

Figure 2. Prominence ratings for the three parts of speech in three different positions in the intonation phrase.

#### 4 Conclusion

There is a clear effect of phrase position on the perceived prominence of lexical items for all three POS, nouns, verbs and adjectives, such that words in intermediate position are less prominent than words in onset (initial) or nucleus (final) position (nouns in nucleus position excepted). The effect noted in Jensen (2004) – reduction of perceived prominence of intermediate accents – is therefore replicated here and is not likely to have been the result of a certain syntactic structure with verbs in intermediate position.

With regard to the effect of POS membership it seems that adjectives are generally slightly more prominent than verbs or nouns. This may be the result of a certain affective content of (some or all of) the adjectives. Although care had been taken to avoid overly affective adjectives, it is difficult to control for minor variations of this parameter.

The interpretation of the results is complicated by the fact that nouns were rated as very prominent in onset position but markedly less so in nucleus position. Such a difference was not found in similar sentences in Jensen (2004), and I have no immediate explanation for this observation.

The question raised in the title and introduction of this paper must therefore be answered somewhat tentatively: while verbs were found to be slightly less prominent than adjectives, the difference was rather small. And while verbs were found to be as prominent as nouns overall, they were less prominent in onset position but more prominent in nucleus position. The implications of this surprising result awaits further investigation.

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## Variation and Finnish Influence in Finland Swedish Dialect Intonation

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#### Abstract

*Standard Finland Swedish is often described as having Finnish-like intonation, with characteristic falling pitch accents. In this study, it is found that the falling pitch accent occurs with varying degrees of frequency in different Finland Swedish dialects, being most frequent in the dialects that have had the greatest amount of contact with Finnish, and less frequent (though in many cases still part of the intonational system) elsewhere.*

#### 1 Introduction

It is generally known that the Swedish dialects of Finland, with the exception of western Nyland (Selenius, 1972; Berg, 2002), have lost the historical word accent contrast between Accent 1 and Accent 2. What is less clear is what kinds of intonational systems the dialects have developed, and how these relate to the previous word-accent system on the one hand, and contact with Finnish (often via Finnish-influenced prestige Swedish varieties) on the other. In their prosodic typology of Swedish dialects, Bruce & Gårding (1978) classified Helsinki Swedish as type 0 (Far East), with falling pitch throughout the word, and western Nyland as type 2A (Central). As for other rural Finland Swedish dialects, subsequent research (Selenius, 1978; Svärd, 2001; Bruce, 2005; Aho, ms.) has suggested that many fit neither category straightforwardly.

The purpose of the present study is to gauge how widespread the falling pitch accent is in Finland Swedish. It may be taken as a sign of Finnish influence, since it is the basic pitch accent in Finnish (see e.g. Mixdorff et al., 2002) but generally not attested in Sweden. Since the investigated dialects appeared to have intonational inventories with multiple pitch accents, unlike the lexical-accent dialects of Sweden, a quantitative component was undertaken to assess the frequency of falling pitch accents intradialectally. The results should be seen as preliminary due to the limited size of the corpus, but they point to some interesting questions for future research.

#### 2 Materials and methods

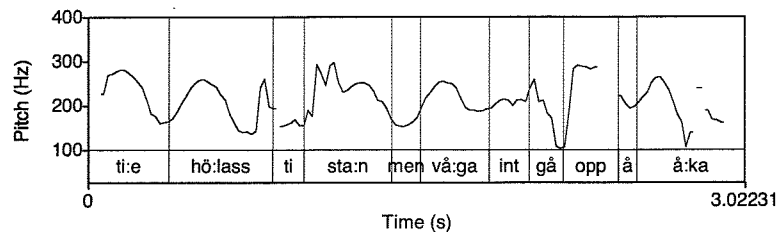
The materials used here were archaic dialect recordings, consisting of interviews and spontaneous narratives, from the CD accompanying Harling-Kranck (1998). The southern dialects included in the study were, from east to west, Lapträsk (eastern Nyland; fi. Lapinjärvi), Esbo (central Nyland; fi. Espoo), Kimito and Pargas (eastern Åboland; fi. Kemiö and Parainen, respectively). The northern dialects, south to north, were Lappfjärd (southern Österbotten; fi. Lapväärtti), Vörå (central Österbotten; fi. Vöyri), and Nedervetil (northern Österbotten; fi. Alaveteli). There was one speaker per dialect. The speakers, all female, were born between 1880 and 1914 and were elderly at the time of recording (1960s-1980s).

Between 1 and 3 minutes of speech from each dialect was analyzed using PRAAT. Accented words of two or more syllables were identified and given descriptive labels according to the shape of F0 in the tonic and post-tonic syllables. Monosyllables were not counted due to difficulties in determining which pitch accents they had. Non-finally, falling pitch accents were defined as those where the tonic syllable had a level or rising-falling F0, followed by a lower F0 in the post-tonic syllable. In phrase-final position, only words with falling F0 throughout were counted as having a falling pitch accent (as opposed to words with rising F0 through the tonic syllable followed by a boundary L).

### 3 Results

#### 3.1 Eastern and central Nyland

Lappträsk (eastern Nyland) and Esbo (central Nyland) overwhelmingly used falling pitch accents: 27 out of 30 total pitch accents and 33 out of 34, respectively. This result agrees with Aho's (forthcoming) study of the Liljendal dialect of eastern Nyland. Just over a minute of speech was analyzed for each of these two speakers, which attests to the high density of accented words, especially given that monosyllabic accented words were not counted. This density is also characteristic of Finnish, which accents nearly every content word (Mixdorff et al., 2002; see also Kuronen & Leinonen, 2001).



**Figure 1.** Falling pitch accents in the Esbo dialect: (*ja tjö:rd*) *ti:e ho:lass ti sta:n men vå:ga int gâ opp å å:ka* 'I drove ten hay bales to town but didn't dare go up and ride'.

For the Lappträsk speaker, the non-falling pitch accents consisted mainly of a low pitch on the tonic syllable followed by a high post-tonic (hereafter Low-High), which was used on 2 tokens and additionally on 5 or 6 monosyllables that were not included in the main count. The Esbo sample did not contain the Low-High accent, though a longer sample might have revealed some tokens.

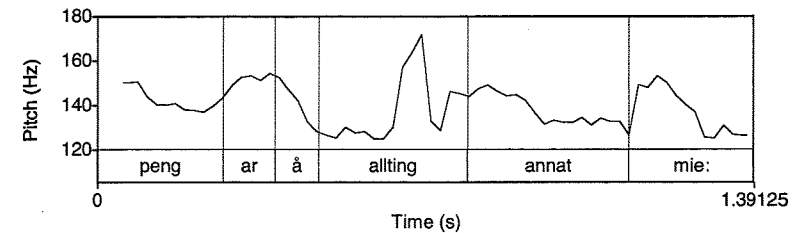
Interestingly, the Lappträsk and Esbo speech samples each contained two examples of an emphasis intonation that is reminiscent of Central or Western Swedish Accent 2. This pitch accent involves a sharp fall in the stressed syllable, followed by a rise culminating in a peak that may lie several syllables after the tonic (cf. Bruce, 2003).

#### 3.2 Eastern Åboland

Eastern Åboland presents a different picture, where the falling pitch accent is infrequent. In the Kimito data (about 1 minute 40 seconds), 6 out of 40 pitch accents were counted as falling, of which five were the last accented word in the phrase.

In the Pargas data (about two and a half minutes), none of the 35 pitch accents were classified as falling. Seven of the 8 phrase-final tokens had an F0 rise in the tonic syllable with a L% boundary tone, however, making at least the disyllables auditorily somewhat similar to falling pitch accents.

In both Kimito and Pargas, the majority of the pitch accents were either Low-High, or had a rise in the tonic syllable plateauing to a level high pitch over the next few syllables (hereafter Rise-Plateau). The Kimito and Pargas samples also contained one instance each of an accent with a sharp fall in the tonic syllable, like in Esbo and Lappträsk, but no subsequent rise.



**Figure 2.** Kimito dialect: *peng ar å allting annat mie:* 'money and everything else too'. *Peng* has a Low-High pitch accent (the initial peak is due to consonant perturbation) and *annat* has a falling pitch accent. The peak in *allting* is due to background noise.

#### 3.3 Österbotten

The results for Lappfjärd (southern Österbotten) were similar to those for eastern Åboland in that only one of the 34 pitch accents (in about 2 minutes of material) was classified as falling. The remaining accents had Low-High and Rise-Plateau shapes, along with 3 instances of sharp falls.

In Vörå (central Österbotten), 3 of the 34 pitch accents (in about 2 minutes of material) were falling, while the rest were Low-High or Rise-Plateau (plus one instance of sharp falling). Both Lappfjärd and Vörå had boundary L% tones, as in Pargas. These results are consistent with Aho's (ms.) findings on intonation in the central Österbotten dialect of Solv.

Lastly, Nedervetil (northern Österbotten) had 13 falling pitch accents, in a variety of sentence positions, out of 34 total accents (in about 2 minutes). This was a higher proportion than any of the other Österbotten or Åboland dialects investigated. Of the remaining 21 accents, 20 were labeled as Rise-Plateau and only one was Low-High.

### 4 Discussion

The preliminary result of this study is that falling pitch accents of the Finnish type are very frequent in Swedish dialects of eastern and central Nyland, common in northern Österbotten, and less frequent or marginal elsewhere in Österbotten and in eastern Åboland. A natural explanation for this is that the eastern and northern outposts of Swedish Finland – eastern Nyland and northern Österbotten, respectively – have, as border regions, had the heaviest contact with Finnish. For example, central and eastern Nyland were the first regions to lose the word accent contrast (Vendell, 1897), and anecdotal evidence suggests that northern Österbotten dialects have some Finnish-like phonetic/phonological features that are not found elsewhere in Österbotten.

The attestation of dialects where the falling pitch accent exists but has a limited role suggests that intonational variation in Finland Swedish might be fruitfully studied to form a sociolinguistic or diachronic picture of how various dialects have made, or are in the process of making, a gradual transition from Swedish-like to Finnish-like intonational systems. A number of topics would need to be addressed that have been outside the scope of the present study, such as the phonetics, pragmatics, and the positional distributions of the various pitch accents. For instance, the intonational phonologies of eastern Åboland and Österbotten are

probably quite different, despite the fact that their pitch accents have phonetic similarities which in this paper have been subsumed under the same descriptive labels.

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## Local Speaking Rate and Perceived Quantity: An Experiment with Italian Listeners

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### Abstract

*We have shown in earlier studies that the local speaking rate influences the perception of quantity in Estonian, Finnish and Norwegian listeners. In the present study, Italian listeners were presented the same stimuli. The results show that the languages differ not only in the relative position – preceding or following – of the units that have the strongest influence on the perception of the target segment, but seemingly also in the width of the reference frame.*

### 1 Introduction

Earlier investigation using Estonian, Finnish and Norwegian listeners has shown that local speaking rate affects listeners' perception of quantity (Krull, Traunmüller & van Dommelen, 2003; Traunmüller & Krull, 2003). The results were compatible with a model of speech perception where an "inner clock" handles variations in the speaking rate (Traunmüller, 1994). However, there were language dependent differences. The most substantial of these was the narrower reference frame of the Norwegians when compared to the Estonians and Finns.

The Estonian quantity system is the most complex one. In a disyllabic word of the form  $C_1V_1C_2V_2$  (such as the one used as stimulus)  $V_1$  and  $C_2$  are the carriers of the quantity distinction:  $V_1$  as well as  $C_2$ , both singly and as a VC unit can have three degrees of quantity: short, long and overlong. Seven of the nine possible combinations are actually being used in Estonian phonology.  $C_1$  and  $V_2$  act as preceding and following context and is a cue to the local speaking rate. Finnish has two quantity degrees, similar to Estonian short and overlong. In a  $C_1V_1C_2V_2$  word all four possible  $V_1C_2$  combinations are used. In Finnish, as in Estonian, the duration of  $V_2$  is inversely dependent on the quantity degree of the preceding units. In Norwegian, on the other hand, only  $V_1$  carries the quantity degree, while  $C_2$  is inversely dependent on the quantity of  $V_1$ . There are only two phonologically different possibilities: short or long  $V_1$ .

In all three languages, it is a *following* unit of context that exerts the strongest secondary influence on the perception of the quantity degree. The question arises: is this generally valid also for other languages? Are there any other contextual factors that make a segment important for quantity perception, apart from relative position? The answer to these questions can perhaps be found by investigating Italian listeners' reaction to the same stimuli. In Italian, it is the duration of  $C_2$  that is considered as the most decisive for the distinction between  $C_1V_1:C_2V_2$  and  $C_1V_1C_2:V_2$  – e.g. *papa* and *pappa* – while the duration of  $V_1$  is considered to be inversely related to the duration of  $C_2$  when the vowel is stressed (Bertinetto & Vivalda, 1978).