Why are the Danes so hard to understand?

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1. Introduction

Since my active empirical research in the past couple of years has been conducted in close collaboration with Hans Basbøll, and since—for obvious reasons—he could not co-author this paper, I am going to give an overview of some well-established phonological processes which—at least in a Scandinavian perspective—are specific and peculiar to Danish and which purportedly makes Danish difficult to understand for non-Danes. Most of them have been exhaustively described by Hans himself, as evidenced by his bibliography, but perhaps they have not been assembled in this fashion previously, with the foreign learner’s perspective. — I also take a brief look at some more recent developments which do nothing to remedy the situation. — Finally, I expose the relative paucity in prosodic parameters and their manifestation. These daunting facts should not discourage anyone who wishes to learn Danish, but they may console those who are going to find, or who have already found, it to be quite a challenge.

Comparison with Swedish as I go along will highlight the peculiar Danish state of affairs.

2. Segments

An overview of the complete sound inventory with key words and translations can be found in Grønnun (1998).

![Figure 1](image)

Danish vowels in the cardinal vowel chart with broad symbols conveniently ascribed to them.
2.1. Vowels
In stressed syllables, Danish has sixteen distinct monophthongal vowel sounds, thirteen of which can occur both short and long. Long vowels may occur with or without stress (cf. 3.1). Add to this [ə] which occurs in unstressed syllables only. The monophthongs are plotted in the cardinal vowel chart in Figure 1, with the broad IPA symbols conveniently ascribed to them.

An immediately obvious trouble maker is the total number of qualitative distinctions, in part due to the presence of rounded front vowels, as well as the pervasive short:long vowel difference. The vowel sounds are not equidistantly spaced either. Note specifically the clustering of [i/i e/e æ/æ] and [o/ɔ u/ʊ] as in

[mile] 'måle måle miq mej mej] mile, mele, mele; mit, mitt, met 'miles, meal, utter; mine, mid, full';
[mose] 'mose mose mose, måse, morse 'mash, behinds, morse'.

Taking morphologically conditioned phonological alternation into account, these more than 40 vowel sounds (including long vowels with stress) can be analysed as manifestations of 10 vowel phonemes: /æ e a y ø o ø o o ø, cf. Basbøll (1968), Grønnum (1996, 1998, 2001), Rischel (1968). This may be some consolation to the phonetician but hardly to the language learner.

Limitations of space prohibit more than merely stating that we also have a good score falling diphthongs, ending in semivowels [i], [y], and [ø], as in [mqj hoq ðigj] mig, hav, birk 'me, ocean, beech'. They can all be analysed phonologically as a vowel plus a consonant, /j/gj, /h vgh/ and /h/, respectively, cf. Basbøll (1973, 1975) and Grønnum (2001). The identification of the diphthongs is complicated by lenition or deletion of the non-syllabic element, cf. 2.2 and 2.3.

A semivowel becomes syllabic when a neighbouring schwa is assimilated into it. In the examples throughout the text I render these syllabic semivowels as [i u v], although this is a misrepresentation of the lack of precision in the articulatorily treated; they would be more adequately transcribed as /i u y/ with a syllability stroke beneath.

There are no principled restrictions in sequences of [j] plus vowel, and phonetically they form a multitude of rising diphthongs in all, e.g., [jysd 'jaqg] jyde, jokke 'foundlandish, trample'.

2.2. Lenition of coda consonants
The stops and /v/ and /h/ undergo 'consonant gradation' (in Rischel's 1970 terminology), i.e., they have different manifestations in syllable onset and coda.

/p t k/ lose their aspiration, and since they are inherently lenes they become identical to the initial manifestation of /b d g/, i.e. [b d g], cf. [jysd 'jag v'ød løbe løløppere; vat, vattere; lak, lakere 'gallop (n/v); cotton, quilt; lacquer (n/v).
2.4. Assimilation of schwa

Assimilation of [a] is pervasive in Danish, not only in informal, spontaneous speech but also in distinct speech styles. Schwa is assimilated to a neighbouring vowel or to a sonorant consonant (including semivowels, cf. 2.2) which then becomes syllabic. This applies also when schwa becomes neighbour to a vowel only after deletion of an intermediate (semivowel, as seen in the first examples below:

[ˈfiːt ˈjʌnu ˈææ:] die, dige; due, duge, duwe; ae, age ‘suckle, dike, pigeon, tablecloths, heave and set; caress, ride in a carriage’;
[ˈfæðə] hæt mony ˈæm] bade, hule, måne, dame ‘bathe, cave, moon, lady’;
[ˈʃæçi] ˈkæll ˈkæ:mm venn ‘læŋ] epipale, kulde, komme, vende, længe ‘impele, cold, come, turn, long’;

Complete elision, with loss of a syllable, also occurs, although not as frequently, thus [ˈsɡæʃə] skabe ‘create’ becomes [sɡæʃə] and [ˈpæsɔ] passe ‘fit’ becomes [pɔas].

Again, this is in stark contrast to Swedish, compare:

Swedish | Danish
---|---
annan | [ə'nə:n] | anden
komma | [ˈkɔma] | komme
många | [ˈmɔna] | mange
alla | [ˈolo] | alle

and see also the comparisons in 2.2 above.

When a vowel segment is lost, the uninitiated listener — who is not aware that a modest rise in pitch after the stressed vowel is the carrier of a second syllable in words like those above — will believe that he heard a monosyllable, and will search in the wrong part of his mental lexicon for the identity of the word, cf. 3.2 below.

2.5. Complicated morphophonology

Inflection and derivation produce alternations in the stem, cf.

[ˈfeːt] fedə ˈbæs] fed, fed; bæl, bældt ‘fat (comm/neutr), soft (comm/neutr);
[ˈʃdiːt ˈʃift] stiv, stivt ‘stiff (comm/neutr);
[ˈʃæçi ˈkæ:mm] kæbe, kæbt ‘buy, bought’;
[ˈkæ(mi] ˈkæ:mm] koge, kogt ‘boil, boiled’;
[ˈʃæçi ˈʃæ:mm] stege, steget ‘steak, fried’;
[ˈhæt ˈhæ:mm] høve, høxt ‘bake, baked, pastry’.

Note that the orthography is close to a ‘morpheme constancy’ ideal, but the morphological link with pronunciation is rather weak, which presumably poses a problem in both perception and production for beginners.

2.6. Further recent developments

Extensive ‘-colouring’, i.e. lowering and retraction of vowels neighbouring /r/, deletion of semivowels after non-high vowels, and loss of vowel length distinctions in certain contexts yield numerous homonyms, for example:

[ˈhanl] = /ˈhanl berer bejør bager/ bare, berer, bager ‘carry, carries, cup, baker’;
[ˈkærə] = /ˈkærə kærə kæ:jər kæ:mm/ kærə, kærəs, kægers, kærəs ‘dear ones’, cart’s, cakes’, chaos’;
[ˈleːdɔ] = /ˈleːdɔ laːdɔ/ ladet, ladet ‘made, loaded’;
[ˈkroʊ ˈɡeːtə] = /ˈkroʊ kuro gedor gedor/ kure, kurre, geder, geder ‘slide, coo; goats, pikes’;
[ˈjoː] = /ˈjoːdɔ sədət sədət se:vədər sədət, sədət, sədet, sədet ‘desolate, wasted, increased, practised’.

High vowels used not to be affected by a neighbouring /r/, but /r/ now lowers one degree after /r/, creating mergers between /u/ and /ø/ and producing hitherto unusual [ʊ]-sounds in closed syllables (where short /ø/ otherwise regularly is manifested as [ɔ]), cf. [ˈsoʊl] krut ‘window-pane, rummage; gun-powder’.

3. Prosody

3.1. Stød


Presence vs absence of stød creates an abundance of minimal contrasts, for instance:

[ˈviːt ˈviːsə] viser ‘shows (yb), hand (on instrument’);
[ˈhuː ˈhæ:mm] hvoren, valen ‘the whale, half-hearted’;
[ˈhuː ˈhæ:mm] huset ‘hustet (n/v)’;
[ˈhæ:mm ˈhændə] hænder ‘händers (n/v)’;
Though presence vs. absence of stød is distinctive on the surface, it is in fact to a very large extent structurally governed. The principles have been greatly simplified in Hans Basbøll’s new and extremely insightful account of this and other matters phonological, cf. Basbøll (2001a, 2001b, 2003). Even so, stød is a hard phenomenon to master. Not just to hear it and produce it – which takes no little amount of practice – but also to put it where it belongs and nowhere else. It is a very common learner’s mistake to make to many støds, which is jarring to a Danish ear.

3.2. The manifestation of stress
In sections 3.2–3.5, I do no more than give examples. Documentation and arguments for the postulated analyses can be found in Grønnum (1991, 1992). Note that the statements made pertain to Danish spoken in the greater Copenhagen area by the younger generations, in neutral reading style.

Stressed syllables are characterised by a variety of rather weak segmental cues, such as a modest lengthening and slightly more distinct pronunciation of segments, perhaps a slightly different – more compressed – voice quality, but above all they are associated with a change in pitch, as can be seen in figure 2. Thus, the peak of a fundamental frequency pattern is constituted by the first post-tonic syllable, not by the stressed syllable, which is perhaps more common in the languages of the world, and foreigners have been known to mistake the post-tonic for the stressed syllable.

3.3. Absence of specific juncture cues
Danish does not have pre-boundary lengthening. For illustration, compare the information in figure 3 with the Swedish corresponding example in figure 4 (and disregard the immaterial difference in prominence across the two figures).
Final lengthening is insignificant in Danish, comprehensive in Swedish, and Swedes are reported to have trouble determining when a Danish utterance is finished. I hold lack of final lengthening responsible, together with the absence of default sentence accents, cf. 3.4.

3.4. Absence of compulsory sentence accents

In a number of languages, among them Swedish, one word in a phrase or utterance will be more prominent than the others, and if the context does not specify otherwise, this accent will fall on the last word. Not so in Danish. Compare first the two Kammas in figure 5. Swedish Kamma has an elaborate fundamental frequency pattern, the most elaborate in the utterance, whereas there is nothing to similarly distinguish Danish Kamma.

Figure 6 demonstrates the difference in Swedish between a final focal accent and the absence of any accent. The upper utterance is the reply to a question “What is Torben’s sister’s name?” and the lower one answers the question “Who has a sister called Kamma?” This puts the corresponding Danish utterances in figure 7 in relief: the putatively accented Kamma above and unaccented Kamma below do not have much to distinguish them. For one thing, there is no consistent difference between the utterance in isolation (figure 3, upper part) and this one which has a final pragmatic focus. Secondly, the pragmatic focus on an early word (Torbens in figure 7, lower tracing) is signalled mainly through the absence of a rise in fundamental frequency from the succeeding stressed syllable sss- to its post-tonic -ter. I.e. focal accents are not boosted in Danish but get their relative prominence through a reduction of the surrounding, predominantly the succeeding, stress.

I believe these very real differences between Danish and Swedish are primarily responsible for the impression some Swedes have that Danes are curiously uninterested in their own discourse; and I am certain that when Swedes carry over their own prosodic patterns, their final lengthening, and their default and focal accents to Danish, they may sound dogmatic or overly enthusiastic, bordering on the theatrical.
3.5. Absence of compulsory local signals to utterance function

Please note that time and frequency scales are almost but not exactly identical across the figures to follow.

Terminal declarative utterances are characterised by an overall fall and a progressive shrinking of the fundamental frequency patterns associated with the stressed syllables. The global fall comes about when the stressed syllables are successively lowered, in equal steps (on a log-scale), whose magnitude is inversely proportional to the number of stresses in the utterance, cf. figure 2 and figure 8 (lower tracing). There is no local final fall to terminate the utterance. Nor do questions have to end on a particularly high note, cf. figure 8, upper tracing. (This is actually too long to be a likely ‘intonation question’ but for illustrative purposes it will serve.)

There are Danish regional varieties with final falls in declaratives, cf. the Bornholm example in figure 9. Bornholm is more similar to Swedish in this respect, cf. figure 10 which superposes a declarative and an interrogative utterance. Both terminate at the same low, but the question starts from higher up.

Again, foreigners may have difficulty determining when an utterance has come to its end and they may not easily recognise questions from their faint prosodic make-up, either.

4. Conclusion

An abundance of vowels, weak syllable codas, unstressed syllables without any vowel sound, and fairly inexpressive prosody makes Danish a harder nut to crack perceptually than most languages which it otherwise is reasonable to compare it to.

Bibliography