

ON THE ORIGIN OF THE VESTJYSK STØD

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In the dialects of West Jutland and North Funen in Denmark stops are preglottalised when they “stand in an original medial position, following a voiced sound in a stressed syllable” (Ringgaard 1960: 195), e.g.: *træ[?]gø¹* ‘pull-PRES’ or *træ[?]g* ‘pull-INF’ which corresponds to (written) Standard Danish *trækker* (pres.) and *trække* (inf.). This preglottalisation is known in the literature under the name of *vestjysk stød*, or *v-stød*.

The *v-stød* differs from the common Danish *stød* both in the way it is articulated and in the auditory impression it makes. In most Danish dialects the common *stød* is a kind of creaky voice (cf. Fischer-Jørgensen 1989; Basbøll 2003), an irregularity in the vibrations produced by the vocal cords (Grønnum 2005: 215; Brøndsted 1997: 57), but is often a full glottal stop in large parts of Sealand. In the West-Jutlandic dialects that have both kinds of *stød*, the *v-stød* is usually much stronger than the common Danish *stød*. In his dissertation on the *v-stød* Ringgaard presents some pictures from an X-ray film of the vocal cords during the production of words with *v-stød* which clearly show that “the *v-stød* is articulated by a contraction not only of the true vocal cords but also of the false ones, so energetical that Sinus Morgagni is completely obliterated, and of so long duration that the occlusion of the vocal cords is found all through the following plosive.” (Ringgaard 1960: 198). It is remarkable, though, that this strong glottal stop gives Ringgaard the same auditory impression as the preglottalised plosives of Northern English, which Docherty and Foulkes (1999) have demonstrated are hardly ever pronounced as voiceless stops. Also Ejsing (2005: 13) describes the *v-stød* as a full glottal stop, which both acoustically and articulatorily is clearly different from the common Danish *stød* which “consists of a short contraction of the vocal cords”² (Ejsing 2005: 12). Jul Nielsen (1968:

¹ I use a question mark ? (in superscript) for the *v-stød*, and a quotation mark ’ for the common Danish *stød*.

² “For den talende, men vel også for den hørende er der en tydelig forskel på de to *stød*. Den talende mærker en kraftigere sammentrækning af stemmelæberne i *vest-*

31), on the other hand, found that the *v-stød* in the dialects of the Bjerre district, a peninsula i SE Jutland, is weaker than the common *stød*, which might be due to the fact that these dialects can be said to be intermediate between the West- and East-Jutlandish dialects (the latter lack the *v-stød*).

The phonological status of the two kinds of *stød* is at least as different as their phonetic features. The common Danish *stød* is a syllabic prosody that is historically related to word accent 1 ('acute accent') in Norwegian and Swedish. The *v-stød*, on the other hand, is not a prosody, but a segmental feature that helps to distinguish two series of stops in wordfinal position. It comes therefore hardly as a surprise that the distribution of the *v-stød* is radically different from that of the common Danish *stød*. In Standard Danish the common *stød* is found in stressed ultimate and antepenultimate syllables, unless these have too little phonetic weight (Basbøll 2003); in order to carry the *stød*, the rime of the syllable must consist of either a long vowel or a short vowel followed by a sonorant (the so-called '*stød-basis*'). There are a number of differences in the use of the *stød* between the standard language and the dialects, the most important ones being: (a) monosyllables ending in a short vowel plus a sonorant and an obstruent, e.g. *hals* 'throat', *hjælp* 'help', *kant* 'side', have *stød* in the standard language (*hal's*, *jel'b*, *kan'd*), but are *stødless* in almost all the dialects of Jutland and Funen; (b) in the dialects of Jutland there is no *stød* in prefixed and compound verbs, e.g. *undervise* 'teach', *udtale* 'pronounce', *forvente* 'expect', which all have *stød* on the verbal root (*ta'l-*, *vend'-*, *vi's-*) in Standard Danish; and (c) due to the apocope of final *ə* in the dialects of Jutland there is opposition between monosyllables with and without *stød*, e.g. *læ's!* 'read!' vs. *læ:s* '(to) read' = *læ:sə* in Standard Danish³.

jysk *stød*, næsten som en let hikke, og der er da også tale om et fuldstændigt stemmeåndlukke og en kraftig kontraktion af mellemgulvet." ["For the speaker as well as for the listener there is a clear difference between the two kinds of *stød*. The speaker will notice a stronger contraction of the vocal cords, almost like a mild hiccup, which shows that we have to do here with a complete closure of the vocal cords and a strong contraction of the diaphragm."]

³ In Modern Standard Danish *ə* is assimilated to the preceding vowel or sonorant, e.g. *å'an* > *å'än* 'river-the', *sø'an* > *sø'øn* 'lake-the' (Brink & Lund 1974: 24-29). In final position the schwa is not lost either, it is assimilated, there is hence no change in the number of syllables, e.g. *a'ə* > *a'a* '(to) caress'. But if the preceding segment is an obstruent the schwa may optionally be dropped in the more 'advanced' varieties of Standard Danish. This ongoing sound change has dramatic

In its core area (West Jutland, North Funen) the v-stød is found with stops in originally medial position, but only if these are preceded by a stressed vowel, or a stressed vowel plus sonorant (*r, l, m, n, ŋ, w, j*) or lax voiced fricative (*β, δ, γ*). In the periphery of this area (the Bjerre district in SE Jutland, the NW part of Himmerland, the island of Mors in NW Jutland) v-stød occurs in a more restricted set of contexts, e.g. only after vowels (Bjerre). Due to the loss of final *ə*, the reinforced stops also appear in final position, where they contrast with their non-glottalized counterparts, e.g. *hen²d* ‘to fetch-INF’ (Dan.⁴ *hente* [hɛndə]) *hent* ‘fetch!-IMP’ (Dan. *hent* [hɛnd]); *skar²b* ‘sharp-PL’ (Dan. *skarpe* [sgɑ:bə]), *skarp* ‘sharp-SG’ (Dan. *skarp* [sgɑ:b]); *ha²d* ‘hats’ (Dan. *hatte* [hatə]), *hat* ‘hat’ (Dan. *hat* [had]).

In compounds the v-stød applies irrespective of word and morpheme boundaries, e.g., *vär²gste* (Dan. *værk-sted*) ‘workshop’, *fe²bsge²g* (Dan. *fipskæg*) ‘pointed beard’, *læ²dhi²’əd* ‘lightness’, all with v-stød, but *læt* ‘light, easy’, *värk* ‘work’ and *fep* without v-stød; with a cliticised pronoun or modal particle: *hjæl²’bmə!* ‘help me’, *de hjäl²b jo* ‘it did help’ with v-stød, but *hjælp!* ‘help!’, *de hjälp* ‘it helped’ without v-stød.

In some cases an internal word or morpheme boundary has been lost and the initial stop of the second part of the compound been re-interpreted as a medial stop, which then could be glottalised, e.g. *säm²ti* (Dan. *sommetider*) ‘sometimes’, *äl²ti/äl²ti* ‘always’, *fär²klä* (Dan. *forklæde*) ‘apron’.

In the dialect of Salling (W Jutland) stops many not only be glottally reinforced but also be replaced by a glottal stop (“glottalling”), e.g. *a²ə < a²tə* ‘after’, *lo²ə < lo²gə* (Dan. *lukker*) ‘close(s)’ (Ejsing 2005: 15). The negation *æ²t* (< *itte* < *inte(t)* ‘nothing’) may be reduced to a glottal stop: *æ²t > æ² > ?*, or: *æ²t > [?]t > ?*, e.g.

(1)	a.	de	ka	a æ?	håw	
	b.	de	ka	a- ² t	håw	
	c.	de	ka	a-?	håw	
	d.	de	ka-?		håw	
		that	can	I NEG	remember	‘I don’t remember’

effects on the prosodic structure of the language, as monosyllables with ‘stød-basis’ now may or may not have stød, e.g. *vi’s* ‘show-IMP’ with stød vs. *vi:s* ‘(to) show-INF’ without stød. This can obviously not be handled by Basbøll’s otherwise elegant model of the stød pattern of Modern Danish.

⁴ ‘Dan.’ to be read here and in the remainder of this paper as: written Standard Danish

Glottalling may lead to an opposition between common Danish stød and v-stød, e.g. in the following minimal pairs (Ejsing 2005: 15-16): *a'ə* 'scar' (Dan. *ar*) – *a?ə* 'after'; *lo'ə* 'thigh' (Dan. *lår*) – *lo?ə* 'closes' (Dan. *lukker*); *nø'ə* 'need' (Dan. *nød*) – *nø?ə* 'uses' (Dan. *nytter*).

Theories on the origin of the v-stød

The origin of the common Danish stød has always been one of the most hotly debated subjects in Danish linguistics, which of course is due to the fact that this stød is a rather peculiar phenomenon. It is quite natural that also the v-stød caught the attention of the linguists, since its distribution seemed to contradict all theories on the common stød. The first theories on its origin all made a connection between the loss of final schwa in the dialects of Jutland and the emergence of the v-stød. Skautrup, the author of the monumental 'History of the Danish language' (*Det danske sprogs historie*), for instance, assumes that the loss of final *-e* was compensated for by the lengthening of the final consonant of the stem, e.g.: *kom*: < *komme* 'to come' (cf. *kom* with short *m* 'come!'); *skow* : *skoww*, Standard Danish *skov* : *skove* 'forest : forests'. But since the geminates could not be lengthened anymore, the overlong closure was replaced by two closures, first a glottal, than an oral stop (Skautrup 1928-9). This theory does not account for the stød in non-apocopated words like *læ'dels* (Dan. *lettelse*) 'relief'; *ver'geli* (Dan. *virkelig*) 'real', or in compounds like *knø'dnæw*: (Dan. *Knytnæve*) 'fist'. It does not explain either the presence of the v-stød in the non-apocopating dialects of North Funen. It is therefore rightly rejected by Ringgaard (1960: 91-113), who after having discussed all previous attempts to explain the origin of the v-stød⁵ presents his own theory. The glottal reinforcement of voiceless stops in medial position is according to him a normal (segmental) sound change, i.e. a change in the way a sound or a class of sounds is pronounced in a given context. This theory is, I think, essentially correct, but needs a number of small amendments. In the remainder of this paper I will discuss the facts that we need to consider in order to present a plausible timetable of the change(s). But before that some words need to be said about the most recent theory on the origin of the v-stød. In a number of papers Kortlandt (1988; 2000; 2003) advances the theory that glottal reinforcement of the voiceless stops that derive from the

⁵ I refer the reader who is interested in the earlier exchanges in this debate to the excellent discussion in Ringgaard's dissertation.

second series of PIE stops (which are traditionally reconstructed as voiced stops: (*b*), *d*, *g*, but as ejectives (*ʔ*), *ʔ*, *k* by the so-called glottalists like Gamkrelidze & Ivanov and Hopper, and by Kortlandt as well) is ancient. The retention of the glottalic character of these stops should hence not be accounted for, but rather its loss. Glottal reinforcement in English and the *v-stød* reflect according to Kortlandt exactly the nature of the Proto-Germanic preglottalised stops. He sees, moreover, a connection between these cases of retention and the following phenomena within the Germanic language family: (a) preaspiration of voiceless stops after short vowels/diphthongs in Icelandic and Faeroese; (b) preaspiration of fortis stops in a large number of Swedish and Norwegian dialects; (c) gemination of *p*, *t* and *k* after short stressed non-low vowels in some Swedish and Norwegian dialects, e.g.: Sw. *droppe* ‘drop’ ON *dropi*; (d) gemination of *k* after a short vowel and before *j* or *w* in Old Norse, e.g. *bekkr* < **bakjar* ‘brook’; (e) gemination of *p*, *t*, *k* before *l* and *r* in West Germanic; (f) assimilation of *mp*, *nt*, *ŋk* to *pp*, *tt*, *kk* in large parts of Scandinavia, e.g. Sw/Dan/Norw *drikk!* ‘drink!’; (g) the change of *p*, *t*, *k* to *pf/ff*, *ts/ss*, *kx/xx* in Old High German. For reasons that I hope will become clear from the discussion below I don’t think that this theory is able to explain the facts. It is, moreover, to be noted that the reinforced stops in the dialects of West Jutland and North Funen in the majority of the cases do not go back to stops of the second series in PIE, but rather to stops of the first (the plain stops *p*, *t*, *k*) or third series (traditionally reconstructed as ‘breathed’ voiced stops: *b^h*, *d^h*, *g^h*). The glottalised dental in the past tense of many verbs, for example, does not reflect PIE **d*, but rather **t* (if it is the dental of the past participle) or **d^h* (if the dental stems from the past tense of the verb ‘to do’), in the ordinals *fæm²d* (Dan. *femte*) ‘fifth’, *sjē²d* (Dan. *sjette*) ‘sixth’, *ø²d* (Dan. *elvte*) ‘eleventh’, *töl²d* (Dan. *tolvte*) ‘twelfth’ from PIE **t* (suffix *-to-*). In words like *næ²də* (Dan. *nætter*) ‘nights’, *o²d* (Dan. *otte*) ‘eight’, *læ²d* (Dan. *lette*) ‘light-ADJ.PL’ etc. the dental is a reflex of PIE **t* which was not shifted in the clusters –*pt* and –*kt*. In an even greater number of cases the glottalised stops occur in loan words from Low German, Latin and other languages. The glottalised stops in these words can obviously not be explained as retentions, and must hence be accounted for in another way, e.g. as the result of analogy. It is, however, hardly likely that the relatively few words with stops that are the reflexes of PIE (*b*), *d*, *g* (or rather *ʔ*, *ʔ*, *k*), would have caused such a massive change in the

pronunciation of the stops with a different etymology. By far the simplest solution, then, is to assume that glottal reinforcement is a relatively late innovation in the dialects of West Jutland and North Funen.

Dating the change

In the dialects of West-Denmark (Jutland) final short vowels were lost in the course of the thirteenth and fourteenth century: in the oldest texts that have come down to us from this region, such as the Stockholm manuscript C37 of *Jyske Lov* (the Law of Jutland)⁶ from around 1280, there are already numerous examples of apocopated forms, as is shown by the following examples from the Prologue to the law: *fyllæggh* instead of *fyllghæ* ‘(to) follow’, *undærstand* instead of *undærstandæ* ‘understand’, *sald* instead of *saldæ* ‘sold’, *Uff* instead of *Uffie* (a name). Since there are many examples of retained final schwas in the text as well, it may be assumed that the apocope was still facultative. It is not certain when it became obligatory in the dialects of Jutland, but I guess that by the end of the fourteenth century final *ə* had become obsolete for most speakers of the dialects in question.

The loss of final unaccented vowels gave rise to a large number of minimal pairs in the modern dialects that only differ from one another in the laryngeal features of the final stop. In apocopated words the stop is preglottalised, in non-apocopated words it is not, e.g. (nouns) *kaʔd* ‘cats’ (Dan. *katte*) - *kat* ‘cat’; (verbs) *snaʔg* ‘(to) talk-INF’ (Dan. *snakke*) - *snak* ‘talk!-IMP’; (adjectives) *tyʔg* ‘fat-PL’ (Dan. *tykke*) - *tyk* ‘fat-SG’; (adverbs) *oʔb* ‘up (position)’ (Dan. *oppe*) - *op* ‘up (direction)’. Since the speakers of the dialects in question cannot be automatically credited with a profound knowledge of the previous stages of their language, which would allow them to know whether or not a given form ended in a schwa in former times, Ringgaard (1960: 107) assumes that the phonemicization of the allophonic variation between originally medial and final stops provides us with a terminus ante quem for the origin of the *v-stød*. This conclusion, however, is not inevitable. It is clear that there must have been a difference in pronunciation between the final stops in apocopated and non-apocopated words, but it is possible that it was another feature that kept the two types of stops apart. Aspiration is a good candidate. The preglottalised

⁶ A digital version of this manuscript has been made available to the public by a joint effort of the Kungliga Biblioteket in Stockholm and the Kongelige Bibliotek in Copenhagen. The address of the web site is <http://www.kb.dk/elib/mss/holmiensis/>

stops are according to Ringgaard (1960: 198) “pronounced fully unaspirated”, whereas the non-glottalised stops are aspirated in final position. Jul Nielsen (1968: 32), on the other hand, found that in the dialects of the Bjerre district in SE Jutland all final stops are fully aspirated, and all medial stops unaspirated. Ejsing (2005: 60), finally, writes that all medial and final stops, be they preglottalised or not, are unaspirated (pronounced as a stop after *s*) in the dialect of Salling (NW Jutland). I assume with Ringgaard that final non-glottalised stops are (or perhaps: were) aspirated, whereas medial and preglottalised stops are unaspirated⁷. It is hence possible that the two series of final stops at first only differed in the absence or presence of aspiration. At a later stage the opposition between the two kinds of stop would then have been made more salient by the glottal reinforcement of the unaspirated stop. By this change the functional load of aspiration was greatly reduced, it could hence be given up (Salling) or spread to all final stops (Bjerre).

A similar line of reasoning can be followed in the case of the definite noun forms in Himmerland and North Funen⁸. Ringgaard (1960: 49) states that the suffixed article does not have any influence on the use of the *v-stød*: *sdork* ‘stork’ - *sdorkən* ‘stork-the’, *ker²g* ‘church’ (Dan. *kirke*) - *ker²gən* ‘church-the.’ There is hence opposition between preglottalised and plain stops in medial position in this dialect. He concludes therefore that the *v-stød* “must have come into existence before the suffixed article came into use in Himmerland.” But since the article probably dates from the tenth or eleventh century⁹ we would be forced to assume that the *v-stød* predates the loss of the inflectional endings, the weakening of postvocal stops, the loss of final schwa, etc. etc. This problem is easily solved if it is assumed that the suffixed article prosodically still was a clitic in the 14th century (and possibly still is), which had no effect on the syllable structure of the word to which it was attached. The forms can then be derived in the following way: the allophonic variation between aspirated and un-

⁷ This is, as the reader will have noticed, reflected in my transcription of the dialectal forms. Following a Danish tradition I use *p*, *t*, *k* for the aspirated stops and *b*, *d*, *g* for the unaspirated ones. The feature [voice] is irrelevant for the description of the Danish stops.

⁸ The dialects of West and South Jutland have a prefix of definiteness *æ*, e.g. *æ tōw* ‘the train’, the other Scandinavian dialects a suffix: *tog-et* ‘train-the’.

⁹ For a summary of the discussion on the age of the suffixed article in the Scandinavian languages, see Perridon 1989: 135-142.

aspirated stops in final and medial position becomes phonemic after final schwa is lost, pl. ('storks'): OSc. *storkar* > ODan. *storgə* > dial. *storg* > *stor²g* –sg. ('stork') OSc. *stork(r)* > ODan./dial. *Stork* (>*storg*). The article is then glued to these forms: sg. *stork*+ən; pl. *stor²g*+ən.¹⁰

The hypothesis that preglottalisation replaced aspiration as a distinctive feature in final stops allows us to give a later date for the emergence of the *v*-stød. This is needed, since the stød also occurs in contexts that were first created by the weakening of postvocalic consonants. This latter change took place after the loss of final schwa in the dialects of Jutland, as is testified by the earliest manuscripts, such as the Stockholm manuscript C37 of *Jyske Lov*. In this text there are numerous examples of the loss of final schwa, but none of the weakening of postvocalic *p*, *t*, *k*. *V*-stød is found in words with a sequence sonorant + stop, in which the sonorant derives from a stop or voiceless fricative, e.g.: *kjøv²d* 'bought' with *v* < *b* < *p*, cf. Dan. *købte*, Norw. *kjøpte*, *bruw²d* 'used' with *w* < *V* < *g* < *k*, cf. Dan. *brugte*, Norw. *brukte*. Since *v*-stød does not occur after a voiceless fricative it must be of a more recent date in these words than the weakening of postvocalic stops and fricatives in vestjysk and the other Danish dialects. Hence, the preglottalization of the stops after a sonorant (or lax voiced fricative) in a word like *kjøv²d* 'bought' must have developed out of an earlier pronunciation that made the final stops in apocopated words different from those in non-apocopated words.

Timetable

A. In the older stages of the language that was to evolve into the various dialects of Jutland (which might be called Old West-Danish) there were the following alternations between obstruents in medial and (word)final position:

<i>in writing</i>	<i>medial</i>	<i>final</i>
p, t, k	b, d, g	p, t, k
pp, tt, kk	bb, dd, gg	pp, tt, kk
bb, dd, gg	ββ, δδ, γγ	bb, dd, gg

The alternation between geminate fricatives in medial position and geminate stops in final position seems to have been facultative in

¹⁰ Adoption of Kortlandt's theory would not put us in a better position to solve the problem, as it does not explain why the glottalisation is retained in the plural *stor²gən*, but not in the sg. *storkən*.

most dialects (Veirup 1958). The unaspirated geminate stops, which later were reduced to singletons, and reinforced by means of the *v-stød*, are only to be found in monosyllables, e.g.: *æʔg* ‘egg’ (Dan. *æg* [ɛ:ʔg], Swe *ägg*), *neʔb* ‘beak’ (Dan *næb* [nɛ:ʔb], Swe *näbb*), *røʔg* ‘back’ (Dan. *ryg* [røʔg], Swe *rygg*), *myʔg* ‘mosquito’ (Dan. *myg* [myʔg], Swe *mygg*).

The lax fricatives (or approximants) *β*, *δ*, *γ* tended to become glides in both positions, as is attested by such forms *sauthæ* ‘said’ and *lauth* ‘laid’ in one of the oldest manuscripts of *Jyske Lov* (the Law of Jutland), viz. NkS 295 8° from around 1325 (Skautrup 1933). Other manuscripts have *sagthe* and *lagth* or *laght*.

B. After the loss of final *ə* the allophonic variations became phonemic, e.g. *drigg* (< *drikke*) ‘drink-INF’ vs. *drikk* ‘drink-IMP.’

C. The large number of oppositions between obstruents in wordfinal position was greatly reduced by the degemination of long obstruents and the postvocalic weakening of stops (Dan. *klusilsvækkelse*). The short aspirated stops *p*, *t*, *k* became lenis stops (*b*, *d*, *g*), or possibly approximants, and later voiced lenis fricatives (*β*, *δ*, *γ*) or glides (*w*, *j*) after a vowel, but did not change after a consonant. *b*, *d*, *g*, the allophones of *p*, *t*, *k* in originally medial position, changed in exactly the same way. All the geminate obstruents were reduced to singletons: wordfinal *pp*, *tt*, *kk* to *p*, *t*, *k*, medial and wordfinal *bb*, *dd*, *gg* to *b*, *d*, *g*, and *ββ*, *δδ*, *γγ* to *β*, *δ*, *γ* or glides (*w*, *j*).

These changes led to the following distribution of the fortis and lenis stops: in medial position there is opposition between unaspirated stops and voiced fricatives/ glides (*b* : *β/w*, *d* : *δ*, *g* : *γ*), in final position between aspirated and unaspirated stops and voiced fricatives/ glides, both in apocopated and non-apocopated words.

D. At some point in time all unaspirated stops were strengthened by means of the *v-stød* if they followed a stressed vowel or vowel + sonorant. In the inflectional system of the dialects in question we thus find alternation between *b*, *d*, *g* and *ʔb*, *ʔd*, *ʔg* in monosyllables which originally had a geminate unaspirated stop, and between *ʔb*, *ʔd*, *ʔg* and *p*, *t*, *k* in words with an originally geminate aspirated stop:

	medial		final
gg	<i>vεγə</i>	‘wall-PL’	<i>vεʔg</i> ‘wall-SG’ (Dan. <i>vægge</i> , <i>væg</i>)
	<i>byγmark</i>	‘barley field’	<i>byʔg</i> ‘barley’ (Dan. <i>bygmark</i> , <i>byg</i>)
kk	<i>træʔg_</i>	‘pull-PRES’	<i>træk</i> ‘pull!-IMP’ (Dan. <i>trækker</i> , <i>træk!</i>)
	<i>laʔgflask</i>	‘lacquer bottle’	<i>lak</i> ‘lacquer’

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