically not contrastive.

Previous research has shown that input frequency may play a role for the persistence of an error that is caused by other factors, but cannot account for the error itself, e.g. Westergaard and Bentzen (2007) or Anderssen et al. (2008). The latter study shows that, in two constructions with very different frequencies, children make word order mistakes in both, but the mistakes persist for longer in the least frequent construction. The errors were argued to reflect a tendency for economy in acquisition at an early stage. In the contexts discussed in the present paper, the most frequent word orders involve syntactic movement. This means that both with respect to subject placement and possessive-noun order, the most complex structures correspond to the most frequent word orders in the input. These cases are therefore especially interesting to test the relative importance of the two factors in early child language. The results reported here suggest that complexity is a more important factor than input frequency.

497 words

- (1) *Hvorfor likte Per ikke Per/ ikke Per maten?*  
 why like.PAST Per not Per / not Per food.DEF  
 'Why didn't Per like the food?'
- (2) *min bil/ bil-en min bil*  
 my car car- DEF my car  
 'my car.'

**Table 1 Pronominal and full DP subjects with S-Neg/Neg-S word order, adult speakers.**

High position		Low position	
Pronoun	Full DP	Pronoun	Full DP
758	2	106	60
	760 (82.1%)		166 (17.9%)

**Table 2 Neg-S<sub>PRO</sub> / S<sub>PRO</sub>-Neg word order in non-subject-initial declaratives and questions with negation/adverbs in Norwegian child data.**

Child	Period 1 (age 1;9-2;3)	Period 2 (age 2,3-2;6)	Period 3 (age 2;6-2;8)	Period 4 (age 2;8-3;0)	Period 5 (age 3;0-3;3)
Ina	0/0	7/4	7/4	10/36	5/21
Ann	0/2	9/7	1/3	0/12	
Ole	1/1	21/3	0/13	6/18	

**Table 3 Prenominal and postnominal possessors, adult speakers**

Poss-N	N-Poss
126 (23.4%)	412 (76.6%)

**Table 4 Poss N/N Poss orders in Norwegian child data**

Child	Period 1 (age 1;9-2;0)	Period 2 (age 2,0-2;4)	Period 3 (age 2;4-2;8)	Period 4 (age 2;8-3;0)	Period 5 (age 3;0-3;3)
Ina	0/0	4/8	6/37	51/84	18/21
Ann	2/0	9/10	7/27	10/20	—
Ole	5/0	8/6	8/23	62/43	—
Total	7/0	21/24	21/87	123/147	18/21
%	(100)	(47)/(53)	(19)/(79)	(46)/(54)	(46)/(54)

## References

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