

INTONATION IN FINLAND-SWEDISH: Word and Sentence Stress in the Helsinki Dialect

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The aim of this paper is to present an acoustic study of the intonation of a less documented variant of Swedish i.e., Finland-Swedish.

Word and sentence stress in Swedish have been thoroughly investigated by Bruce, Gårding and others, but there are only a few reports on the prosody of Finland-Swedish. At the same time, there are many speculations and theories about Finland-Swedish which lack an empirical foundation. The aim of the present experiment is to contribute to such a foundation.

Finland-Swedish is a minority language spoken by about 300.000 people living in the coastal areas and archipelago of Finland. Due to geographical and political reasons, the Swedish dialects of Finland differ from those in Sweden in many respects. The prosody is simpler, there is no word accent opposition, except for the dialect of Västra Nyland, and there are also differences on the segmental and syntactic levels. These differences are usually explained by interference from Finnish or by the archaic character of the dialect.

Prosodically the most striking difference is the lack of a word accent opposition and its effect on intonation. To study this problem, I chose a material consisting of short statements where the following parameters were varied; (1) the placement of focus (sentence accent), (2) the placement of stress, and (3) the number of syllables in the words in focus. This material was first

\* This is a summary of a longer report. Copies of the full report are available from the author.

used by Gösta Bruce in his thesis *Swedish word accents in sentence perspective* (Bruce 1977) and later in intonation studies of several Swedish dialects. His material was very suitable since it was designed for studies of this problem; it had also been tested on other dialects and therefore my results could easily be compared. Furthermore, the Lund-model for Swedish intonation is based on this material (Bruce & Gårding 1978, Gårding & Bruce 1981).

Three informants, one male and two females with the same social dialect, were recorded in Lund. Measurements were made from mingo-grams.

Results: In words with short vowels the word accent is signalled by an Fo-rise at the beginning of the accentuated syllable, and an Fo-maximum in the middle of the accentuated vowel or at the VC-boundary. The Fo-maximum is followed by an immediate Fo-fall to the posttonic vowel (Fig. 1).

In Swedish dialects with a word accent opposition, the timing of Fo-changes is decisive for the perceptual distinction of the accents. Due to the lack of an opposition in Finland-Swedish it was hypothesized that there should be a less exact timing of the Fo-movements since a confusion of word accents was not possible. The instability of the accent has also been suggested before by Selenius (Selenius 1978).

Still in the present material, the timing of the Fo-rise and, in particular, the Fo-fall, was very precise both within and across speakers. The accent is stable in timing even though there is no opposition.

The sentence accent is also signalled by an Fo-rise with a maximum value in the accentuated vowel followed by an Fo-fall in the posttonic syllable, and also by a larger Fo-interval. The sentence accent Fo-contour is dominated by the steep fall in the posttonic syllable, the posttonic fall seems to be the most stable indication of focus. The difference between word and sentence accent is mainly a question of domain. The placement of focus affects the utterance as a whole, while the influence of the

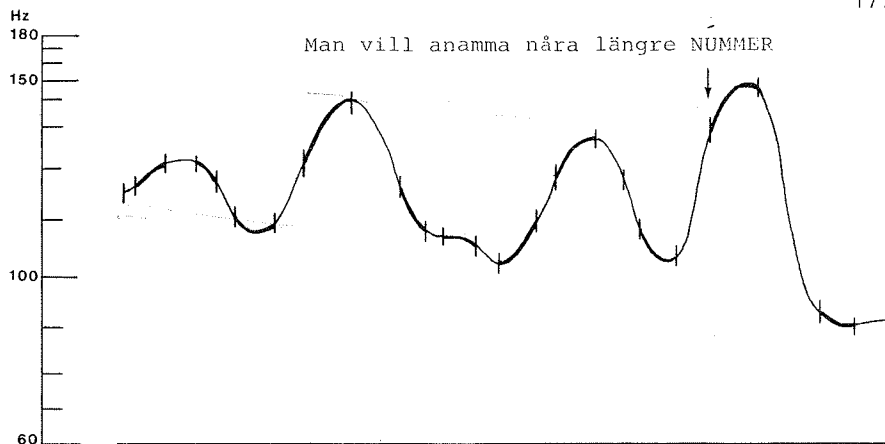


Figure 1. The arrow indicates the boundary between N and U. Focus on NUMMER. The thick lines are vowels, the thin lines consonants.

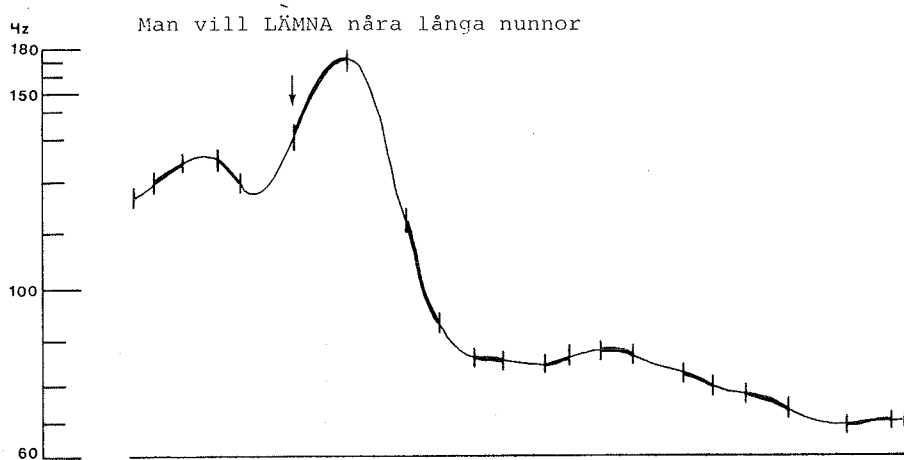


Figure 2. The arrow indicates the boundary between L and Ä. Focus on LÄMNA. No tonal manifestation of post-focal word accents.

word accent is limited to the surrounding syllables (Fig. 1 and Fig. 2).

The placement of focus is important for the planning of the utterance. Word and sentence accent co-occur and up to focus the tonal manifestation of the word accents is preserved. After focus the word accents are very deaccentuated and there are very low peaks or no tonal peaks at all manifesting word stress (Fig. 2). Deaccentuation occurs after focus as in other languages with one-peaked accents (Greek, French), even in the one-peaked Swedish dialects (1A, 1B) where word and sentence accent co-occur. It is never found in two-peaked variants where word and sentence accent are manifested by separated tonal gestures. Deaccentuation occurs for all informants regardless of Fo-range. Deaccentuation before focus is rare but can be seen in very monotonous informants.

By testing the Lund-model for Swedish intonation on Finland-Swedish a comparison can be made with other variants of Swedish. The model is a schematic description of the prosody in short Swedish statements, also accounting for dialectal variation (Gårding & Bruce 1981).

The model is based on Meyer's observations of word accents in different Swedish dialects. Gårding and Lindblad (Gårding and Lindblad 1973) made a further categorisation to four main types due to tonal contour, its timing, and geographical location. These four types are called South 1A (Malmö), Central 1B (Dalarna), East 2A (Stockholm), and West 2B (Gothenburg). Finland-Swedish is called Far East 0 (Helsinki) because of lack of word accent opposition.

The model is input-output oriented, where the input is information about word prosody, sentence prosody and the actual dialect. The output consists of sentences having correct intonation.

A comparison of Finland-Swedish with other variants of Swedish shows that the intonation in general resembles South 1A but without accent opposition (Fig. 3). The timing of the Fo-contour

		O Far East e.g. Helsinki	1A South e.g. Malmö	1B Central e.g. Dalarna	2A East e.g. Stockholm	2B West e.g. Göteborg
Word prosody		H ⊕	⊕	⊕	⊕	⊕
A1	L ⊕	⊕	⊕	⊕	⊕	⊕
A2	H ⊕	⊕	⊕	⊕	⊕	⊕
Input string		V C V C: V C V	V C V C: V C V	V C V C: V C V	V C V C: V C V	V C V C: V C V
Sentence prosody		Wide interval at A	Wide interval at A	Higher H	Wide interval after A	H late after A
SA (FO-CUS)		Lower L	Lower L		H after A	H late after A
S1		L at onset and L at offset (statement)				

Figure 3. The linguistic part of the model, with a comparison of different Swedish dialects.

resembles the first peak of accent 2 in West 2B. The shape of this accent contour is said to be the consequence of a generalised two-peaked contour and a subsequent loss of the second peak.

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