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PROSODIC FEATURES IN REGIONAL DANISH - WITH A VIEW TO SWEDISH AND GERMAN

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This is a summary of some of the results reported in recent publications (Grønnum/Thorsen 1988a, 1988b, 1989). They are given in tabular form below.

The point of departure for my investigations of intonation in various regional types of Standard Danish are facts about Copenhagen Danish, as I have established them over the years: We have no compulsory default sentence accent - we have no

	SENTENCE INTONATION SIGNALLING	DEFAULT SENTENCE ACCENTS	FOCAL SENTENCE ACCENTS	FOCUS BY STRESS REDUCTION OF SURROUNDINGS	FINAL LENGTHENING	STRESS GROUP PATTERNS GET TRUNCATED/ COMPRESSED
STOCKHOLM	local	compulsory	compulsory	- - -	yes, extensive	truncation and compression
BORNHOLM	local	optional	optional, frequent	- - -	shortening	extensive compression
MALMÖ	global	no	no	optional, rare	optional?	weak compression
COPENHAGEN	global	no	no	optional, never finally	yes, modest	truncation
NÆSTVED	global	no	no	rare, never finally	optional	truncation
AALBORG	global	no	no	optional, rare finally	optional	truncation
TØNDER	global	no	no	optional, never finally	yes and no	truncation
SØNDERBORG	local	no	no	optional, never finally	yes	truncation
STANDARD NORTH GERMAN	local and global	optional	compulsory, except finally	- - -	yes	truncation and compression

compulsory focal sentence accent - we signal focus (optionally) by stress reduction - we signal sentence intonation function globally - we truncate Fo patterns when time is short in the stress group - we have modest final lengthening. Do regional variants of Standard Danish behave similarly? How does Bornholm relate to Skanian and Central Swedish? How does South Jutland relate to Standard North German?

I have recorded (laboratory) speech from a total of 30 speakers from 9 different localities, and analysed the material by way of hard-ware instrumentation, measurement by hand, and calculation of averages. See further, e.g. Thorsen (1988a).

The schematic summary above cannot do justice to the amount of variation in the data, for one thing, and the reader should keep in mind that it presents the results of severely manipulated, read speech. Nevertheless, I do think that some of the differences noted in the schema are rather categorical, and I do think the results have something to say about different prosodic structures and habits in the various regional and national languages, because I think that what a speaker does in this particular speech style will be reflected also in his spontaneous speech. I think it unlikely that he will slough off his prosodic snakeskin completely in the transition from read to spontaneous speech.

About the terminology: A DEFAULT ACCENT is present when in a context free utterance the last stressed item is perceptually more prominent than preceding ones. This is a simplification, because there is no such thing as context free utterances. Even if there is no overt textual context, there is a real or imagined situational one. Secondly, not all isolated utterances will have the default accent on the last item. The semantics and pragmatics of the utterance may dictate an earlier location, so this is only a rule of thumb, but it holds for the material I have recorded. FOCAL ACCENT

is the term employed when an item is perceptually more prominent than the other stressed ones, a prominence which is provoked by the (textual or pragmatic) context. This is also a simplification, because it is entirely possible for an utterance to be produced with more than one focal accent, but my material was constructed so as to only invite one.

I should note explicitly here that it was never my intention to contribute to the more syntactic, or semantic/pragmatic debate about what determines focus placement; when and whether a focus is broad or narrow; what focus is and what contrastive stress or emphasis is, etc. There is an excellent treatment of these issues in Ladd (1978) and in Fretheim (1988). Rather, I have constructed the utterances and their textual contexts in a manner to elicit what I deem unambiguous default and focal accents in the desired locations.

The figures below will illustrate (the difference between) default and focal accents, focus signalling by stress reduction, global versus local signalling of sentence intonation function, and truncation versus compression of stress group patterns.

About the figures: Figs. 1-6 are average Fo tracings from one (of several) speakers from eight of the nine locations in the schema above. Full lines are utterances produced in isolation, and so are the slender broken lines where Bornholm and Stockholm are concerned, the difference there being that full lines denote utterances that were not perceived as having a final default accent, slender broken lines depict isolated utterances with a final accent. Dotted-broken lines denote utterances from a context which invited an initial focus indication, dotted lines a medial focus indication, and (heavy) broken lines denote utterances from a context which invited a final focus indication. The digits above the Swedish texts denote the word accents. The Stockholm speaker in Fig. 1 produced the isolated utterance with accent with secondary stress only on 'kommer'. The German speaker in Fig. 1 produced the full line and the broken line editions with a decidedly weaker-stronger prominence relation on 'Bertha's Schwester ..'.

Fig. 1 exemplifies isolated utterances, perceived with a final default sentence accent (slender broken lines with Bornholm and Stockholm, full line with German). Common to all three is that the Fo movement in the final stress group is more comprehensive and/or more complex than in preceding ones. Fig. 2 - the full lines - display similar tracings by a Copenhagen, a Tønder (just north of the German border, to

the west) and a Malmö speaker, where no extra final prominence was heard: the final stress group here has neither larger nor more complex Fo movements than preceding ones.

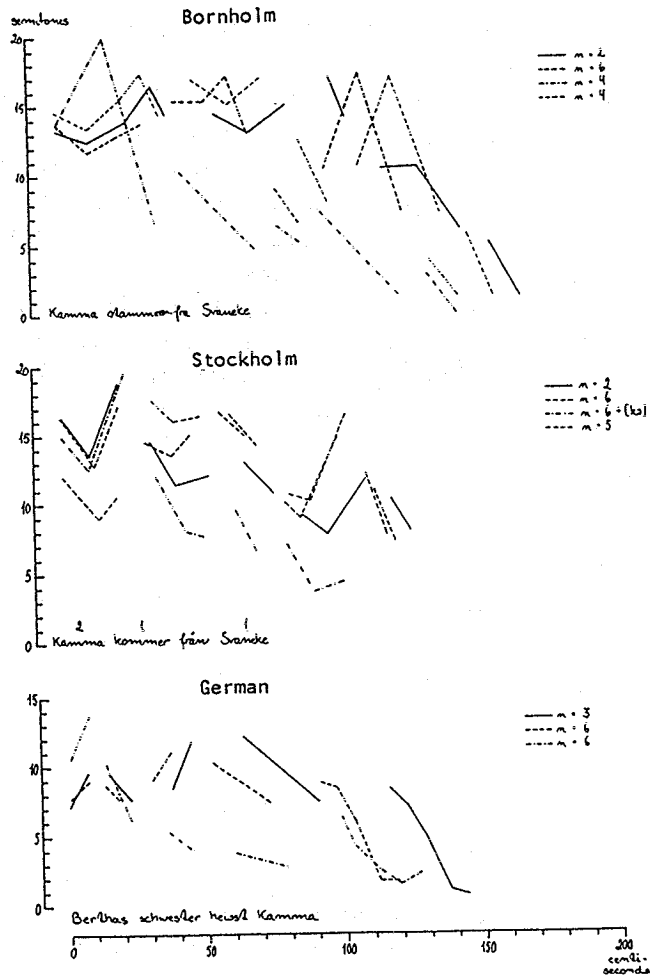


Figure 1 - see the text

On Bornholm, not all speakers produce default accents, and those that do, do not do so invariably, which means that we can compare the same item in final position, with and with-

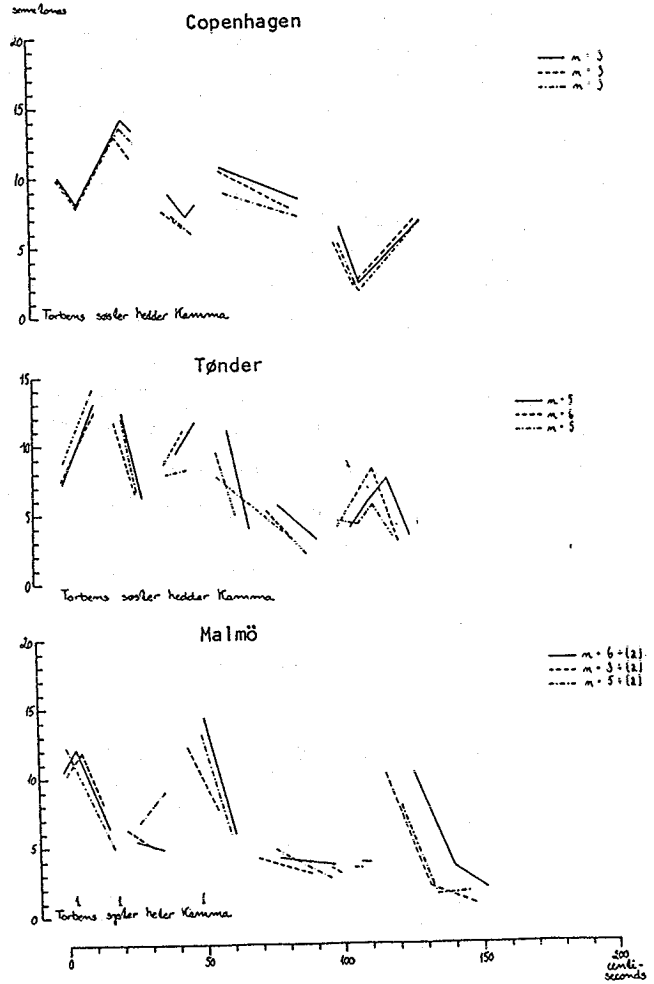


Figure 2 - see the text

out final default accent, and thus determine what constitutes the significant feature of the accent. See the Bornholm speaker in Fig. 1, and compare the full and the slender broken lines. The final stress group under accent has a much larger movement, it is also more complex (it is bi-directional) and its early part is still within the range established by the preceding stress groups. Without accent, the final Fo movement is not much larger than non-final ones. Its different shape (the fall versus the fall-rises in the prelude) has to do with sentence intonation function and juncture. Besides, you will note that the last post-tonic in the preceding stress group behaves differently before the default accent: it drops well below the onset of the accent, which presumably helps to make the accent stand out more from its surroundings, i.e. it helps to make it prominent. This is characteristic of default accents.

A comparison between default and focal accents is possible only in final position, which is the only position where default accents occur. The difference comes out in two different ways. One appears from Fig. 1, the Stockholm speaker, in the slender versus heavier broken lines. With a focal accent, the preceding part of the utterance is lowered and

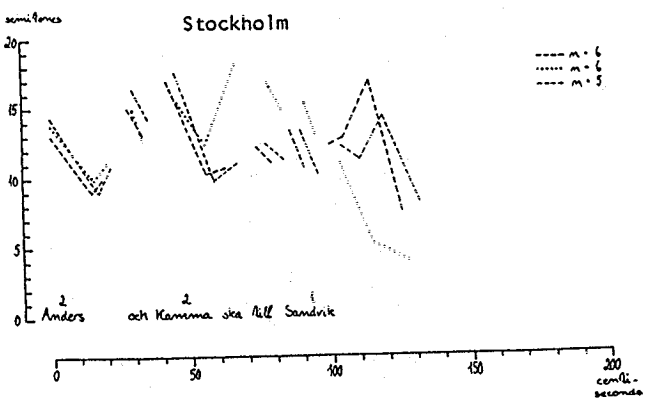


Figure 3 - see the text

shrunk, but the accents themselves do not differ. A more common way for the Stockholm speakers to realise the difference is depicted in Fig. 4, in the slender versus heavier broken lines: The focal accent has an even more pronounced Fo movement than the default accent, but the preludes do not differ. -- In initial position there are likewise two different ways to realise a focal accent. One appears from Fig. 1, the Stockholm speaker, in the slender broken versus dotted-broken lines: the focussed item does not carry a larger Fo movement than the item without initial focal accent, but the succeeding part of the utterance is severely shrunk and deprived of any autonomous Fo movements. This is very reminiscent of focus signalling in languages that have no sentence accents (as defined above), but it is not the most common way to signal focus in languages that do: Fig. 4 displays an initial focal accent (dotted-broken line) which is boosted relative to the non-focussed edition (slender broken line), while at the same time the accentual rise on the post-tonic in the final stress group is removed, but it retains its movement in the stressed syllable.

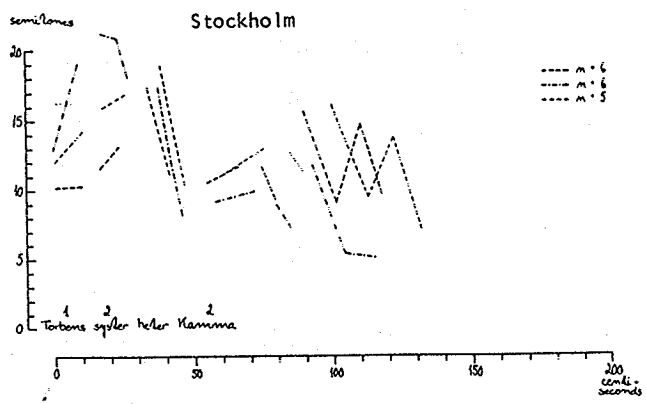


Figure 4 - see the text

Fig. 5 displays examples of focus signalling be reduction of the prominence on the surroundings, by stress reduction, for short. A speaker from Aalborg (north Jutland) depicts initial focus signalling, a speaker from Sønderborg (just north of the German border - to the east) displays a medial focus signal (dotted line), and the Malmö speaker in Fig. 2 (broken line) exhibits an utterance with invited final focus. Initial and medial foci portray a modest lowering/shrinking of succeeding stress group patterns, whereas the final focus is not overtly different from the Fo course in the isolated utterance (without default accent). The major difference is in a rather considerable abbreviation of the utterance with focus (which is not due to the fact that it occurred in a context, cf. Thorsen 1988a, p. 64ff), i.e. in an acceleration of the prelude - which is characteristic of utterances with focus in non-initial positions. It should be noted that languages without sentence accents proper, and which thus signal focus by reduction of the surroundings, do so mainly by

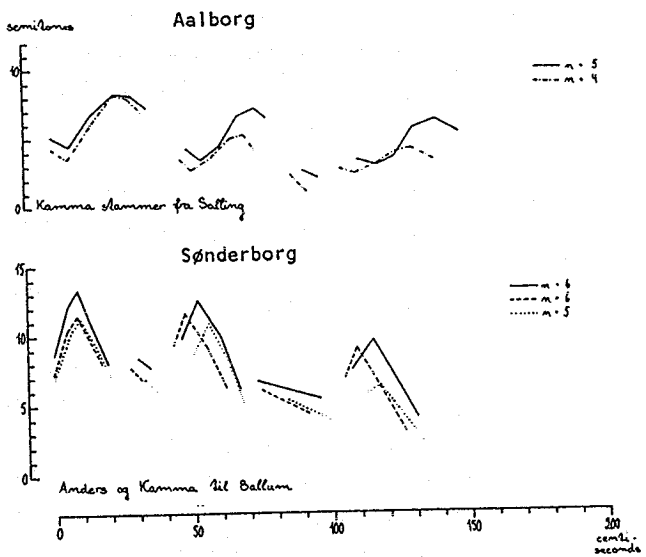


Figure 5 - see the text

suppressing (partially) the succeeding, not the preceding stress group patterns. Thus final foci generally go unmarked Fo-wise. Speech rate in the prelude is thus the only cue to a final focus, but even that may occasionally be slight, cf. the example from Sønderborg in Fig. 5, and you cannot always reliably judge from spliced out utterances whether they were produced in isolation or as answer to a question.

The material I have on focus versus emphasis for contrast is incomplete (I only have data from Stockholm) and the analysis has not been thoroughly performed yet. The explicit contrasts were elicited by questions like: "One of them has a sister called Kamma. Is it Torben or is it Peter?", whereas the foci were invited by, e.g., "Who among them has a sister called Kamma?". Suffice it here to say that it appears as if a contrast may lower and shrink the surroundings more, and may specifically also affect preceding stress groups, and thus an emphasized item gets to stand out more clearly from the surroundings than do focalized items. This is very reminiscent of Bannert's (1985) results for German.

To conclude this part: Default and focal accents (and emphases for contrast) have different functions, and also somewhat different phonetic manifestations. It is possible to describe the difference as one of degree rather than kind, as I suppose one could also do for the semantic or pragmatic difference. - There are a number of varieties of Danish - and Swedish as well - where default accents are non-existent, if we maintain that to be a candidate an extra prominence must be present both perceptually and acoustically in the final lexically stressed word of isolated utterances. These are the same languages or varieties where focus gets signalled not by a more elaborate Fo excursion (a sentence accent proper) but by a mere reduction of succeeding stresses. -- I hypothesize that in those varieties, focus and emphasis are distinguished by the preceding course, which does

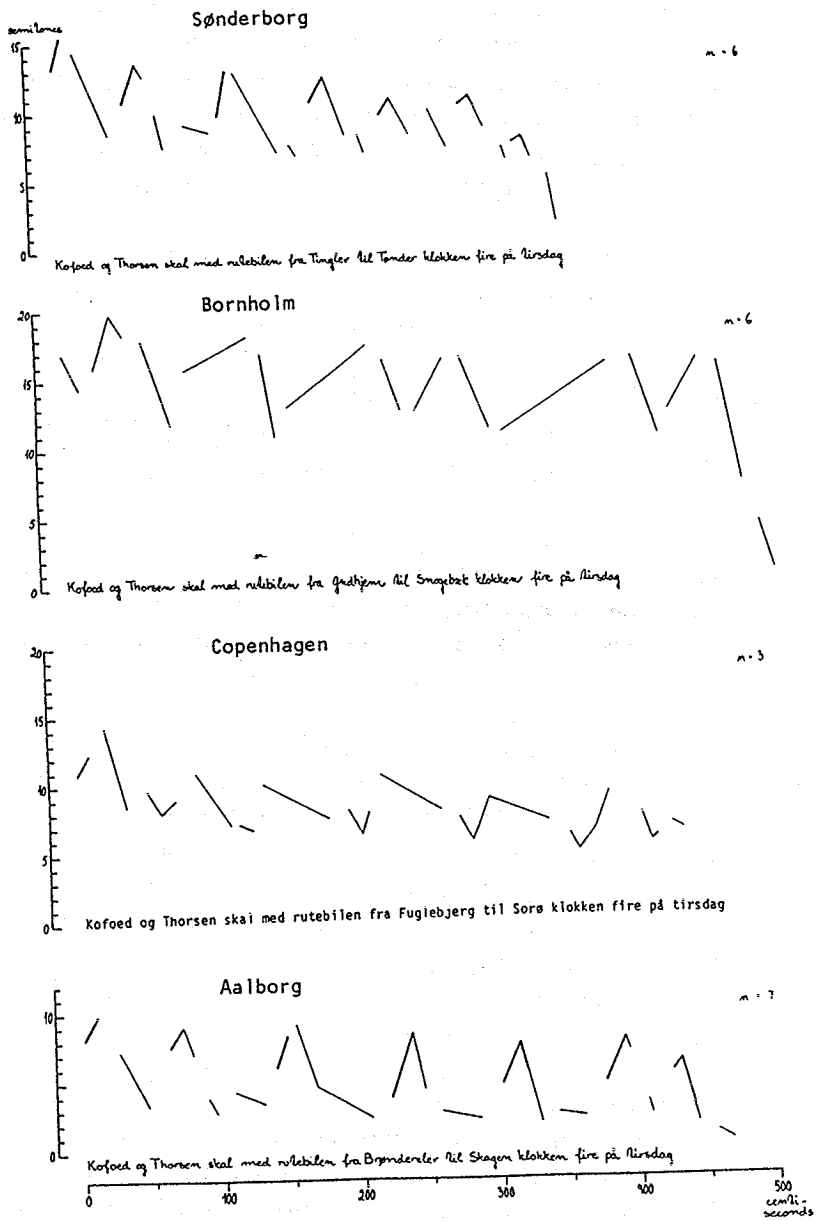


Figure 6 - see the text

not get shrunk with focus but does so with contrast, cf. Thorsen (1980).

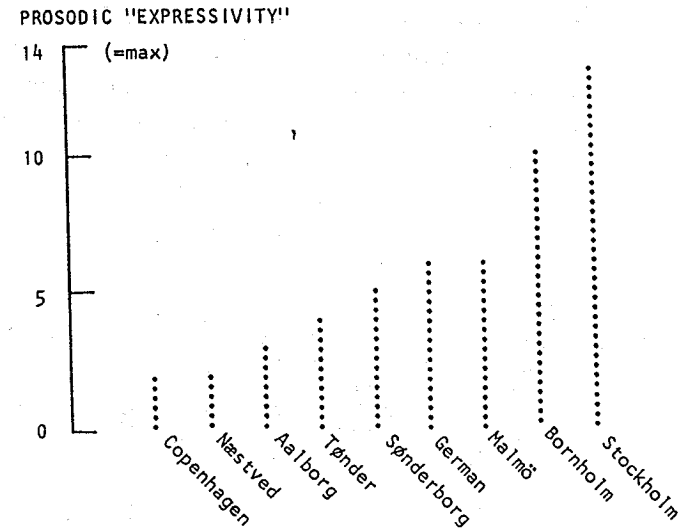
Fig. 6 displays average Fo tracings of a long terminal declarative utterance by a speaker from four different Danish regions. In Bornholm and Sønderborg, the final stress group displays a significant fall which takes the end point well below the range established by the preceding part. In Copenhaven and Aalborg a mild global trend is observed throughout the whole utterance, but the final stress group is neither qualitatively nor quantitatively different from preceding ones. If anything, its movement is less extensive. Neither utterance by the Bornholm and Sønderborg speakers had a default accent (Sønderborg does not have them at all, and in Bornholm they are optional and never occurred in the rather taxing long utterances), so the final fall is clearly a feature of sentence intonation function and juncture. Furthermore prosodically non-terminal utterances (not displayed here) and terminal ones do not differ in the slope preceding the final movement (which is rising in non-terminals) in Bornholm and Sønderborg, but overall slope differences are the only cues to non-terminal versus terminal in Copenhagen and Aalborg. The Standard German speakers displayed both global and local cues to sentence intonation function, i.e. the prelude is significantly less declining in non-terminal contours, but it is the only variety among the nine listed in the schema above which behaves in this fashion.

In most Danish varieties the stress group patterns can be viewed as an invariant melody, onto which you string the syllables in straight succession, according to their duration. The tune is only complete if enough syllables are present to finish it. It is simply interrupted when there are no more unstressed syllables to carry it: compare the ante- and penultimate stress groups in Fig. 6, the Copenhagen speaker. In Bornholm, on the contrary, the same target values are attained, the same lows and highs, but the movements to reach

these targets are quicker or slower, according as time is shorter or longer, the patterns are expanded or compressed as time dictates, cf. the same two stress groups by the Bornholm speaker in Fig. 6.

Some languages have rather considerable lengthening of pre-boundary syllables and segments. Others have more modest and not so stable lengthening, and Bornholm has predominant and considerable shortening. I.e., final post-tonic syllables are shorter than in other positions, ceteris paribus. This means that final lengthening cannot possibly be a consequence of larger final Fo movements, as it has been suggested by, e.g., Lyberg (1979). Bornholm has larger Fo movements finally, by virtue of default accent and sentence intonation function signalling, yet this final element is shorter than it is in earlier positions. Instead, lengthening or shortening of final elements must be an independently varied parameter. Maybe it is part of the boundary signalling in the following way: what is important is that speech rate changes locally, but the change may be either a deceleration or an acceleration. That is, "final lengtning" should be re-christened "final rate adjustment".

Conclusion: I think this rather restricted area, geographically and in terms of historical relatedness, demonstrates a rather amazing dispersion where the prosodic systems are concerned. These differences cannot possibly be due to corresponding differences in syntax. Danish, Swedish and German are not that different syntactically, and the materials recorded for the comparative analyses were near identical, both semantically and syntactically. It is possible, though not very likely, that somewhat greater differences would be found in the syntax of spontaneous speech (versus read laboratory speech), and that the prosodic systems are basically tuned to the latter speech style. This is an empirical issue, but I doubt very much that Copenhagen Danish spoken syntax should be so much richer in structure (compared with,



e.g., Bornholm), to reasonably compensate for the rather poorer inventory of prosodic parameters and their manifestation. Instead, I propose that some languages/varieties simply go down as less expressive prosodically than others. If we assign values from zero to two to the parameters listed in the abstract, and give "2" to local sentence intonation, to compulsory default and focal sentence accents, to extensive final rate adjustment, to word tones, to large Fo movements in stress group patterns, and assign "0" to the opposites, and "1" to weak or optional manifestations and to stød, and sum up the values obtained, a graph like above results. It corresponds fairly well, of course, with my own subjective impression of these regions, and clearly illustrates that Stockholm has just about everything and Copenhagen very little, prosodically speaking.

For lack of space, there is a whole separate issue which I have left out, namely whether all of these different prosodic systems could be brought within one and the same descriptive

frame of reference, within one and the same theory of intonation. In terms of a recent dichotomy: could they all be equally well handled within the tonal sequence theory and/or could they all be handled within a theory of hierarchies and superposition of layers of prosodic structures? Or are some better suited for one theoretical framework and others for another? I rather opt for the latter solution.

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