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"STØD" AND UNEXPECTED SUBSTITUTIONS IN THE SPEECH  
OF DANISH 2-YEAR-OLD CHILDREN

John Jørgensen<sup>1</sup>

1. Introduction

The aim of the present paper is to add new data - in the form of observations - to the study of child language. Danish being the maternal language of the children, it seemed natural to pay special attention to a phenomenon which is characteristic of Danish, viz. the "stød". Danish "stød" can be characterized as a sort of phonemic accent with the syllable as its domain. A phonological description of "stød" is given by e.g. H. Basbøll (1969). It is well known (to Danes at least) that foreigners learning Danish have great difficulties both in producing the "stød" and in placing it correctly. But is that also the case with Danish children learning their mother tongue?

Another feature which attracted my attention during my survey of the material was the children's substitutions of other sounds for certain sounds of the adult language. The substitutions were unexpected in the sense that they did not agree very well with what might be predicted from the hypotheses proposed by Roman Jakobson in his fundamental work on this topic (1941).

According to Jakobson, stops are acquired before fricatives (and therefore stops are substituted for fricatives, whereas the reverse substitution is not possible). Among the fricatives /s/ is claimed to be the most fundamental and, accordingly, it should not be possible to find any phonemic system where /s/ is lacking.

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1) Institute of Phonetics, University of Copenhagen.



Jakobson does not directly mention "stød" in his work but, using nasalized vowels as an example, he states that phonemic phenomena which are found only in few languages, are acquired very late by children.

## 2. Material<sup>1</sup>

The material on which my observations are based consisted of tape recordings of four two-year-old children's non-imitated speech. About 125 phrases (containing 2-3 syllables on an average) were recorded for each child.

All recordings were transcribed in relatively narrow phonetic transcription. About one fifth of the phrases were transcribed in very narrow phonetic transcription.

## 3. Results

### 3.1 "stød"

Out of a total of at least 1000 syllables "stød" was incorrectly treated by the children in only 41 instances, i.e. less than 5 percent. In order to decide whether this surprisingly good result was caused by the fact that the children had avoided phrases containing "stød" in the target language, the percentages of phrases with and without "stød" was calculated. 40 per cent of all phrases contained one or more occurrences of "stød" and 60 per cent contained no "stød". These figures agree quite well with what is found in adult language. The distribution of "stød"-mistakes among the subjects was relatively uniform, viz. MI 11, KR 12, NO 11, and TI 7.

A quantification of the mistakes into 3 groups gave the results shown in table 1.

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1) A detailed description of the material and how it was collected will appear in the next issue of ARIPUC.



Table 1

## Distribution of "stød" errors

Lack of "stød" on a syllable which should have the "stød"	25
"Stød" on a syllable which should have none	10
"Stød" on wrong segment of the syllable	6

It should be added that the syllables with "stød"-mistakes seemed to have no specific phonological structure in common.

3.2 Substitutions

Only two types of substitutions will be dealt with here. One concerns the phonetic realisation of the phoneme /s/, the other the realisation of the phoneme /k/. With a very few exceptions the /s/ phoneme was realised by all four children as a non-sibilant fricative with its place of articulation somewhere between the dental and pre-palatal regions. As no palatograms or other physiological data were acquired, the above articulatory description can only be a qualified guess. It has, however, been confirmed by other trained phoneticians who listened to the tapes. The sounds produced by the children may be transcribed [ $\theta$ ] or [ $\zeta^+$ ].

As for the realisation of the /k/ phoneme there seemed to be very little, if any, consistency among the subjects. One child correctly realised /k/ as [ $g^h$ ]. Another substituted a dental stop for /k/. Still another substituted the fricative [ $x$ ] for /k/. And the fourth child realised /k/ as a retracted [ $g^{h-}$ ] or a relatively advanced [ $g^{h+}$ ].

4. Discussion

I shall not attempt to give a conclusive explanation of the discrepancies between Jakobson's predictions and my observations



on the linguistic behaviour of a very limited number of Danish children. A few points will be mentioned, however, which may deserve being taken into consideration in discussions of Jakobson's hypotheses:

- a) One possible explanation of the early acquisition of the "stød" may be that the "stød" is treated as a prosodic phenomenon by the children. It is well known that prosodic phenomena (e.g. intonation) are acquired very early.
- b) The [s] — [θ] substitution may reflect the children's inability to produce an [s] with its characteristic and complex tongue shape. Thus the substitution may be considered a purely phonetic one, and it is worth noticing that none of the children had a phonemic opposition between /s/ and /θ/.
- c) The substitution of a fricative for /k/ may be explained partly by the fact that Danish /k/ is strongly aspirated (and affricated), and partly by the fact that it is more difficult to make fine adjustments with the back of the tongue than with the tip and blade.

##### 5. Final remarks

It should be stressed that the value of the above considerations is strongly limited by the small amount of data on which they are based. Moreover, there is an unfortunate scarcity of data from other studies to compare with. Especially the very first steps in language acquisition are almost unexplored.



References

- Basbøll, Hans 1969: "The phoneme system of advanced standard Copenhagen", ARIPUC 3, p. 33-54
- Jakobson, Roman 1941: Kindersprache, Aphasie und allgemeine Lautgesetze