

NOTES ON THE PHONOLOGY OF DANISH IMPERATIVES WITH A  
DIGRESSION ON VOWEL QUANTITY<sup>1</sup>

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1. Introduction

The purpose of the present paper is to give a brief presentation of some facts concerning the phonology of Danish imperatives, both from a taxonomic and (mainly) from a generative point of view.

I shall be concerned with the phonological shape which the imperatives have if they do at all occur (the modal verbs, which never form imperatives, are, of course, left out of consideration), but not with the extent to which these imperatives are actually used or avoided in normal speech, for semantical or other reasons (cf. section 2.2.2. for some imperatives which are often avoided for phonological reasons).

In section 3.4. the vowel quantity of some related nouns and verbs is compared. The implications of this material for the imperative are discussed in section 3.3.

It should be emphasized that the present paper does not attempt to give explicit rule formulations or other definite solutions, since it is my conviction that too little is known as yet about the generative phonology of Danish (at least to the present author) to make such attempts successful. The purpose is the more modest one of presenting some data and problems which may be relevant to later, more explicit, formulations.

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1) I am indebted to Eli Fischer-Jørgensen and Jørgen Rischel for valuable comments on a first draft of this paper.

### 1.1. The language under consideration

The language described here is a rather conservative variety of Standard Danish, close to the norm described by Jespersen (10), Martinet (11), and Hjelmslev (9), generally in accordance with the pronunciations found in Ordbog over det danske Sprog. Rischel (13) often gives two or more pronunciations, and generally the more (most) conservative of these corresponds to the norm described here.

It should be noted that this "Conservative Standard Danish" (CSD) is clearly different from "Advanced Standard Copenhagen" (ASC) as described by Basbøll (1). In section 4. of the present paper a very brief survey of the imperatives in ASC will be given. (A summary of the main differences between CSD and ASC is given in the said paper (p. 34 ff).)

### 1.2. Phonetic transcription

I use a rather broad phonetic transcription much like the one found in Rischel (13). The reader is referred to his paper, both for a definition of the IPA symbols used in the transcription (p. 179), and for a survey of the phoneme system and the main rules of allophonic variation (p. 178 ff).

### 1.3. The material

The material includes all imperatives found in Sørensen (15). In some cases, other sources have been consulted, too, especially dictionaries and Hansen (6 and 8).

## 2. Danish imperatives from a taxonomic point of view

In most textbooks on Danish, the imperative is said to be identical to the stem of the verb, e.g. Diderichsen (5, p. 64). This is true for the orthography, and also for the pronunciation as long as the stød is kept out of consideration (cf. section 2.2. below).

The stem is found by subtracting final shwa (if there is any shwa, see below) from the infinitive, cf. the following section.

## 2.1. The infinitive

Danish infinitives all end in a vowel<sup>2</sup>: either in shwa ([ə]) or in a long or short "full" vowel (in accordance with the tradition, I consider all stød-vowels as being phonemically long; the term "full" vowel denotes all vowels except shwa).

All verbs whose stem ends in a consonant or a diphthong have infinitives ending in shwa.

Verbs whose stem ends in a vowel have infinitives identical to the stem or ending in shwa. This depends partly on the quality of the stem vowel. If it is u, the infinitive ends in shwa (exception du [du?] 'be good'). If it is i, some infinitives end in shwa (tie 'keep silent', kvie (sig) 'writhe', bie 'wait', svie 'smart', die 'suck'), others in [i?] (fri 'woo', ri 'tack', si 'strain', vi 'marry' - [gi?] is discussed below). If it is a, the infinitives seem to end in shwa, but we have only got two marginal examples (a'e 'caress', bejae 'say yes to' - [hæ? , tæ?] are discussed below). For all other vowels, the infinitive is identical to the stem.

Thus Martinet's statement (11, 4-9) that "les infinitifs danois ne prennent pas le -e désinence caractéristique de ce mode, lorsque le thème verbal se termine par une voyelle" is not correct, but his argument (for interpreting the diphthongs as combinations of a vowel plus a consonant) holds true because stems ending in a diphthong always have infinitives with shwa.

Phonemically, there is neutralization between long and short vowel before shwa. In all cases where the stem vowel appears word-finally it has stød and thus must be considered long, and I shall therefore consider the stem vowel before shwa as being phonemically long in all cases. Examples are the

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- 2) The infinitives ending in a long (voiced) consonant, e.g. kalde [kal:] 'call' (only in rapid speech), are phonemically to be interpreted as consonant plus shwa ( /kalə/ ).

adjectives ny, nye [nyʔ, ny(:)ə] 'new' and fri, frie [fʁiʔ, fʁi(:)ə] 'free' (and the sideforms of the infinitive vi/vie and di/die; the rare forms vie and di are mentioned by Hansen (6, p. 53 and 8, vol. III p. 66)). The imperatives are under discussion and should therefore not be used as an argument here.

Three verbs should be mentioned apart from the others because they have three different infinitive forms: give 'give', have 'have', and tage 'take', pronounced [gi:və, giʔ, gi], [hæ:və, hæʔ, ha], and [tæ:ʔə, tæʔ, ta], respectively. The normal pronunciations are those with stød-vowel. [gi, ha, ta] are the only infinitives which in stressed position end in a short "full" vowel (in unstressed position all vowels may lose their length and/or stød).

The verb klæde 'dress' is either pronounced [klɛ:ðə] or [klɛʔ] (with the corresponding two pronunciations [klɛ:ðp] or [klɛʔp] in the present tense). Similar sideforms are found in the verbs be(de), re(de), li(de) 'pray', 'comb', 'like'.

## 2.2. The imperative

The imperative of a verb is phonemically identical to the stem except for the fact that the imperative has stød whenever the stem has "phonetic stød-basis" (cf. section 3.2. below for another type of stød-basis).

Only syllables with a certain amount of stress can take the stød, but all stem syllables (which are the ones considered here) have got this amount of stress (normally primary or secondary stress), except when the word in which they occur is in unstressed position; the latter case is disregarded in the present paper.

Syllables with a long vowel always have phonetic stød-basis (if stød occurs it falls in the vowel). Syllables with a short vowel have phonetic stød-basis only if the vowel is immediately followed by a voiced consonant (which may or may not be followed by additional voiced or voiceless consonants), i.e. by [ð ʔ ʁ ʁ l m n ŋ] (if stød occurs it falls in this consonant). The i- and u-diphthongs also have phonetic stød-basis (if stød occurs it falls in its second member, cf. that they are normally interpreted as a short vowel plus /j/ or /v/; this inter-

pretation is used in the present paper).

The above-mentioned term "voiced consonant" should be taken to denote a class of phonemes, and not as being a purely phonetic description (in the case of r, however, the following consonant must be taken into consideration, cf. section 2.2.1. below). Word-final r, l etc. in stød-less syllables are often partly or wholly devoiced (e.g. par, hul [pɑɹ̥, ho̥l̥] 'pair', 'hole'), but these syllables nevertheless have phonetic stød-basis as shown by the imperatives par, hul [pɑɹ̥ʔ, ho̥l̥ʔ].

As an example of the formation of the imperative, let us consider the verb give. Corresponding to the three forms of the infinitive [gi:və, giʔ, gi] we have the three imperatives [giʔv, giʔ, gi].

Two verbs are exceptions to the rule that all imperatives with phonetic stød-basis (in the sense defined here) have stød, viz. kom, gør [kɔm, gœɹ] 'come', 'do'<sup>3</sup>. (According to the general scheme these imperatives should be \*[kɔmʔ, gœɹʔ], cf. the infinitives [kɔmə, gœɹvə].) Probably no purely synchronical explanation of these exceptions can be given, but Rischel (12) has pointed to the fact that these forms are often used in unstressed position, and in this position stød and vowel length are normally lost.

### 2.2.1. Verbs with stem-final r + consonant

The verbs with stem-final r + consonant pose special problems. I shall only give a very rough sketch of what I hope to be the main facts (in accordance with Hansen (7, p. 75 ff)); the practice of Ordbog over det danske Sprog is, however, extremely complicated - and probably inconsistent - on this point, cf. Diderichsen's detailed discussion (4, p. 62 ff).

In the norm described here, r after a short vowel is unvoiced before f, s, and written p, t, k. Such syllables do not

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3) Before the enclitic variants [ən, əð] of den, det [dɛnʔ, de] 'it', monosyllables with phonetic stød-basis always have stød, e.g. ['gœɹʔəð] (or ['gœɹdə]) 'do it (imperative or present)', but this phenomenon has nothing to do with specific grammatical forms, e.g. the imperative, see Hansen (6, p. 115 ff).

have phonetic stød-basis, cf. the absence of stød in imperatives like styrt, verf [sdyɔ̄d̥ , vɛɣf] 'overthrow', 'throw'. On the other hand, r before other consonants, including written b, d, g, is voiced, and such syllables have phonetic stød-basis, cf. the stød in imperatives like myrd, hverv [myɣ<sup>?</sup>d̥ , vɛɣ<sup>?</sup>v] 'murder', 'recruit'.

There are commutation pairs like vårten, verden [vɛɣ<sup>?</sup>d̥ən , vɛɣ<sup>?</sup>d̥ən] 'the host', 'world'. Phonemically, this may be a difference between /rt/ and /rd/ (after [ɣ] also [t] is heard, but never after [ɣ]), or between /r̥/ and /r/.

The first solution, which is in fact the common one, is in disagreement with the well-known statement (first mentioned by Uldall (16, p. 56 f), and discussed in detail by Martinet (11, 3-5 ff)) that there is neutralization [p/b], [t/d], and [k/g] before shwa. This argument is decisive for Martinet because he considers /ð/ and /ɣ/ (which generally are in opposition to [t/d] and [k/g], respectively, before shwa) as being separate phonemes, and he concludes that if the opposition verden : vårten were general in Danish (what he refutes) it must be a distinction between a voiced and an unvoiced r-phoneme (11, 3-30).

This distinction between two r-phonemes would permit us to state the needed addition to the rule for phonetic stød-basis of section 2.2. above in a simple way: /r/ belongs to the class of phonemes that constitute stød-basis together with a preceding short vowel, whereas /r̥/ does not. [ɣ] before f and s, where there is no opposition to [ɣ], is then of course to be identified with /r̥/, whereas word-final r (which may have anything between voicelessness and full voicing) is identified with /r/. (In ASC these words behave differently, cf. section 4. below.)

If, on the other hand, [t-] and [-d(-)] are reduced to one phoneme /t/, and [d-] and [-ð(-)] to /d/ (and similarly for [k-] and [-g(-)], and for [g-] and [-ɣ(-)]) - as they have normally been in Danish phonemics - Martinet's argument is no longer valid since there is then opposition between /t/ and /d/, and between /k/ and /g/, in the position between a vowel and

shwa. Thus it seems to be the simplest solution not to introduce a new phoneme ( $/r_{\text{ø}}/$ ), but to let the distinction between værtēn and verden be one between  $/rt/$  and  $/rd/$  where  $/d/$  is manifested by a stop (and not by a fricative as when occurring between a vowel and shwa). It should be added that  $/g/$  is manifested by a fricative in the cluster  $/rg/$ , and that the distinction between  $/p/$  and  $/b/$  after  $/r/$  is similar to that between  $/t/$  and  $/d/$  (e.g. torpen, Torben [tɔɾpɛn, tɔɾbɛn] 'the thorp', '(a boy's name)')<sup>4</sup>.

If the above-mentioned reduction is accepted, the formulation of phonetic stød-basis of section 2.2. above must be modified like this: (1) Syllables with a long vowel have phonetic stød-basis; (2) syllables with a short vowel immediately followed by one of the phonemes  $/d, g, l, m, n, ŋ, j, v/$  have phonetic stød-basis; (3) syllables with a short vowel immediately followed by  $/r/$  have phonetic stød-basis unless the  $/r/$  is immediately followed by one of the phonemes  $/p, t, k, f, s/$ .

#### 2.2.2. Final consonant clusters

It is well known that Danish imperatives often have final consonant clusters which do not otherwise occur word-finally but only word-medially in Danish (between a "full" vowel and shwa). This is the reason why imperatives are generally excluded from the material when the permissible final consonant combinations are set up, e.g. by Martinet (11), Uldall (16), and Vestergaard (17). I quote Uldall on this point (p. 56): "imperatives have been left out, because in these forms groups occur which are not otherwise permissible in the language (e.g. in slobr, klatr, vekl). The conclusion is that the imperative is normally formed by subtraction."

Jespersen (10, p. 172 ff) does not exclude the imperatives explicitly, but he only mentions imperatives in three cases, all in parentheses ( $[ðn]$  in vidn 'witness',  $[ðm]$  in rødm 'redde', and  $[ln]$  in skeln 'distinguish'). Diderichsen (3) includes imperatives in the material.

I shall not try to make any systematic (not to say exhaustive) classification of these clusters (and they will not even

4) Eli Fischer-Jørgensen has suggested this point.

be enumerated), but I wish to make a few tentative remarks concerning the more important types.

(1) Some final clusters do not constitute any difficulties for Danish speakers, although they are not found word-finally in native words outside the imperatives (some foreign words pose similar phonotactic problems as the imperatives). This is true for e.g. [ðn], [ðm], and [ln] (cf. vidn [viðʔn], rødm [ʁøðʔm], and skeln [sgɛlʔn], the three imperatives mentioned by Jespersen); these imperatives are always pronounced as true monosyllables (otherwise Vestergaard (17, p. 60)). The reason probably is that they are in agreement with the order relations for final consonants, according to which voiced fricatives appear before nasals (Vestergaard 17, p. 56)), and liquids appear before nasals, too (Vestergaard does not state this latter rule, but it can be deduced from his diagram (ib.)).

(2) The clusters which conflict with the above-mentioned order relations for final consonants fall into two groups according to (a) their agreement with or (b) their violation of the basic order relation that voiced consonants appear before voiceless ones (initially the relation is, of course, the reverse). Vestergaard (17) states this as an order rule among many others, but it seems to be of a more fundamental nature (cf. the treatment of the imperatives below; the postvocalic voiced consonants are crucial to formulations of the appearance of stød; and Danish speakers react much more violently to conflicts with this rule than to conflicts with the other order rules).

(a) Final clusters that conflict with at least one order relation, but not with the 'voicing' rule'. Such clusters are e.g. [mʁ], [ml], [nl], as in the imperatives tømr [tøʔmʁ] 'carpenter', vriml [vʁemʔl] 'swarm', and handl [hanʔl] 'trade'. These are either pronounced as true monosyllables, or as dissyllables, thus coalescing with the nouns tømmer [tøʔmʁ] 'timber', vrimmel [vʁemʔl] 'swarm', and handel [hanʔl] 'trade'. Similarly, the imperative logr [lɔʁʔʁ] 'wag' may be pronounced either as a monosyllable or as a dissyllable rhyming with kogger [kɔʁʔʁ] 'quiver'. (Hjelmslev (9) interprets those nouns as being "ideally" (i.e. - with a gross approximation -



morphophonemically or in their underlying form) monosyllables because of the stød.)

The cluster [ðɸ], as in hædr [hɛðʔɸ] 'honour!' probably belongs here. It conflicts with Vestergaard's rule that liquids appear before fricatives (17, p. 56), but this rule is somewhat dubious because of the important "exceptions" [ɣl] and [ɥl] which are much more stable than the reverse clusters [lɣ] and [lv]. It may be more correct to say that [ðɸ] does not conflict with any order rule but that it does conflict with the principle that two members of the same "order class" do not combine, [ð] and [ɸ] being otherwise vowel adjacent (it is hard to say whether [ðɸ] or [ɸð] is the more "unnatural" combination).

(b) Final clusters that violate the 'voicing rule'. Examples are [tɸ], [kl], [sn], as in the imperatives klatr 'climb', pukl 'swot', and visn 'wither' (notice that the three imperatives mentioned by Uldall (16, the quotation above) as an argument in favour of excluding all imperatives from the distributional material, all belong to this group). These are normally pronounced as dissyllables, thus coalescing with the nouns klatter [kladɔ] 'blots', pukkel [pogl] 'hump', and the adjective vissen [vesn] 'withered'. If, however, they are pronounced as monosyllables, the last consonant is devoiced, thus obeying the 'voicing rule': [kladɸ], [pogl], [vesn̥] (these pronunciations are quoted by Rischel (12)).

### 3. Danish imperatives from a generative point of view

#### 3.1. The problem

A basic problem concerning the Danish imperatives from a generative point of view has been formulated by Rischel (13, p. 202), who also suggests where to look for a solution:

"A paradigm like [bað] 'bath' - plural [bæ:ðə] can be described as a case of vowel lengthening in "open syllable" under the conditions summarized above [i.e. "ty-

pically before a voiced approximant <sup>5</sup> that is followed by a vowel, cp. [ hɑu ] 'sea' - plural [ hæ:və ], [ glað ] 'glad' - plural [ glæ:ðə ] " (13, p. 201). ]. The verb [ bæ:ðə ] 'bathe' with its preterite and past participle forms [ bæ:ð(ə)ðə ] , [ bæ:ð(ə)t ] can apparently be explained in the same way, as derived from underlying forms with short vowel. However, the imperative of this verb is [ bæ ?ð ], which rather points to underlying long vowel in the verb. Thus it may seem that vowel length is generated by a simple rule in plural forms like [ bæ:ðə ] but is due to a stem formation feature of length in infinitive forms like [ bæ:ðə ] .

There is, however, some evidence that the behaviour of the imperative is due to special formation features and thus should not be taken as decisive in assessing the underlying quantity. It is necessary here to point to the fact that stød, too, functions (on the surface) to distinguish imperative forms from otherwise phonetically similar noun forms, cp. the noun [ sbel ] 'play' (definite form [ sbel ?ə ð ] ) versus the imperative [ sbel ? ] 'play' (infinitive [ sbel ə ] )."

Rischel's two proposals for the formation of the imperative will be discussed below in section 3.3., but this discussion presupposes a conception of the stød from a generative point of view which will be stated briefly in the following section.

### 3.2. Phonological stød-basis

In addition to the phonetic stød-basis discussed in section 2.2. above, one may define a "phonological stød-basis". In general, the problems concerning stød (and quantity, cf. section 3.4. below) are much too complicated to be taken care of in this paper, and I shall only roughly sketch what I understand by the term "phonological stød - basis".

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5) On this point Rischel disagrees with Hjelmslev (9) who postulates a vowel lengthening before all single consonants followed by shwa (cf. section 3.4.1. below).

It was mentioned in section 2.2. that some syllables do not have stød when they occur as stressed monosyllabic words, although they have phonetic stød-basis, e.g. hul, par, ven, ham<sup>6</sup>, bad, hav, tøj, fog [hol, paʁ, vɛn, ham, bað, haʊ, tɔj, foʝ] 'hole', 'pair', 'friend', 'him', 'bath', 'sea', 'cloth', 'blizzard'. In foreign (French) words also word-final [ŋ] occurs in stød-less syllables, e.g. in bon [bɔŋ] 'voucher'. These stød-less monosyllables with phonetic stød-basis all have short vowel plus a single "systematically"<sup>7</sup> voiced consonant.

When the final consonant in question is followed by other consonants, the syllable has stød. (Two stød-less words which normally end in [l] may, however, end in [lv] in very formal or perhaps somewhat artificial speech: sølv, gulv [sɔlv], [gol(v)] 'silver', 'floor'; note, however, that lv in these words is normally retained before shwa: gulve, forsølv [golvə, fɔʁsɔlvə] 'floors', 'silver-plate (verb)'). The domain of this stød-basis rule does not exceed morpheme boundaries, cf. tals [tals], genitive of tal [tal] 'number' as against hals [halʔs] 'neck' (this difference may be explained by some sort of juncture in the former case).

A final consonant with stød which is not followed by other consonants can sometimes, as shown by Hjelmslev (9), be considered a manifestation of an underlying consonant cluster, e.g. in mand, skyld [manʔ, sɣylʔ] 'man', 'guilt', cf. the derivatives mandig, skyldig [mandi, sɣylɔ] 'manly', 'guilty' (the derivative is -ig and not -dig, cf. søvnic [søʊni] 'sleepy', derived from søvn [søʊʔn] 'sleep'). This is never the case for final l, n etc. in stød-less monosyllables.

These facts may be generalized so that stød occurs automatically in stressed monosyllables with underlying short vowel plus a consonant cluster (including geminates) whose first member is one of the voiced consonants mentioned above, i.e. l,

- 6) Final [m] occurs in stød-less monosyllables only in pronouns and the imperative kom [kɔm].
- 7) By this term I mean that the consonant in question is [+voiced] in the completely filled (i.e. redundant) matrix which is input to the phonological rules (i.e. after the redundancy rules have applied).

n, m, ð, ɣ, j, v, r (if r is not taken to be a segment distinct from r (cf. section 2.2.1. above), the clusters rp, rt, rk, rf, rs are exceptions to the rule). Furthermore, the stød occurs automatically in stressed monosyllables with an underlying long vowel. In the following, these two types of syllables are said to have phonological stød-basis. (An interpretation very much along these lines was first proposed by Hjelmslev (9).)

It is clear that the stød must be assigned at an early stage of the derivation since it is dependent on the morphological structure (which may be expressed by means of junctures) and latent consonants.

Although I do not a priori exclude the possibility that the stød may be introduced at various stages of the derivation, I shall in the following presuppose that the stød is predictable from the underlying form, i.e. only syllables with phonological stød-basis have stød. This stød occurs in all syllables with phonological stød-basis with certain exceptions, notably when they occur in unstressed position, before shwa, and as first part of compounds and certain derivatives (e.g. måle, målmand, søvnig [mɔ:lə, 'mɔ:l,man', sœʏni] 'measure (verb)', 'goal-keeper', 'sleepy', cf. mål, søvn [mɔ?l, sœʏn] 'measure (noun), goal', 'sleep').

Some proposals which modify the concept of phonological stød-basis stated above are mentioned in the following section.

### 3.3. The imperative

The nouns bad, spil [bað, sbel] 'bath', 'play' are obviously related to the verbs bade, spille [bæ:ðə, sbelə] 'bathe', 'play', imperatives [bæ?ð, sbel?]. There seem to be several possible ways to explain the relation between these forms.

(1) As proposed by Rischel (section 3.1. above) the noun and the verb stem may have the same underlying form, viz. ending in a short vowel plus a single consonant, and the vowel length of the plural [bæ:ðə] of the noun and in the forms of the verb [bæ:ðə] except the imperative are explained by means of a vowel lengthening rule in open syllable. According to this proposal the imperatives [bæ?ð, sbel?] are formed by a

special stem formation rule which in some verbs (e.g. bade) geminates the vowel, in others (e.g. spille) geminates the final consonant (I use the terms "lengthening" and "gemination" synonymously).

(2) Another possibility, briefly suggested by Rischel (section 3.1. above), is that the vowel length in the verb [bæ:ðə] is due to a stem formation feature of length. Thus the imperative [bæʔð] is identical to the verb stem in the underlying representation, and we may conclude that also the imperative [sbelʔ] is identical to the stem of [sbelə], i.e. spille is derived from the noun [sbel] by means of a stem formation feature which geminates the final consonant.

The fact that the vowel quantity of the infinitive and the imperative is always the same (on the surface) (except gøre, gør) speaks against assumption (1). On the other hand, in all cases where a verb and a plural ending in shwa are both formed from the same (stød-less) noun with an underlying short vowel plus a single final (systematically) voiced consonant (without any vowel shift), the vowel quantity of the verb and the plural is the same. This suggests that the vowel length of e.g. the plural and the infinitive [bæ:ðə] is in fact the same phenomenon (as it is according to hypothesis (1)). This might lead to a third hypothesis.

(3) There is one phonological rule which - under certain conditions and in certain words, see below - lengthens vowels (a) in open syllables and (b) in imperative forms; or which lengthens the vowels in question in open syllables, after which the final shwa (of the infinitive) is deleted in imperative forms. This is, however, in disagreement with my presupposition on the stød (section 3.2. above: the stød is predictable from the underlying form) since according to hypothesis (3) the stød-rule would have to apply after the mentioned vowel lengthening rule (it may of course be the presupposition which is wrong). Furthermore, a rule would be required to lengthen the consonant in e.g. the imperative [sbelʔ] before the stød-rule applies.

(I shall not discuss whether the stød-rule could be an

'over-all rule' applying whenever certain conditions are fulfilled. Another possibility, which is also in disagreement with the claim of section 3.2. above that only syllables with phonological stød-basis have stød, is the following: stød is assigned to all syllables which should have stød according to the morphological structure of the word in which they occur (e.g. to the root syllable of a complex verb (afspille, udgøre etc.), to the imperative, and to a monosyllabic noun before the definite article). The stød could be removed from syllables without phonetic stød-basis by some sort of output-constraint. According to this proposal, the concept of phonological stød-basis defined in section 3.2. above would be relevant only to certain word-types, notably the (stressed) monosyllables.)

Under the mentioned assumption about the stød (of section 3.2. above) I have found one argument which strongly speaks against proposal (1) and in favour of (2). Verbs like spille, smøre [sbelə, smø:ʔə] 'play', 'butter (the bread)' should according to (1) have underlying short vowel plus a single (systematically) voiced consonant, i.e. no phonological stød-basis, cf. the nouns spil, smør [sbel, smøʔ] 'play', 'butter'. However, as the second part of complex verbs they always have stød, e.g. afspille, besmøre ['a u, sbelʔə, be'smøʔʔə] 'play back', 'smear'.

The same is true of the two verbs whose imperatives have no stød although they have phonetic stød-basis, viz. komme, gøre [kɔm ə, gø:ʔə] (imperatives [kɔm, gøʔ]), cf. bekomme, udgøre [be'kɔmʔə, 'uð, gøʔʔə] 'get', 'consist of'. These stød-forms suggest, together with the fact that all other forms of these verbs (except the present gør [gøʔ]) seem to have stød under the same conditions as other verbs (cf. the preterite kom [kɔmʔ] 'came' and the past participle gjort [gjoʔʔd] 'done'), that the verbs komme and gøre have underlying forms with phonological stød-basis, and that the imperative kom and the imperative and present gør are marked as exceptions in the lexicon. But this argument is only valid if my assumption about the stød is valid (section 3.2. above), and I shall leave

the question open here.

Another argument which seems to speak in favour of (2) is the first vowel of the noun badning which may be long and always has the quality of the long vowel: [ bæ(:)ð neŋ ] 'bathing'. (Rischel has, however, mentioned the possibility of deriving it from bade+ning, i.e. with lengthening in open syllable and shwa-deletion (oral communication).)

I shall not make any definitive choice between the hypotheses in question, but I think there are better arguments in favour of (2) than of (1).

One might ask why the verb is formed from the noun by a stem formation feature of length, and not the noun from the verb by a shortening "stem rule". The reason is that we can - in the cases under consideration here - give certain rules for the derivation from noun to verb but not the other way round: e.g. the verbs corresponding to the noun spil [ sbel ] (with underlying single l) and the noun spild [ sbil? ] 'waste' (with underlying geminated l) both have (surface and underlying) short vowel and, according to hypothesis (2), underlying geminated l ( [ sbelə ] and [ sbilə ] 'waste', respectively, which have exactly the same stød-possibilities in all forms); and similarly the verbs corresponding to the noun bad [ bað ] (with underlying short vowel) and the noun rod [ ʁo?ð ] 'mess' (with underlying long vowel) both have (surface and, according to hypothesis (2), underlying) long vowel ( [ bæ:ðə ] and [ ʁo:ðə ] , respectively).

According to hypothesis (1), the following section 3.4. on vowel and consonant lengthening is directly relevant to the formation of the imperatives; according to (2), the relevance is only indirect, viz. for the stem formation of the verbs and not specifically for the imperative forms. I shall use the vague terms "vowel and consonant lengthening (or gemination)" which may be taken to be a phonological rule or a stem formation rule according to the hypothesis in question on the formation of the imperative.

Since alle imperatives with phonetic stød-basis have stød (except kom and gør, cf. the discussion above), either one or the other lengthening rule will apply to all verbs de-

rived from words with underlying short vowel plus a single voiced consonant, e.g. [bæ?ð] has vowel lengthening and [sbel?] has consonant lengthening.

If the underlying vowel of the related noun is long (hâne [hɔ:nə] 'mock', derived from hân [hɔ?n] 'scorn'), or if the postvocalic voiced consonant (of the verb) is followed by a consonant (hilse [hilsə] 'greet'), neither of the lengthening rules need apply (the imperatives are [hɔ?n] and [hil?s]). (If it turns out to give a simpler description, one may let the vowel lengthening rule apply in the first case and the consonant lengthening rule in the second case since they will then apply vacuously, in the second case without any complications at all.)

Infinitives with (surface) long vowel plus an unvoiced consonant are never derived from words with a short vowel, and thus they probably all have underlying long vowels (they are often derived from monosyllables with long vowels, e.g. mase [mæ:sə] 'toil' from mas [mæ?s] 'bother (noun)'). Thus neither of the lengthening rules need apply to verbs whose (first) postvocalic consonant is unvoiced (but they might apply vacuously, cf. above).

#### 3.4. Vowel and consonant lengthening

The following problem remains: to which verbs derived from monosyllables with underlying short vowel plus a single voiced consonant does vowel lengthening apply, and to which verbs does consonant lengthening apply? This question is intimately connected with a more general one: before which consonants does vowel lengthening occur at all? It goes without saying that this general question can by no means be answered definitively in this paper, but I shall give a brief survey of some material which must be taken into account.

Our focus of interest will be the relation between the (surface) vowel quantity of the infinitive (imperative) and of the word (generally a noun) it is derived from (or related to).

A summary of the vowel lengthening tendencies is given in section 3.4.1.6. below.



### 3.4.1. Vowel lengthening

Before we examine the material, a few preliminary remarks will be necessary.

Firstly, our material is limited to stød-less monosyllables ending in a voiced consonant (including [ i ] and [ u ] ). Thus an example like spøg [ sb p i̯ ? ] 'joke', cf. the verb spøge [ sbø:ɣə ] 'joke'<sup>8</sup>, is not taken into account, because it involves not only vowel lengthening, but also consonant shortening (if our concept of phonological stød -basis (section 3.2.) is accepted), and a "consonant shift".

Secondly, forms whose vowel quality differs (phonemically) from that of the infinitive will not be taken as decisive evidence for vowel lengthening of the infinitive; e.g. neither the noun skud [ sguð ] 'shot' nor the participle skudt [ sgud ] 'shot', nor the preterite skød [ sgø?ð ] 'shot' will be taken as decisive for whether the vowel of skyde [ sgy:ðə ] 'shoot' has been lengthened or not. As shown by these and many other examples (which often seem to give contradictory results), the inclusion of such material would presuppose a general examination of ablaut and umlaut in Danish which has not been undertaken so far.

Thirdly, special problems arise in the noun declension. The noun fred [ fʁ eð ] 'peace' has the definite form freden [ fʁ e?ðə n ], whereas bred [ bʁ eð ] 'brink' has the definite form bredden [ bʁ eð ? ə n ]. It is not possible to explain this difference by a distinction between underlying long and short vowel, since there are also nouns with surface length in the indefinite form, like ed [ e ?ð ] 'oath' (definite eden [ e?ðə n ]), and these obviously have underlying long vowel. How this problem should be handled in a generative grammar of Danish is an open question which will not be discussed in the present paper.

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8) The pronunciations [ sbø ?ɣ ] and [ sb p i̯ ə ] also occur, but more rarely in the norm described here.

Before m, l, and j, there are no examples of vowel lengthening. The case before the remaining voiced consonants, i.e. n, r, v, ð, and ʎ, will be discussed separately (the question whether ð and ʎ are primary segments or derived from d and g, is discussed in Rischel (14)).

### 3.4.1.1. Vowel lengthening before n

Generally, there is no vowel lengthening before n (cf. ven, venner [vɛn, vɛnp] 'friend', 'friends'; søn, sønner [sɔn, sɔnp] 'son', 'sons'; tin, fortinne [ten, fɔʁ'tenʔə] 'tin (noun)', 'tin (verb)'; tran, trannet [trɔn, trɔnəð] '(whale) oil', 'oily').

In some cases, long and short vowels are found in both mono- and dissyllabic forms; but this should not, of course, be taken as a proof of vowel lengthening (cf. gran [gʁan, gʁaʔn, gʁanʔ] 'spruce', plural [gʁaʔnp, gʁanʔp]; spån [sbɔn, sbɔʔn] 'chip', plural [sbɔnp, sbɔ:np]).

Two words might be taken as evidence of vowel lengthening before n (Hjelmslev's example (9, p. 20): han, hane [han, hæ:nə] 'he', 'cock' should be disregarded - there is absolutely no need to consider these two words related). One valid example is vane [væ:nə] 'habit', obviously related to van [van] which is only found in the locution pleje van 'use to' (the related verb vænne [vɛnə] 'habituate' has a short vowel in all forms). The other is the somewhat old-fashioned verb trine [tʁi:nə] 'stalk', obviously related to the noun trin [tʁin] 'step' (the rare pronunciation [tʁiʔn] is also found, cf. that the definite form is either [tʁinʔəð] or [tʁiʔnəð]).

This is the only example where a verb seems to be formed by vowel lengthening before n, but the example is not at all convincing, partly because the rare form [tʁiʔn] also exists. (Rischel has suggested that the difference in vowel length between the noun [tʁin] and the verb [tʁi:nə] may be explained as a case of ablaut like the one between the noun bud [buð] and the verb byde [by:ðə], both meaning 'command'.)

As stated above, vowels are generally not lengthened before n, and the verb fortinne [fɔʁ'tenʔə] is formed by consonant lengthening.

### 3.4.1.2. Vowel lengthening before r

In some cases, vowel lengthening seems to occur, maybe (partly?) depending on the vowel in question, but the material is too limited for safe conclusions to be drawn from it.

o and ø seem to be lengthened before r (vor, vore [vɔʁ, vɔ:ʁə] 'our'; for, fore- [fɔʁ, fɔ:ʁə], e.g. in tage sig for = foretage sig 'undertake'; smør, smøre [smøʁ, smø:ʁə] 'butter (noun)', 'butter (verb)'; gør, gøre [gøʁ, gø:ʁə] 'does', '(to) do', but gør is an exception, cf. section 3.3. above). (Note, however, that the definite form of hør [høʁ] 'flax' is [høʁʔən] without lengthening, like smør, smørret [smøʁ, smøʁʔəð] 'butter', 'the butter'.)

i, y, a, and ɛ do not seem to be lengthened before r<sup>9</sup> (ir, irre [iʁ, iʁə] 'verdigris', 'become coated with verdigris'; fyr, fyrre- (træ etc.) [fyʁ, fyʁə(tʁɛʔ)] 'fir', 'fir (tree etc.)'<sup>10</sup> (definite form fyrren [fyʁʔən]); par, parre [paʁ, paʁə] 'pair (noun)', 'pair (verb)' (definite form parret [paʁʔəð]; cf. kar, karret [kaʁ, kaʁʔəð] 'vessel', 'the vessel'); jer, jeres [jɛʁ, jɛʁəs] 'your' (cf. bær, bærret [bɛʁ, bɛʁʔəð] 'berry', 'the berry' and herr (short form of herre), herren [hɛʁ, (hɛʁə,) hɛʁən] 'sir', 'the gentleman')).

Thus smøre [smø:ʁə] is the only verb whose infinitive seems to be formed by vowel lengthening before r (still disregarding være). The verbs irre, parre [iʁə, paʁə] are formed by consonant lengthening.

A special problem concerning the imperative tør [tøʁʔ] 'dry' of the verb tørre [tøʁə] should be mentioned here.

- 9) The verb forms er, var, være [ɛʁ, vaʁ, vɛ:ʁə] 'is', 'was', 'be' are not taken into account.
- 10) This example should not be taken as decisive, however, since fyrre only occurs as first part of compounds where there is a general tendency toward vowel shortening.

This verb is derived from the adjective tør [ tœʔʁ ] which seems to have an underlying short vowel (and a geminated r to explain the stød), since its definite and plural forms both are tørre [ tœʁə ] (like the infinitive of the verb). Likewise, the adverb før [ fœʔʁ ] 'before' (comparative) may have an underlying short vowel, cf. the superlative først [ fœʁsd ] 'at first'. The r of [ fœʔʁ ] would then be an underlying geminate (to explain the stød); thus før (comparative) would have the stem "fœr" plus the comparative flexive "r".

This would, however, presuppose a rule which lengthens the vowel, probably applying only to these two words. And since the adjective and the imperative tør are distinguished on the surface (as [ tœʔʁ ] versus [ tœʁʔ ]), the mentioned rule should apply only in the context [ + verb ] or the like. Since this is a very artificial kind of rule it may be the simplest solution to account for these alternations in the lexicon, but I shall leave the question open here.

#### 3.4.1.3. Vowel lengthening before v

The words in question are those with the final stød-less diphthongs [ a<sub>u</sub> ] and [ p<sub>u</sub> ].

Three of these seem to have vowel lengthening (hav, have [ ha<sub>u</sub>, hæ:və ] 'sea', 'seas'; trav, trave [ tʁa<sub>u</sub>, tʁa:və ] 'trot (noun)', 'trot (verb)'; lov, love [ lɔv<sub>u</sub>, lɔ:və ] 'law, praise (noun)', 'laws, praise (verb)'). (Since the definite forms are havet, travet, loven [ hæʔvəð, tʁa<sub>u</sub>ʔəð, lɔʔvən ], respectively, it might be questioned whether the basic form of hav and lov has underlying short or long vowel; but as mentioned in section 3.4.1. above, we disregard the definite form.)

One word, however, has definitely no vowel lengthening, viz. tov, tove [ tɔv<sub>u</sub>, tɔv<sub>u</sub>ə ] 'rope', 'ropes' (definite form tovet [ tɔv<sub>u</sub>ʔəð ]).

The remaining ones have short vowel in the definite form, and they do not form plurals different from the singular forms (lav, nav, rav, rov, behov [ la<sub>u</sub>, na<sub>u</sub> (?), ʁa<sub>u</sub>, ʁɔ<sub>u</sub>, be'hɔv<sub>u</sub> ] 'lichen', 'hub', 'amber', 'rapine', 'need (noun)';

the last example shows that the rule that stressed syllables with the prefix be- have stød if they have phonetic stød-basis, is confined to verbs and deverbatives (e.g. participles used as adjectives, cf. behåret [ be'hɔ?ɐð ] 'hairy' and håret [ hɔ:ɐð ] 'hairy')).

The two verbs in this material are thus formed by vowel lengthening (imperatives trav, lov [ tɐɑ?ɐv, lɔ?ɐv ] 'trot', 'promise').

The word bogstav [ bogsdæʏ ]<sup>11</sup> 'letter (of the alphabet)', plural bogstaver [ 'bog, sdæ?ɐvɔ ] , should be mentioned. Its second syllable probably has an underlying long vowel since its phonetic quality throughout the paradigm is that of the long vowel, cf. hav, have [ haʏ, hæ:vɐ ] . The reason why this syllable has no stød in the indefinite singular form should then be that it has no stress; a similar shift between unstressed and stressed syllable (in indefinite singular versus all other forms) seems to be found in words of the type mad-ding, maddinger [ maðeŋ, maðeŋ?ɐ ] 'bait', 'baits', where the absence of stød in the first case can only be explained by the absence of stress (the stød in the second case might, however, be explained as an automatic phenomenon occurring in all derivatives in -ing).

#### 3.4.1.4. Vowel lengthening before ð

There is a rather large number of stød-less monosyllables ending in ð. Whether vowel lengthening before ð occurs (in open syllable) seems to be highly dependent on the vowel segment in question.

It might be pointed out here, too (cf. Rischel (14)), that there is only one adjective in the material - glad, glade [ glað, glæ:ðɐ ] 'happy' (all other adjectives with final ð have a long vowel) - and a couple of adverbs and other "small words" (ad, hvad, ved, med, hid, gid [ að, vað, veð, mɛð, hið, gið ] ), all the remaining words being nouns with a de-

11) A sideform [ 'bog, sdæ?ɐv ] also occurs.

finite majority for the neuter gender (most of the nouns with facultative stød are of the common gender, viz. bred, brod, od, glød, nød [ b ʁ e ɔ̃ (?), b ʁ p ɔ̃ (?), p ɔ̃ (?), glø (? ) ɔ̃ , nø (? ) ɔ̃ ] 'brink', 'sting', 'point', 'ember', 'nut' (notice, however, that stød [ sɔ̃ (? ) ɔ̃ ] is neuter)).

When the vowel is ɔ̃, definitely no lengthening occurs (lod, lodder [ l p ɔ̃ , l p ɔ̃ p ] 'weight', 'weights'; skod, skodde [ sg p ɔ̃ , sg p ɔ̃ ə ] 'stump', 'top (a cigarette)'; brod, brodder [ b ʁ p ɔ̃ (?), b ʁ p ɔ̃ p ] 'sting', 'stings'; od, odder [ p ɔ̃ (?), p ɔ̃ p ] 'point', 'points'; all the mentioned nouns plus flåd, tråd [ fl p ɔ̃ , t ʁ p ɔ̃ ] 'float', 'foot lever' have short vowel in their definite form (the latter two are related to the verbs flyde, træde [ fly: ɔ̃ ə , t ʁ ε : ɔ̃ ə ] 'float', 'step', respectively, but as mentioned above we shall not use forms with (phonemically) different vowels as decisive evidence for the underlying quantity of each other)).

All the words with a which also occur in open syllable<sup>12</sup> have vowel lengthening (e.g. had, hade [ ha ɔ̃ , hæ: ɔ̃ ə ] 'hatred', 'hate'; fad, fade [ fa ɔ̃ , fæ: ɔ̃ ə ] 'dish', 'dishes'), also in their definite forms.

The words with e, ɛ, u, y, and ø have vowel lengthening when the vowels occur in open syllable (their definite forms have sometimes long, sometimes short vowels, e.g. bud, budget, bude [ bu ɔ̃ , bu ? ɔ̃ ə d, bu: ɔ̃ ə ] 'messenger', 'the messenger', 'messengers', versus bud, buddet [ bu ɔ̃ , bu ɔ̃ ? ə d ] 'command(s) (noun)', 'the command'). Vowel lengthening in open syllable also applies to words with i, except spid, spidde [ s bi ɔ̃ , s bi ɔ̃ ə ] 'spit(noun)', 'spike (verb)'.

Thus it seems that verbs derived from nouns with underlying short vowel and single ɔ̃ are formed by consonant lengthening if the vowel is ɔ̃ (imperative skod [ sg p ɔ̃ ? ] 'top (a

12) I.e. before a single consonant followed by shwa; there is evidence, however, that definite forms of monosyllables (e.g. øllen [ øl ? ə n ] 'the beer'), and plurals whose stem has stød in that form (e.g. øller [ øl ? p ] 'beers'), should be interpreted as being (systematically) monosyllables, cf. Hjelmslev (9).

cigarette') and in the case of the verb spidde (imperative spid [sbiðʔ] 'spike'). If the vowel of the noun is short a, e, ɛ, ø, or i, the verbs are formed by vowel lengthening (except spidde) (e.g. the imperatives mad, smed, tilsted, stød, bid [mæʔð, smeʔð, 'tel, sdɛʔð, sdøʔð, biʔð] 'feed', 'forge', 'allow', 'push', 'bite'; cf. the nouns mad, smed, sted, stød, bid [mað, smeð, sdɛð, sdø(?)ð, bið] 'food', 'smith', 'place', 'push', 'bite'). There are no examples of verbs with u or y, but such forms, too, would probably have vowel lengthening if they did occur (cf. above).

#### 3.4.1.5. Vowel lengthening before ʏ

There are very few stød-less monosyllables in ʏ. Some of those have vowel lengthening in their definite forms (e.g. rug, ruge [ʁ u(?)ʏ, ʁ uʔ ʏ ə n] 'rye', 'the rye'), others have not (e.g. skrog, skroget [sg ʁ p ʏ, sg ʁ p ʏ ʔ ə ð] 'hull', 'the hull').

I have only found one valid example (albeit a rather marginal one) of vowel lengthening in open syllable, viz. fjog, fjoget [fj p ʏ<sup>13</sup>, fj ɔ : ʏ ə ð] 'fool', 'foolish'; but skrog, skroget 'poor thing', 'miserable' has no lengthening ([sg ʁ p ʏ, sg ʁ p ʏ ə ð]).

The only verb relevant to our discussion is fjoge [fj ɔ : ʏ ə] (e.g. in fjoge rundt 'make a fool of oneself'), imperative [fj ɔ ʔ ʏ], which seems to be formed by vowel lengthening. The same may be true of the verb tage [tæ : ʏ ə, tæ ʔ, ta] 'take' (imperative tag [tæ ʔ ʏ, tæ ʔ, ta]), related to the noun tag [tæ ʔ ʏ, t a ʏ] 'grasp'.

#### 3.4.1.6. Summary of the vowel lengthening tendencies

Before we drown in details, let me briefly summarize the vowel lengthening tendencies stated above.

It should be kept in mind that we have only examined the dissyllables with a single intervocalic consonant derived from

13) This is the pronunciation given by Ordbog over det danske Sprog, but also [fjo ʏ] and [fj ɔ ʏ] are heard.

stød-less monosyllabic words with final voiced consonant (because it is certain that these monosyllables have underlying short vowel and a single final consonant, if our concept of phonological stød-basis is accepted at all). Furthermore, all cases where the vowels in question are of (phonemically) different quality have been disregarded. For a general discussion of quantity, other kinds of material should, of course, be taken into consideration, too.

With these reservations, it seems as if the verbs derived from monosyllables with underlying short vowel plus a single y or ɣ always have vowel lengthening (there was only one marginal example with ɣ (imperative fjog [fjɔʔɣ]), but since word-final ɣ never has stød, we can be sure that ɣ belongs to this group).

If the single consonant is r or ð, vowel lengthening sometimes occurs. The open rounded vowels, i.e. ɔ and œ, seem to be lengthened before r. ɔ is the only vowel which is not lengthened before ð. It seems surprising that the tendencies for a given vowel to be lengthened or not before r or ð look exactly reversed. Eli Fischer-Jørgensen has suggested that the lengthening of ɔ before r may be due to the fact that their place of articulation is practically the same (phonetically, syllable-final r is often pronounced [ɾ]). And since œ does not occur before ð at all, the discrepancy between the lengthening tendencies before r and ð is maybe only apparent. (It may be questioned whether ɔ and œ are phonemically distinct (a survey of the relevant material and a discussion may be found in Basbøll (2)); if they are not, ɔ is lengthened both before r (smør, smøre [smœɾ, smœ:rə] 'butter (noun)', 'butter (verb)') and ð (stød, støde [sdø(?)ð, sdø:ðə] 'push (noun)', 'push (verb)').)

On the other hand, the material is so limited that some of the tendencies we have found toward a dependency between the vowel quality and the ability of lengthening in open syllable may be rather accidental, being due to lack of sufficient data.



### 3.4.2. Consonant lengthening

Verbs derived from monosyllables with an underlying short vowel plus a single (systematically) voiced consonant are formed by consonant lengthening if they are not formed by vowel lengthening (cf. the preceding section). Consonant lengthening thus applies if the consonant is l, j, m, or n (on the verb trine, cf. section 3.4.1.1. above), and sometimes when it is ð or r (see above).

### 4. Appendix. Imperatives in Advanced Standard Copenhagen

One difference between Advanced Standard Copenhagen (ASC; cf. the references given in section 1.1. above) and the Conservative Standard Danish described in the present paper (CSD) is that the postvocalic r is pronounced [ɾ] or deleted (viz. after [a] and [p]) in ASC. This is probably a reason why many imperatives, which in CSD end in [ɾ] plus an unvoiced consonant and thus have no stød-basis, have stød in ASC (the voicing of the r is at least a necessary condition for it to have stød). Examples are spark 'kick' (CSD [sbæɾg], ASC [sbæʔg]), styrt 'overthrow' (CSD [sdyɾd], ASC [sdyɾʔd]), skærp 'sharpen' (CSD [sgɛɾb], ASC [sgæɾʔb]), and mors 'morse' (CSD [mɔɾs], ASC [mɔʔs]). This tendency is not, however, completely carried through in ASC (e.g. mærk 'remark', CSD [mɛɾg], is [mæɾg], less often [mæɾʔg], in ASC).

If this tendency is carried through, the result will be that r then belongs to the class of phonemes which always have phonetic stød-basis together with a preceding short vowel, and phonological stød-basis together with a preceding short vowel and a following consonant, i.e. the rules for stød-basis become considerably simpler (both because the stød-basis may be formulated without regard to vowel-remote consonants (cf. the clusters /rp, rt, rk, rf, rs/ in CSD), and because the class of phonemes constituting stød-basis together with a preceding short vowel will simply be those which are [+voiced]).

But the main difference between ASC and CSD is - at least as far as the imperatives are concerned - that in ASC all stød-syllables with final [ɾ, ʌ, j, ð] (corresponding to

CSD r, v or Y, j or Y, and ð) have a short vowel and stød in the following segment. This makes the description of the imperatives more complicated from a taxonomic point of view (cf. bad, bade [bæðʔ], [bæ:ðə] 'bathe (imperative)', 'bathe (infinitive)' with different vowel quantity).

From a generative point of view, there seems to be at least two possible ways of describing this phenomenon:

(1) All imperatives of verbs derived from monosyllables with underlying short vowel plus a single (systematically) voiced consonant except nasals and l are formed by means of a stem formation feature of consonant lengthening.

(2) Imperatives are formed in the same way as in CSD, and there is a later rule (that will be needed anyhow) which moves the stød from the vowel to the following consonant if the latter is [+voiced, -nasal, -lateral].

It should be noted that alternative (1) does not remove the difficulty of explaining what vowels are lengthened before what consonants in what position; e.g. the difference between slid, slide [slið , sli:ðə] 'bother (noun)', 'toil (verb)' and spid, spidde [sbið , sbiðə] 'spit (noun)', 'spike (verb)' is still to be explained.

I shall leave the choice between the alternatives open, but only emphasize that the grammars of ASC and CSD cannot, of course, be looked upon as independent of each other.

References.

- (1) Hans Basbøll, "The Phoneme System of Advanced Standard Copenhagen", ARIPUC 3 (1968), p. 33-54.
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