

TONE ACCENT PATTERNS OF CHILDREN AND FOREIGNERS

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As quite a few of the papers presented at this symposium deal with prosody, I want to take the opportunity to report some results from investigations carried out primarily by second-term students of phonetics in connection with some seminars I led in 1971.

- A. One of the investigations concerned the tone accents of children, 2-6 years of age¹:

Some bisyllabic words (13 in all, 6 with the acute and 7 with the grave tone accent), known to belong to the vocabulary of the children, were illustrated by simple pictures and shown to 35 children from Malmö (Scania)². Their pronunciations of the words were recorded on tape. At the same time one of the investigators made an interpretation of the pronounced words as acute or grave. Further interpretations by the investigators, and by a Scanian phonetician, in most cases confirmed this first interpretation. So did fundamental frequency analysis.

Results

The accent distinction is acquired rather late (fig. 1), with the age of 4 as a rather sharp boundary. There are, however, great variations among the younger children. Some learn the distinction early, some considerably later. There also seems to be a gradual acquisition of the acute accent, which is the one totally missing from the beginning. As could perhaps be expected, and at least judging from this investigation, children do not apply a certain rule consistently at once, but the accents

ACUTE ACCENT

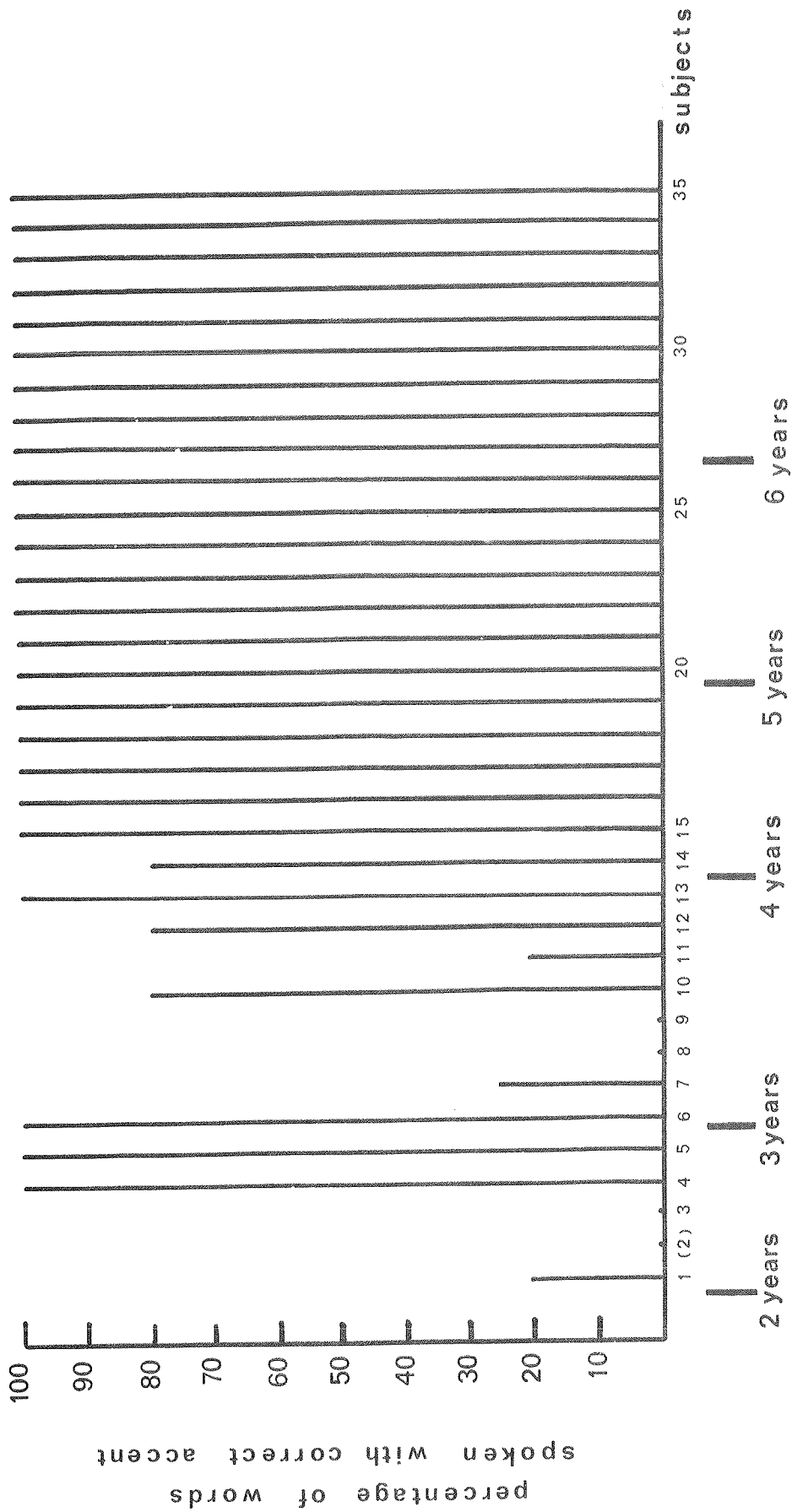


Fig. 1. The diagram shows how the acute accent is often infrequent in the speech of subjects younger than 4 years.

of common everyday words are evidently learnt word by word, not type by type. The test was not, however, designed to examine this.

- B. Another investigation concerned the realisations of the Swedish tone accents by foreigners and the interpretation by Swedes of the tone accent patterns produced by these foreigners³:

A preliminary investigation of Polish and Czech speaking people, learning Swedish as a foreign language at voluntary evening classes in Malmö, revealed that none had acquired the distinction between the acute and the grave accents, although they were said to belong to the most advanced of the students. Nor was the distinction clear for some American students living in Lund.

The investigator then looked for informants who had been living in Sweden for a long time, and who had tried to learn the language also in its more advanced forms. A small but rather homogeneous group was tested. The group consisted of three people only: one man and two women, all 35-40 years of age, two of them born in England, one in Scotland, but all three grown up in England. Two of them were teachers at the English Institute, Lund University, and the third was a phonetician. All three had been living in Sweden for 13-17 years and were married to Swedish (Scanian) people.

Twelve minimal pairs, consisting of everyday Swedish words, were recorded.⁴ As preliminary tests had revealed considerable difficulties with respect to the tone accents, the acute and the grave accent words always appeared together in the reading list, sometimes with the acute, sometimes with the grave accent word first, like this:

Vinden viner i trädtopparna. viner - viner - viner

Många viner kommer från Frankrike. viner - viner - viner

Dessa strider var mycket jämna. strider - strider - strider

Detta strider mot reglerna. strider - strider - strider

Många gifter sprids i naturen. gifter - gifter - gifter

Många gifter sig mycket unga. gifter - gifter - gifter

In this way the speakers were given every help to understand what the test was about and thus to realize the differences.

The second of the three isolated versions of the words were listened to by the investigators. For every speaker those four words which were considered to be the most successfully pronounced grave examples⁵ were used in a listening test together with four acute words (not minimal pairs in order to avoid a discrimination choice). What is said below is thus valid only for these "best" representations, and only for isolated words.

10 listeners from Southern Sweden (as all speakers were expected to have been influenced by the Scanian accent patterns) listened to these words appearing twice in a randomized test.

Results

As could be expected the grave accent presented the greatest difficulties. Speaker A (fig. 2) was more successful with this accent than the others. It seemed to be the other way around with the acute, strangely enough, but this speaker was more conscious of the purpose of the study, which may have caused him to overemphasize the grave type. Had, however, the selection of test words been made quite by chance, this would certainly have resulted in still fewer grave responses. Once more it should be stressed that all the speakers are linguistically conscious people with

time enough to be able to realize linguistic rules. In running speech there ought to be less time to remember these rules, particularly as they only apply in stressed positions.

	A	B	C
Acute	69 %	79 %	76 %
Grave	80 %	43 %	40 %
Together	74 %	61 %	58 %

Fig. 2. Percentage of words where listeners' judgments of accent agreed with the intentions of speakers A, B and C.

Acoustic measurements of the words produced and judged as grave showed that the fundamental frequency contour in all cases was characterized by two frequency maxima. Furthermore, the second syllables of these words had greater intensities and longer durations. The fundamental frequency contour with two maxima is certainly not typical of the Scanian dialects, which was the type one might have expected from these speakers. However, it is the pattern of the standard central Swedish pronunciation commonly used as a model for language teaching.

Almost at the same time as these investigations were carried out a recording was made in the department of an interview with a German-speaking phonetician.⁶ He had been living in Sweden for 6-7 years. His grave words, too, revealed two frequency maxima. (They generally sound, according to my own opinion, very Swedish).

This could be compared with the results of an investigation concerning how Swedes and foreigners try to describe how they perceive the Swedish tonal accents.⁷ Contrary to what was the case for the acute accent, 50

Swedes (of different dialects) and 24 foreigners chose, both for a Scanian speaker (with only one frequency maximum in the grave words) and for a Central Swedish speaker (with two maxima), to illustrate the grave accent with symbols indicating two maxima, e.g. \wedge for the acute accent and ∇ for the grave. To me, this seems to be an indication that some sort of loudness feature is involved here.

Notes

1. Investigators were: E. Holmberg, S. Lawrischin, and J. Sörensson.

2. Number of children in the different age classes:

2-3 years - 5

3-4 years - 8

4-5 years - 7

5-6 years - 6

6-7 years - 9

3. Investigators were: K. Eberlius Nilsson, B. Epps, A. Jönsson, and E. Stéen.

4. The following minimal pairs were used:

biten (the piece, the bit): bīten (bitten),

Pólen (Poland): pólen (the pole),

stégen (the steps): stēgen (the ladder),

tánken (the tank): tānken (the thought),

gifter (pres. of verb marry): gīfter (poisons [noun pl.]),

ánden (the duck): ānden (the ghost):

världen (the world): vārden (values [noun pl.]),

strider (pres. of verb fight): strīder (fights [noun pl.]),

Öskar (Oscar): åskar (pres. of verb thunder),
slågen (battles [noun pl.]), slågen (beaten up),
våken (the hole in the ice): våken (awake),
viner (pres. of verb whizz): viner (wines [noun pl.]).

5. The grave accent caused most problems.
6. Investigators were: K. Karlsson and I. Svensson. (The investigation was carried out under the guidance of R. Bannert.)
7. Investigators were: M. Elevant, M. Hamrén, and A.-C. Johansson. (The investigation was carried out under the guidance of E. Gårding.)