# The Four Troublemakers in Danish Orthography 

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#### Abstract

This paper deals with those aspects of Danish orthography that makes it useless as a guide to actual Danish pronunciation. Danish has a bad reputation among prospective learners for being difficult to pronounce. Certain aspects, like the number of full vowels and the glottal stop, are difficult to cope with, but other aspects are certainly not. Part of the confusion lies in the fact that the orthography - rather than leading the student of Danish towards a proper pronunciation - systematically gives a false impression of what Danes do when they speak. The main areas are 1) the way graphemes associated with the plosives are used, 2) the unsystematic sound-grapheme relation of the short vowels, 3) the problems in deriving the correct length of a full vowel from the writing and 4) the absence of an orthographic equivalence to the glottal stop.


## 1. Pronunciation and spelling of Danish ${ }^{1}$

The theme of this article is to give an introduction to the main problems that arise for anybody trying to use the orthography as a guide to the pronunciation of Danish. Among prospective learners, Danish has a bad reputation; the language is considered difficult to learn and to cause endless trouble for people who try to learn it. Nevertheless some people succeed with the task, among them the person we celebrate with this book. Learning Danish is possible, but definitely not easy.

[^0]Learning Danish pronunciation is in itself a difficult task. The pronunciation is characterized by many complicated assimilations, especially around the unstressed syllables (cp. Ács \& Jørgensen, 1990; Ács, Fenyvesi \& Jørgensen, 2008; Basbøll, 2005, pp. 293-322). The spectrum of consonants also varies in unpredictable ways; the actual inventory of consonant sounds being different in prevocalic and postvocalic positions (Basbøll, 2005, p. 42). Finally, the sheer amount of different full vowel phonemes is considerable; the analysis varies, but recent revisions by, among others, Hans Basbøll (Basbøll \& Wagner, 1985; Basbøll, 2005) have brought the number to twelve. Along with this dirty dozen comes a number of combinatory variants, which means that Danish supersedes most other languages by having three different classes of vowels (back, front rounded and front unrounded) and at least five different height levels (Basbøll, 2005, p. 50).

In addition to all these complex factors, the prospective learner of Danish is faced with the fact that Danish orthography is quite complicated. Sometimes the euphemism "deep orthography" is used to characterize the situation; the situation is, put more bluntly, that the orthography has a long tradition, that the occasional changes of the orthography never were meant to deal with problems in the grapheme-to-sound correspondences, and that several aspects of the pronunciation have not been covered by orthography in any way. While such an orthography favours those who have put the best of their childhood years into mastering it, it is unfavourable to those who try to learn the language. In the words of the important Danish phonetician and grammarian Jens Pedersen Høysgaard (1698-1773): "It is no grace to a language to be filled up with rules that are only there to cause trouble to youngsters, to the simpletons and to foreigners who try to learn the language. ${ }^{2}$

The intention with this paper is to give an outline of the kind of difficulties that Danish orthography causes to learners of the language. The four most important troublemakers are the following themes, where the Danish orthography gives no clue whatsoever to the actual pronunciation:

1) The graphemes $p t k-b g d$ normally associated with the plosives
2) The vowel graphemes, esp. those covering short vowels
3) Vowel length
4) The glottal stop
[^1]
## 2. The effects of the four troublemakers

One of the main problems in Danish is the distributional asymmetry of many consonant graphemes. Many graphemes are associated with different sounds, according to whether they occur before or after the vocalic nucleus of the syllable. Part of the reason for this is economy. There is a different set of sounds before and after the vocalic nucleus; thus recycling may be necessary if we want to have a reasonably international alphabet. Another reason is that the sounds have changed their pronunciation in the different contexts after the writing tradition was established. As we shall see, both these factors have been active in shaping the sound/writing interface of Danish. The following discussion relies mainly on Basbøll (2004, 2005), Becker-Christensen (1988), Jervelund (2007), and above all Katlev (1980).

### 2.1. Plosives

Under this heading, I discuss the pronunciations associated with the six graphemes $p t k-b d g$, usually associated with plosive pronunciations in languages that use the Latin alphabet. The point is that these graphemes are associated with many different consonant qualities, not just plosives.

In Danish, the phonemes have standard pronunciations according to their position in the syllable. In principle, a consonant phoneme in Danish has four possible positions; before the vocalic nucleus, we may distinguish between the absolute front position with nothing preceding the consonant (C-) and a secondary position (cC-) with (at least) one other consonant preceding. After the vocalic nucleus, we may distinguish between absolute back position ( -C ) and a secondary position ( -Cc ) with (at least) one other consonant following. The following tables show how the graphemes are converted into pronunciation, according to the position in the (written and pronounced) syllable. The tables also includes certain variational phenomena.

| Grapheme: | C- | cC- | -Cc | - C |
| :--- | :--- | :--- | :--- | :--- |
| p | $[\mathrm{p}]$ | $[\mathrm{b}]$ | $[\mathrm{b}]$ | $[\mathrm{p}] /[\mathrm{b}]$ <br> Non-standard: $[\mathrm{w}]$ |
| t | $[\mathrm{t}]$ | $[\mathrm{d}]$ | $[\mathrm{d}]$ | $[\mathrm{t}] / \mathrm{d}]$ or $[\mathrm{\delta}]$ |
| k | $[\mathrm{k}]$ | $[\mathrm{g}]$ | $[\mathrm{g}]$ | $[\mathrm{k}] /[\mathrm{g}]$ |

Table 1. Plosives ' p ', 't' and 'k'

The interpretation of this table is quite straightforward; only grapheme ' t ' in -C position covers two distinct phonemes, /t/ and / $\delta / .{ }^{3}$ The actual distribution of the aspirated plosive phonemes is that they only appear in Cposition as phonemically distinct from the unaspirated plosives. In all other positions, we find only the unaspirated sounds, although often represented by the 'aspirated' grapheme. This is the reason why the 'unaspirated' graphemes occur much more sparsely:

| Grapheme | C- | cC- | -Cc | -C |
| :--- | :--- | :--- | :--- | :--- |
| b | $[\mathrm{b}]$ | -- | $[\mathrm{b}]$ or $[\mathrm{w}]$ | $[\mathrm{p}] /[\mathrm{b}]$ |
| d | $[\mathrm{d}]$ | -- | (marginal) | $[\mathrm{t}] /[\mathrm{d}]$ or $[\mathrm{d}]$ |
| g | $[\mathrm{g}]$ | -- | (marginal) | $[\mathrm{k}] /[\mathrm{g}]$ or $[\mathrm{i}] /[\mathrm{w}]$ |

Table 2. Plosives 'b', 'd' and 'g'
Thus the plosive graphemes must always be interpreted in relation to the position in the syllable. This is not unusual in Danish; it also happens, for instance, with the graphemes ' $r$ ', ' $v$ ' and ' $j$ '. All these three are pronounced as fricatives when prevocalic, but as semivowels when postvocalic, cp . Basbøll, 2005, p. 64. But, whereas this alternation is rather straightforward, the main problem with the plosive graphemes is that the contrast between what the grapheme would normally correspond to, and the actual sound is striking. When graphemes like ' $d$ ', ' $g$ ' and partly ' t ' change from front to back position, they also change in three phonetic categories:

1) From punctual to continuous;
2) From unvoiced to voiced;
3) From contoid to vocoid.

In a hierarchy of sonority, the contrast between plosives and semivowels is considered strong, these two classes being at either end of the consonantal part of the hierarchy. Yet, in Danish, the three graphemes mentioned perform this change, as we shall see.

[^2]| $b$ | C- | cC- | -Cc | -C |
| :--- | :--- | :--- | :--- | :--- |
| Plosive <br> pronunciation | by (town) <br> bro (bridge) <br> blad (leaf) | -- | vable <br> ceble (apple) <br> skcebne (fortune) <br> erobre (conquer) <br> krebs (cancer) | køb <br> (acquisition) |
| Semivocalic <br> pronunciation | -- | -- | (ceble) | (køb) <br> kobber (copper) <br> peber (pepper) |

Table 3. Asymmetry of plosive graphemes - pronunciation of 'b'

The grapheme ' $b$ ' presents only few problems. Semivocalic pronunciations (all of them with a [u]) are mostly varieties in casual speech ${ }^{4}$, except kobber (copper) and peber (pepper), where the semivocalic pronunciation is standard. It is odd, but not unsurmountable that out of the words given here with postvocalic plosive pronunciation, ceble has a semivocalic variant but the others do not. In this case, a plosive pronunciation will always be acceptable.

| $d$ | C | cC- | -Cc | -C |
| :--- | :--- | :--- | :--- | :--- |
| Plosive <br> pronunciation | dør (door) <br> dingle (hang) <br> droppe (drop) | -- | -- | absurd (absurd) <br> addend (factor) <br> akkord (chord) <br> ard (type of plough) <br> bold (ball) |
| Semivocalic <br> pronunciation | -- | -- | --5 | mad (food) <br> mod (courage) <br> bid (bit) <br> slud (slush) <br> vold (violence) <br> aldehyd <br> alkaloid |

Table 4. Asymmetry of the plosives - pronunciation of 'd'

[^3]The real complication with this grapheme is the pronunciation in the -C position, where both plosive and semivocalic pronunciation are in play. Another complication is that a written ' -d ' is not pronounced after ' l ', ' $n$ ' and 'r' (fald (fall), hold (grip), mand (man), grund (ground), hård (hard), mord (killing)' and before ' s ' and ' t ' (Mads (name), gods (goods), midt (middle), blandt (among) ${ }^{8}$ ), the so-called "silent d". In such contexts, the $d$ often represents earlier conventions concerning certain now lost sounds that were represented in orthography of those days with a digraph. On the complicated details of these spelling forms and their interaction with the glottal stop, see Jensen 2016.

| g | C- | cC- | -Cc | C |
| :--- | :--- | :--- | :--- | :--- |
| Plosive <br> pronun- <br> ciation | gave (gift) <br> gåde (riddle) <br> grufuld <br> (terrible) | sgu <br> [swearword] | gigt <br> vcegt (weight) <br> heegte (connect) <br> bygd (village) <br> loegd (military roll) <br> slags (kind) <br> sigt (sight) <br> magt (power) | grog (rhum) |

Table 5. Asymmetry of the plosives - pronunciation of ${ }^{\prime} g^{99}$
This table demonstrates the same overall distribution as with the other two plosive graphemes: the cC - position is only represented by the swearword $s g u$, derived from a longer oath containing gud ('God'), hence the deviant

[^4]$s g$-spelling. Here, the -Cc position is the complicated one, where both possible pronunciations are found. The -C position seems mostly to trigger semivowels; grog (rhum) is a loanword. It adds to the complications that the semivocalic pronunciation is dependent on the preceding full vowel: front vowels yield an $[\mathrm{i}]$ corresponding to the ' g ', back vowels a $[\mathrm{u}]$.

### 2.2. Short vowels

As has been noted often (Basbøll \& Wagner, 1985; Basbøll, 2005; Jervelund, 2007), the sound-to-letter correspondence for long vowels is unmarked in most cases. The short vowels, on the other hand, are complex. Sometimes one grapheme represents two or more phonemes, at other times two graphemes share a phoneme. When both these situations occur, the pronunciation gets rather complicated. With the front unrounded vowels, the two middle ones represent the same phoneme, but the high and the ones represent two: ${ }^{10}$

| Grapheme | Sound | Examples |
| :--- | :--- | :--- |
| I | /i/ | pisk (whip), (mini-)Risk (name), mild (mild), sild <br> (herring), vild (wild), skidt (dirt) |
|  | /e/ | disk (counter), fisk (fish), pil (arrow), vil (vb. will), <br> midt (middle) |
|  | $/ \varepsilon /$ | fest (party), hest (horse), bedst (best) |
| Æ | $/ \varepsilon /$ | loest (shoe tree), ncest (next to) |
| A | $/ \mathrm{a} /$ | and (duck), hat (hat), fald (fall) |
|  | $/ \alpha /$ | Anders (name), kaffe (coffee), kam (comb) and in <br> connection with -r-: kram (hug), skrald (garbage) |

Table 6. Sound-grapheme correspondences of the short unrounded front vowels
The two front rounded vowels share the sound /ø/. Quite often, the phonological context gives no clue to the pronunciation (bytte vs. nytte; dysse vs. kysse):

[^5]| Grapheme | Sound | Examples |
| :--- | :--- | :--- |
| Y | $/ \mathrm{y} /$ | bytte (exchange), dytte (honk), hytte (hut), lytte (listen), <br> pyt (puddle), dysse (soothen), hysse (hiss, silence), <br> Sysse (name) |
|  | $/ \varnothing /$ | nytte (be of use), spytte (spit), kysse (kiss) |
|  | $/ \varnothing /$ | bøtte (bucket) |
|  | $/ \mathrm{CE} /$ | bønne (bean), stønne (groan) |

Table 7: Sound-grapheme correspondences of the short rounded front vowels
The graphemes that represent the back vowels share four sounds in the most inconsistent way:

| Grapheme | Sound | Examples |
| :---: | :---: | :---: |
| U | /u/ | bul (treetrunk), bulle (official letter), skulle (inf. of 'shall'), tulle (mess around), kulle (bald mountain) |
|  | /3/ | kul (coal), hul (hole), nul (zero), (for-)kulle (turn into coal), (gennem-)hulle (to get filled with holes) |
| O | /0/ | mor (mother), foto (photo) |
|  | /3/ | bombe (bomb), plombe (dental filling) |
|  | / $/ 1$ | rhombe (rhombe), hekatombe (hekatombe) |
| Å | (/D/ | tårn (tower), år (year), hår (hair) ${ }^{11}$ |
|  | / $/ 1$ | bånd (ribbon), hånd (hand) |

Table 8: Sound-grapheme correspondences of the short back vowels
The situation concerning the short vowels can only be characterized as a complete mess. Due to sound changes and etymology, conventional spellings with a very inconsequent relation to the actual pronunciation prevail and leave the learner with almost no clue at all of what to do.

[^6]This problem, combined with the fact that the orthography only makes a dim distinction between long and short vowels (see sect. 2.3.), makes the orthography of the vowels almost impossible to use when actual pronunciation is attempted.

### 2.3. Vowel length

Vowel length is an important feature in Danish pronunciation; yet the orthography does very little to make clear when a vowel is long, and when it is short. Still, there are some main rules, which Becker-Christensen, 1988, p. 87 gives as a two-way system:

I: In syllables ending in a vowel and syllables with one postvocalic consonant: the vowel is LONG.
II: In syllables with two post-vocalic consonants: the vowel is SHORT

Before we may use this rule, there are some reservations. This rule applies only to monosyllabic words and words ending in a stressed syllable. Furthermore, the rule may first be applied when all inflections and derivatives have been removed. This makes life more complicated for learners, since one has to know the details of morphology in order to apply the rule.

However, this is not all there is to it. We find a number of exceptions to both rules, which makes the picture even more opaque. Exceptions to rule I, e.g. short vowel in VC-structures without glottal stop (cf. BeckerChristensen, 1988, p. 92 \& 213):

- In front of plosives: hat (hat), nok (enough), kat (cat), gok (a stroke, blow), tit (often), flok (flock), klik (click), smuk (beautiful), flot (impressive), glat (even), at (that), sat (form of vb.'to sit')
- In front of nasals: han (he), hun (she), man (pron. 'one'), som ('that' as relative)
- In front of semi-vowels: og (and), jeg (I), dig (obl. form of sg. 'you'), sig (refl. pronoun), er (is), var (was), rav (amber), drev (drive (IT)), rev (riff), jer (obl. form of pl. 'you'), vor (our)
- In front of [ð]: glad (happy), mad (food), had (hatred), gud (God), bed (bed of flowers), fred (peace)

Pronouns and other function words are well represented in this group: og, jeg, dig, sig, er, var, at, som, det (it), sit (reflexive-possessive), jer and vor ${ }^{12}$. The main reason seems to be that the prosody of the standard pronunciation has changed drastically after the first establishment of the writing tradition.

Furthermore, there are a number of exceptions to rule II, cp. BeckerChristensen (1988, p. 91):

- The vowel is long before $-r d$ and $-d s$, and before $g C$ : Bord (table), kreds (circle), ligne (look like), fugl (bird), flegma (phlegma), and as exceptions karl (farmhand), vejr (weather)
- The vowel is long before certain double consonants: ncebbet (beak-the), loeggen (thigh-the), skeegget (beard-the), cegget (egg-the), sjette (sixth), otte (eight), cetten (family-the), bredde (broadness), vidde (width).
- The vowel is long before certain combinations of graphemes: vable, ceble (apple), skcebne (fortune), veebne (vb. 'arm'), erobre (conquer), sagte (silent, soft-spoken), ens (identical), besk (bitter), slesk (wheedling), trcesk (wily), påske (easter), bcest (animal, unpleasant person), faste (lent), kiste (coffin), hoste (cough), pruste (snort), puste (blow; the two last ones may be both long and short).

Inflectional forms are the reason for a number of (apparent) exceptions to rule II (short vowel when followed by two consonants). In many cases, one spelling form has two pronunciations, one following rule II and therefore short, one of them inflected, and therefore following rule I after subtraction of the ending $-t$ :

- Mast: as a substantive ('mast') short, but as a verb ('mase', press) long
- Lcest: as a substantive ('shoe tree') short, but as a verb ('læse', read) long
- Lyst: as a substantive ('pleasure') short, but as a verb ('lyse', give light) long
- Kyst: as a substantive ('coast') short, but as a verb ('kyse', to scare) long
- Øst: as a substantive ('east') short, but as a verb ('øse', to pour) long

In the central part of the vocabulary, such exceptions like e.g. short vowel in syllables ending in a vowel are quite frequent (Becker-Christensen,

[^7]1988, p. 93):

- Many personal pronouns: $d u$ ('you' sg.), $v i$ ('we'), $I$ ('you' pl.), $d e$ (De) ('they' \& 'you' polite sg. \& pl.)
- Many interjections: $j a$ ('yes'), ha ('ha'), hurra ('hurray'), $f y$ (introducing a reproach), $n a ̊$ (expression of attention or doubt), oho, hallo
- Adverbs, conjunctions etc. ${ }^{13}$ : nu, da, så, thi, jo

Many loan words generate exceptions as well:

- The solmisation do, re, mi, fa, la
- Loan words from French: cha-cha-cha, gaga, charpi, fait acccompli, hotel garni, kepi, maki (including the French-inspired pronunciation of the capital of Finland, HelsinKI), art deco, yoyo, vue/vy, revy, (portemonnce, adjø,) miljø. ${ }^{14}$

While many of these exceptions are marginal, several of the others deal with the core vocabulary. Together with the principle that the rules of prosodic interpretation of vowel graphemes do not apply until the stem has been stripped off its morphology, it is fair to conclude that the prosodic character of the vowels is almost inscrutable from orthography in Danish.

### 2.4. The orthography and the glottal stop

According to the most recent and most comprehensive theory on the glottal stop, this prosodic feature is distributed according to the weight of the syllable, cp. Basbøll (1988, 1998, 2005). Therefore, the other prosodic features (vocalic length combined with certain voiced postvocalic consonants) determine where the glottal stop may occur. In principle, the glottal stop only occurs in the ultimate syllable of a stem; if there is an unstressed final syllable, usually no glottal stop occurs. However, the orthography gives no clues to this at all. No constellation of letters signals the glottal stop in any consistent way (Basbøll, 2005, p. 90).

The fact that the glottal stop is concomitant with other factors is probably the main reason why this phenomenon never attracted the interest

[^8]of orthographers (except Høysgaard in the 18th century). However, for a learner, the rules needed to identify the position of the glottal stop are so complex that they are hardly worth applying in teaching (except when teaching linguists). Thus, the absence of a spelling convention creates serious challenges for learners.

If Jutland had remained the core area of the kingdom (as it was at the dawn of Danish history, the capital being Jelling in Southern Jutland), things would have had to take a different course. All dialects in Jutland have APOCOPE, i.e. unstressed final syllables have been lost. Due to this sound law, Old Norse monosyllabic stems (later with glottal stop) and bisyllabic stems (later without glottal stop) form one monosyllabic group in this dialect comprising most of the current vocabulary of the language. However, the contact backwards in the Jutland dialects is intact; the old monosyllabic words retain the glottal stop, and the old bisyllabic words did not acquire it. Only the glottal stop will keep the two groups distinct and therefore any orthographic system for Jutland dialects will have to find a way of signalling the glottal stop; otherwise essential information is lost. Since, however, the standard orthography was based on the pronunciation in Sealand dialects, where no systematic apocope is found, this problem did not arise in Standard Danish.

Loss of final schwa is now spreading into Standard Danish (Brink \& Lund, 1974, pp. 195-7), thus facing also the non-jutlanders with this soundgrapheme interface problem. Furthermore, most modern monosyllabic loan words from English (boom, cool, cruise) cannot be accommodated to modern Danish orthography. For theoretical reasons, the attempts at spelling conventions for Jutland dialects are of interest; they might provide us with a solution to a problem that will become more and more relevant due to the strong influx of English loan words.

Viggo Sørensen (2007, p. 54) gives an analysis of the situation in Standard Danish compared to Jutland dialects. He identifies three monosyllabic types in Standard Danish:

- Words with vocalic glottal stop (bro (bridge), sne (snow), gry (dawn), fad (tray), nol (tarrying))
- Words with consonantal glottal stop (land (land), rend (mass), vom (stomach))
- Words without a glottal stop (hat (hat), scet (set), blot (only), rat (steering wheel))

As we have seen, Danish orthography leaves no clues as to which of these types the learner is faced with, apart from the spelling conventions mentioned above. It is remarkable that the orthographic constellation (-)VC is represented in all three prosodic word types.

In the Jutland dialects on the other hand, Sørensen (2007, p. 57) identifies seven syllabic types:

1. Words with a tonal accent (only relevant in certain Southern Jutland dialects)
2. Words with vocalic glottal stop
3. Words with consonantal glottal stop
4. Words without a glottal stop
5. Words with a long vowel without glottal stop
6. Words with long consonant
7. Words with West Jutland glottalization

This is a general matrix. Only a few dialects in Southern Jutland have type 1 , and the use of 7 is also restricted to parts of Western Jutland. However, types 2-6 are present all over the peninsula.

In Jutland, presence and absence of glottal stop ${ }^{15}$ are the only distinctions of singular vs. plural with many monosyllabic words:

| Hus (house) | [hu2s] $-[$ hu:s $]$ |
| :--- | :--- |
| Ben (leg) | [bie?n] $-[$ bi:en $]$ |
| Gren (branch) | [græ2n] $-[$ græ:n:] |
| Bro (bridge) | $[$ bro?w $]-[$ bro:w: $]$ |

Therefore, most Jutland dialects have a syllabic type unknown to Standard Danish until the monosyllabic English loan words arrived: monosyllables with a long vowel without glottal stop. The plural forms above display this.

In general, there has been little interest in a special orthography for Jutland dialects, even though the Standard Danish language taught in the schools must have seemed strange to small children in Jutland 200 years ago. Most practitioners of a special Jutland orthography were authors using dialect either in quotes or in whole narratives. The best known of them, poet

[^9]and vicar, Steen Steensen Blicher (1782-1848), devised an orthography for his short stories in dialect, mostly written in Central Jutland dialects. Here follows an overview of Blicher's method of rendering the prosody in orthography (after Sørensen, 2007, p. 55; 'GS' is short for 'glottal stop'):

1. Short $\mathrm{V}+/-\mathrm{C}$ :
2. Long $\mathrm{V}+\mathrm{GS}+/-\mathrm{C}$ :
3. Short $\mathrm{V}+\mathrm{C}+\mathrm{GS}$ :
4. Long $\mathrm{V}+/-\mathrm{C}$ :
5. Short $\mathrm{V}+$ Long C :
no special marking
Ve $($ bar $($ carried $)=$ baer; dør (door) $=$ døer $)$
$\boldsymbol{V C h}($ vild $($ wild $)=$ vilh; nem $($ easy $)=$ nemh $)$
$\boldsymbol{V h} \boldsymbol{C} \boldsymbol{C})($ plade $($ plate $)=$ plahd; tørre $($ to dry $)=$ tahr)
$\boldsymbol{V C C}($ nar $($ fool $)=$ narr, levne (leave behind $)$
= löwnn)
6. Short $\mathrm{V}+\mathrm{C}+$ West Jutland GS: like 5

Certain aspects of Blicher's orthography are inconsistent. It seems irregular to signal the glottal stop in vowels with 'e' (2), but with 'h' with consonants (3), particularly when ' $h$ ' with vowels signify length (4). Many of Blicher's orthographic devices echo from orthography in early modern times (1500-1700, partly also older), where many similar spelling variants are found. In all likelihood, they were not used in a consistent way even then; what Blicher did, was to take unsystematic occurrences and give them a consistent meaning.

For Jutland dialect speakers, his orthography was, and may still be, intuitively useful. Whether an attempt at a modern spelling reform designed to eliminate the troublemakers would find Blicher's way of handling things useful, is quite another matter. However, he actually managed to solve the prosodic problems in a way that might be useful in a future orthographic reform.

## 3. Conclusion

The four problem areas that I have tried to identify in this paper, the plosive graphemes, the short vowels, the vowel length, and the glottal stop, are the main reasons why orthography is a very bad guide to Danish pronunciation. Hopefully, this overview serves to demonstrate how complicated the situation is. What Danes write, has very little to do with what they say.

Sometimes, the problem areas are language-internal matters. In almost all languages, short inherently unstressed words will often have a well-established orthographic form, and it is quite unlikely that it converges with the main tendencies in the sound/writing interface.

Other problems arise from loan words. German and French loan words are normally quite well integrated in present-day Danish orthography. The English loan words, on the other side, present unsurmountable problems to the orthographic system and at present no attempt is made to integrate them at all.

Obviously a regulation, especially of the prosodic form, is tempting - in theory. In reality, things look different. A thorough reform will change the orthography to a degree where contact with other Scandinavian languages and older written matters will become almost impossible.

My experience with Danish students is that they find it extremely difficult to distinguish prosodic features, although paradoxically they must perceive the effects of them. There are variational phenomena and developments underway; thus, there is no truly consistent norm to codify.

Therefore, my best guess is that nothing will happen with the Danish orthography, in spite of the state of affairs. If instructors want novice learners of Danish to sound Danish, they will still have to teach them pronunciation by the ear without the aid of a textbook. Furthermore, in the future written Danish will be utterly misleading when it comes to actual pronunciation. A spelling reform would probably make Danish less frustrating for foreigners, but due to the distance between spelling and pronunciation cause problems of other kinds. Høysgaard's negative judgment on complicated languages will continue to apply to Danish for a long time to come.

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[^0]:    1 This paper is based on a lecture given at SDU Odense (DK) and Harvard in 2014. I am grateful for comments and suggestions from the audiences in both places. Also, I wish to express my gratitude to Péter Ács, Budapest, for many years of discussion on related themes, and for his comments and suggestions for this paper.

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[^1]:    2 In Høysgaard's original words: " Thi det er ingen Dyd ved noget Sprog, at det har mange unyttige og unødvendige Observationer at plage Børn, eenfoldige og fremmede med, som vilde legge sig derefter..." (Høysgaard, 1743, p. 207)

[^2]:    ${ }^{3}$ There is a long discussion of the phonemic interpretation of [ð]. Here I have chosen a simple interpretation of this sound as a distinct phoneme, thereby disregarding a long tradition for including it as a positional variant of /d/, going back at least to Rischel 1970 (Consonant Gradation). Ács \& Jørgensen (2016) discuss the reasons to give up this analysis.

[^3]:    4 The use of the semivocalic pronunciation alternative is common, especially among speakers born before 1965 regardless of other social or regional variation.
    5 A few word forms with '-ds' are pronounced [ðs]: betids (in due time), andetsteds (elsewhere) etc. They all derive from genitive forms of tid (time) and sted (place), and therefore they are not true examples of this spelling constellation.
    6 Although it looks like loanwords mainly have the [d] pronunciation, this is not handled consistently. Chemical terms often have [ $\varnothing]$.

[^4]:    7 There are, however, some exceptions: bold (ball), bande (gang), herrde (make-hard), all of them with final [d].
    8 This last rule also applies when ' t ' is an inflection: hed - hedt (hot); $s \phi d-s \phi d t$ (sweet).
    9 This table does not take the use of ' g ' in digraphs like '-ng' into account.

[^5]:    ${ }^{10}$ The notation of the vowels follows normalized versions in the table in Basbøll, 2005, pp. 45-47. I refrain from giving the strict non-normalized IPA forms in this paper, but they may be found in Basbøll's table.

[^6]:    ${ }^{11}$ This grapheme-sound correspondence is only relevant if the phonemic analysis has to catalyse an /-r/ in this position. Otherwise, these examples are simply long vowels, manifestation of a fourth back vowel phoneme $/ \mathrm{d} /$, almost always corresponding to a digraph ‘år’. This phoneme makes perfect commutations with $/ \mathrm{J} /: a^{a}$ (river) - år (year); lå (past tense of ligge) - lår (thigh). Although certain cases of this commutation apparently rely on grammatical relations, like få-får (infinitive and present of 'to get') or gå-går (same forms of 'to go'), commutations like $\frac{a}{a}-a ̊ r$ and lå-lår cannot be reduced to grammar in this way.

[^7]:    12 But not den (it) with glottal stop and $\sin$ (reflexive-possessive) with a long vowel (and glottal stop).

[^8]:    ${ }^{13}$ Since most of these words do not correspond to similar words in English, no translation is given.
    ${ }^{14}$ This may be due to pronunciation habits created by "informed" speakers. The now obsolete and not quite polite $p \phi$ от $p \phi$ (fr. peu en peu) has a long vowel with a glottal stop, just as expected from a final vowel.

[^9]:    ${ }^{15}$ Or similar prosodic oppositions, like the tonemic patterns in certain Southern Danish dialects, cf. https://dialekt.ku.dk/dialektkort/.

