The “Frog Melody”: A variation of the Scania Swedish tone accent 2 melody to encourage children

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Abstract

Swedish is known for having two lexically diverse tone accents, called accent 1 and accent 2 in modern literature. The choice between the two accents is determined by the language system, and the distribution rules for the accents vary between varieties [1]. The most important function of the tone accents is their use as pitch accents in prominence signalling in utterances [1], [2]. The accent melodies associated with the two accents also differ between varieties [1]. In this paper, a first tonal and functional outline of a variation of a Scania Swedish tone accent 2 melody is presented, with the working name “frog melody”. Interestingly, this variation seems to be associated with attitudinal meanings in addition to prominence signalling. The “frog melody” changes the association between accent melody tones and syllables, while remaining a clear case of the (South-eastern) Scania Swedish accent 2 type.

Index Terms: tone accents, Scania Swedish, accent 2, attitudinal meanings

1. Introduction

This is a first outline of a phenomenon that I discovered by coincidence and not a fully-fledged study. It began like this: Walking home from day care with my son in the buggy, I always tried to pick up a conversation with him; but he was rather uninterested. Therefore, I started each attempt with the cheerful question “Have you been on the playground today?”, in Scania Swedish: Har du vatt på lekplatsen idag? Because the children are on the playground every day, I thought that this should be a topic that he could say something about.

One day I noticed a peculiar little melody at the end of my question. In (1), I have used Praat [3] to visualize the intonation. There are two accents: a “small” tone accent 1 on the word du (“you”) [2] (for small and big accents, see section 2), transcribed with a capital letter for the vowel; and a “big” accent on the word lekplatsen (“the playground”) [2], transcribed with capital letters for the whole accented syllable. The circle marks the primary-stressed syllable, which is the trigger of the accent melody, and the following two syllables, on which this accent melody is fulfilled.

At first, I was amused at my observation. I thought I sounded like the frogs in an American beer commercial that I once saw (see for example https://youtu.be/WkavReH4LE0, sec 9-26). Those frogs quaked Bud-wei-ser with a similar melody. However, my quaking partly arose from the voiceless plosives [p] and [t] in lekplatsen, which separated the tones in my speech (listen: 1_lekplatsen.wav). When replacing lek-plat-sen for a skol-gär-den (“the school playground”) with all voiced segments in the word middle, the tonal jumps were replaced by the natural glides of normal speech (2_skolgarden.wav).

1) The “frog melody” in (Eastern) Scania Swedish.

2) The “frog melody” in (Eastern) Scania Swedish.

But even with glides, I realized that there was something strange going on with the accent melodies in lekplatsen and skolgården.

2. Scania Swedish tone accent melodies

The Scania Swedish tone accents have one characteristic accent melody each. Both accent melodies involve a high tone, from which the accent melody falls, the most important difference lying in the alignment of the peak within the primary-stressed syllable (HL* for accent 1 and (L)H*L for accent 2) [4; 94-97, 101], see illustration in (3) below.

Traditionally, two phonological levels of accents are distinguished. Following Myrberg and Riad [2], I will call them “small accents” (traditionally called “non-focal accents”) and “big accents” (traditionally called “focal accents”, see for example [1], [4]) so that it is possible to distinguish between big accents (phonological level) and (big) accents with the pragmatic function of signalling information-structural focus (wide or narrow) (for a discussion, see [5]) because these two features do not always coincide [2]. The difference between small accents and big accents in Scania Swedish consists in scaling, i.e., the same accent melodies are used for small and big accents, but the H tones in the big accent melodies are upscaled [4; 97], [6].

Because skolgården has three syllables, I have used three-syllable words in the illustration of accent melodies in (3) for a better comparison: engelska (“English”) for accent 1

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(3a_engelska.wav) and ångarna (“the meadows”) for accent 2 (3b_angarna.wav). The primary-stressed syllables eng-lâng- are segmented after vowel [ɛ] + half consonant sound [ŋ].

3) Scania Swedish accent 1 vs. accent 2 melodies.

As can be seen in (3), and also (4) below, the normal accent 2 melody thus involves a rise through the primary-stressed syllable; it peaks around the boundary to the next syllable; and then it falls again in that second syllable. (NB: the rising tone on the last syllable in (1) and (2) is a high boundary tone, see below). This is illustrated in (4) by the word skolgården (“the playground”) spoken in isolation (4_skolgarden.wav):

4) Accent 2 melody in skolgården spoken in isolation.

If you compare the accent melody of skolgården in (4) to the accent frog melody of skolgården in (2), the characteristic rise-fall melody of the Scania Swedish accent 2 can still be detected in (2). However, the rise is delayed by one syllable, such that it starts in the second syllable; the peak is reached around the boundary between the second and third syllable; and the fall then takes place in the third syllable. The primary-stressed syllable, which is normally aligned with the rise, instead has a low, level tone in the frog melody in (2).

The rise on the last syllable dag(“day”) in (1) and (2) is the result of a high final boundary tone and not part of the accent melody. Analysing my own speech, I see that I use the high final boundary tone a lot, especially in the communication with my son.

3. What functions do tone accents have?
Before moving on to the meanings of the frog melody, let us briefly take a look at the functions of tone accents reported on in the literature.

Accent 1 vs. accent 2: For a couple of hundred minimal pairs of words with identical segmental form ([7: 59–69] lists 357 such minimal pairs), the choice between accent 1 and accent 2 accounts for their lexical differentiation, for example anden (accent 1, “the duck”) vs. anden (accent 2, “the spirit”). Both accent 1 and accent 2 are used as pitch accents for signalling prominence on important words in utterances [1], [2]. Prominence marking is a very important function of the tone accents. In an utterance, the primary-stressed syllables of some words trigger an accent melody as a prominence signal. The pitch accents help chunking the speech, and it does so on two phonological levels. In contrast, phonetically, there seem to be three levels, at least in Central Swedish [1], [2]: first, there is chunking through the “small” accents (in the terminology of [2]). Then there is a higher-level chunking of speech through the “big” accents. Finally, the last big accent of an utterance is phonetically upscaled to a “nuclear” accent [2], although it has not been tested yet if this upsizing also is a perceptive category, and apparently, it is not considered an accent type of its own [2: 136]. The same three levels of chunking can be found in [1]: for example, p. 128, but less explicitly discussed.

In recent research, the two Swedish tone accents have been shown to play a surprisingly important role in lexical access despite the fact that they have a low functional load “in the sense that they distinguish only few minimal pairs” [8: 176]. In two experiments, one with monolinguals and one with bilinguals, lexical access of first syllables in combination with accent 1 and accent 2 was examined [8]. The results show that the Swedish tone accents are used in lexical access in both groups. (It would be interesting to repeat this experiment with people listening to other varieties than their own because both the accent melodies and the distribution of accent 1 and accent 2 over different words differ between Swedish varieties [1]).

Finally, and important for this paper, there are some tentative findings that accent melodies may be varied to convey attitudinal meanings. In [9], the data from two different experiments are used for investigating phonetic cues of the Scania Swedish tone accents beyond the well-established difference in timing of F0 movements. The first experiment was originally designed to investigate the tone accent pronunciation as a function of “discourse context”. Consequently, the experimenters had constructed eight different discourse contexts for the written test phrase, for example as an assertion, a confirmation, a correction, an exclamation etc. The authors report on an unexpected two-peak accent 2 variation of the Scania Swedish accent 2 melody in the exclamation condition [9: 3237]. This finding is not discussed any further in [9], but it means that there is evidence of varying accent melodies for conveying other pragmatic meanings in addition to signalling prominence. Further, it is interesting that it is the accent 2 melody (in focal position) that is varied also in [9], as the frog melody also primarily seems to be an accent 2 phenomenon, see section 5.

4. Effect of the frog melody
In this section, I will discuss what attitudinal meanings the frog melody has on utterance interpretation in addition to prominence marking. I have examined these meanings introspectively and intuitively, but first I had to make sure that the frog melody really is an authentic melody, so I sent an utterance pair around to some friends and relatives who have grown up with Scania Swedish. None of them are linguists, but all of them are interested in language(s). The utterances had identical wording, and I tried only to vary only the last accent 2 melody. I decided to speak both utterances, because the frog melody not only means a difference in melody, but also a big difference in intensity, compare the oscillogram of the stressed syllable in (1) and (2) with (4). I asked the recipients if both utterances sounded natural, and if yes, what associations they gave rise to.

The frog melody utterances were accepted as natural by all recipients. However, the utterances were not a perfect minimal pair, which meant that one friend immediately picked up on
the slightest changes in voice modality and focused mainly on those instead on melody. However, and I got enough answers that went in the same direction as my own intuition. Therefore, I think that I am on the right track.

5) The frog melody makes the utterance sound like …
   a) the speaker is happy and interested.
   b) the information in the utterance is shared knowledge between the speaker and the addressee.
   c) the speaker is talking to a child.

To (5a): One of my friends at times arranges activities for children. She said that she hoped that she spoke like the frog melody utterance when talking to the children at those arrangements, because the speaker sounds happy and engaged.

To (5b): Another friend said that she could imagine herself using the frog melody with questions like Have you been to the playground today? when picking up her child from day care if she had seen photos of the children at the playground in the parents’ app that day and already knew that they had been there. She would use the frog melody even if her child did not know that she knew. I myself have on several occasions heard myself say Jättebra! (“Very good!”) with frog melody to my son when he has done something that we both know is good, like washing his hands when we get home. But when he tells me something that he has done and seems unsure if I approve of it, I say Jättebra! with the normal accent 2 melody.

To (5c): Another friend remarked that if somebody asked her the question with the frog melody, she would be insulted because it would sound as if the speaker thought she was simple-minded. It is also my intuition that the frog melody is better not used in utterances addressed to adults.

I think this explains why I used the frog melody with my son: (5a) He did not seem too interested, so I tried to encourage him to engage in conversation with me by sounding happy and interested in him. (5b) The frog melody suggested that this was a question that he would know something about. (5c) It is a melody used for talking to children.

5. Usage restrictions of the frog melody

Once I had become aware of the frog melody (the tonal features of which are described and illustrated in section 1 and 2), I started examining its features. I monitored my own speech when talking to my son and other conversation partners. I wrote down interesting utterances and interpretations, and then I recorded them and compared utterances with the normal accent melody and with the frog melody for their difference in interpretation and usage. The interpretation was discussed in section 4. In this section, I will discuss the usage restrictions of the frog melody.

On the one hand, the usage restrictions and the child-directed character of the frog melody means that it is a rather rare phenomenon. In addition, I do not know how widely spread it is. Does it exist in other Scania Swedish varieties, or in other Swedish varieties in general? From that perspective, it is less important than the normal accent 2 melody. On the other hand, it is interesting from the point of view that it shows that accent melodies may be varied for attitudinal meanings in addition to prominence marking.

The frog melody is an accent 2 melody variation. It is a three-syllable pattern (see section 1 and 2), and therefore, it requires at least two unaccented syllables following the primary-stressed, accent-triggering syllable. If there is only one subsequent unaccented syllable, the normal accent 2 melody is used.

The frog melody seems to work best if the accent-carrying word is the last accented word of the utterance. In addition, the frog melody word seems to signal information-structurally wide focus, like in that first question Have you been to the school playground today? If I put focus on the last word of that question instead, namely idag ("today"), the normal accent melody is used on skolgården ("school playground") (6_skolgården_DAG.wav):

6) Information-structurally narrow focus on idag ("today") leads to normal accent 2 melody on skolgården ("school playground").

It is my impression that the frog melody cannot be used with an accent 2 words that signal information-structurally narrow focus. For example, if I am surprised to hear the children in my son’s day care group have been at the school playground and say “What? Have you been to the school playground today? with an information-structurally narrow focus on “school playground” (skolgården), it seems to get the normal accent 2 melody (7_SKOLgården.wav). (The rising tone at the end is caused by a high final boundary tone.)

7) Narrow focus on skolgården ("school playground") results in normal accent 2 melody.

Further studies of the interplay between narrow focus and accent 2 melodies are needed, but if it would turn out to be a stable phenomenon that frog melody and narrow focus exclude each other, it could be a result of incompatibility between pragmatic meanings: narrow focus marks a word as needing special attention from the listener in some important way, and this might be incompatible with the notion of shared knowledge (see section 4). But perhaps there is a general incompatibility with narrow focus: the information-structural focus on idag ("today") in (7) is also a narrow focus.

As for the interplay between the frog melody and the discourse function of the utterance as a whole, I use the frog melody most frequently with yes/no questions with an inverted subject like in the first question Have you been to the playground/the school playground today? But I have also observed myself using it also with imperatives and statements. For example: one day my son was waiting for me to park my
bikes outside our house, and he complained about the cold. I said: Are you cold? Go into the stairwell for the meantime, then! There is a small accent 1 on the particle verb expression gå in (“go into”) and a big accent 2 frog melody on trapphuset (“stairwell”). After trapphuset, the rest of the utterance is de-accentuated: så länge då (“in the meantime, then”). There is a high final boundary tone on då (“then”) (8_trapphuset.wav):

8) Frog melody in an imperative utterance.

(9) is an example for a statement: having dinner with my son, I once remarked: Du har ju ätit upp alla fiskpinnarna, ja! (“You have eaten all the fish fingers!”) (9_fiskpinnarna.wav).

There is a small accent 1 on the particle verb expression ätit upp (“eaten all of it”) and a big accent 2 frog melody on FISKpinnar-(na) (“fish-fingers-(the)”). On the last word, there is a high final boundary tone. (In addition, the Swedish modal particle ja, meaning “as you and I both know”, is used twice in this utterance):

9) Frog melody in a statement.

Finally, while writing this paper I asked myself if there really were no corresponding frog melody for accent 1 words, with the same or similar attitudinal meanings as for the accent 2 frog melody (see section 4). Just by monitoring my own speech, I had not observed any accent 1 melodies that I struck me as odd. Instead, I simply tried to exchange the accent 2 words in indisputable frog melody utterances for accent 1 words, for example Har du vatt på badet idag? (“Have you been to the swimming bath today?”). Just like in (1) and (2), there is a small accent on du (“you”) and a big accent on badet (“the swimming bath”), while idag (“today”) is de-accentuated (10_badet.wav):

10) Attempt at “frog melody” for an accent 1 word.

As can be seen in (10), the accent 1 peak and fall still take place within the primary-stressed syllable, but it is delayed. Now there is a rise before the peak, which is uncharacteristic for accent 1, compare (10) to the normal F0 movement for accent 1 in (3). The utterance in (10) sounds similar to the accent 2 frog melody, and I would not use it to an adult (5c).

However, I am not sure that a rising accent melody for accent 1 words always has the same attitudinal meanings associated to it as the accent 2 frog melody does. For example, the question in (11) is one that I often ask my son at the end of meals: E du mätt? (“Are you full/satisfied?”) (11_matt.wav).

There is an all-rising tone throughout the accent 1 word mätt (“full”), but this utterance I could imagine using to adults, too, without sounding condescending:

11) Scania Swedish accent 1 melody with an all-rising tone in the accented syllable.

At this point, I am only sure that the accent 2 frog melody is a child-directed accent variation with the restrictions mentioned in this section and the attitudinal meanings mentioned in section 4.

6. Conclusion and Thoughts

The most well-known functions of the Swedish tone accents are firstly their lexically differentiating function in a couple of hundred pairs of lexical words and secondly their use in prominence signalling.

The first report known to me of pragmatic effects beyond prominence marking achieved by accent melody variation is the finding of a two-peak accent 2 melody in exclamations reported in [9]. The frog melody is another such an accent melody variation which results in pragmatic effects on the interpretation of the utterance as a whole (see (5a-c)). Since the accent 2 frog melody variation is a clearly definable form in combination with stable attitudinal meanings, it is a so-called grammatical construction from a construction-grammatical perspective [10].

However, there is still much work to do on the frog melody. It is also unclear how widely spread it is: does it exist in all Scania Swedish varieties? How about other Swedish varieties? And perhaps there are other accent melody variations in other varieties, which do not exist in Scania Swedish?

It would be interesting to see more research on tone accents from a pragmatic perspective beyond prominence marking.

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8. References


