

Segmental representation of Livonian stød

Livonian, tone, glottal stop

Enguehard, Guillaume (Paris 7/LLF)

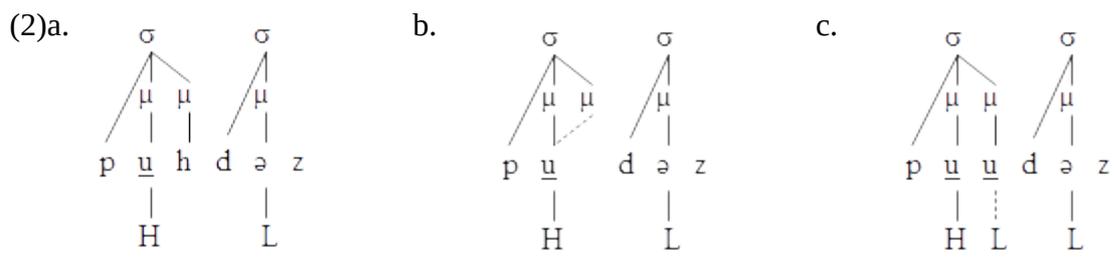
0. Livonian (Finnic, Latvia) shows a well-known phenomenon called stød (= /'/) and realized as: **i.** a falling tone, or **ii.** a glotal stop (Kettunen, 1938). Kiparsky (2006) suggests that this stød is a tone derived from stress. In this paper, I bring some new data to show that, in a specific category of words (i.e. words like pu'udəz 'pure'), it is a lexical segment ʔ . The analysis that I propose accounts for the two possible realizations of stød mentioned above.

1. Two categories of Livonian words show a stød: words like ka'llə 'fish' and words like pu'udəz 'pure'. These støds respectively show opposite phonological properties. In words like pu'udəz, the stød is contrastive (e.g. ju'odə 'lead' ~ juodə 'drink'), and preceded by a branching nucleus (e.g. vi'iri 'yellow').

2. Despite the fact that stød is contrastive in words like pu'udəz, Kiparsky (2006) supposes that words like pu'udəz show an underlying consonant that is neutralized in surface, and which conditions the emergence of a low tone. Indeed, all Finnic words showing a h as a coda of the stressed syllable (underlined) became words like pu'udəz in Livonian (1).

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| <p>(1) pu'udəz <i>pure</i> (Finnish puhdas)
vi'iri <i>yellow</i> (Finnish vihreä)
nɔ'ɔgə <i>skin</i> (Finnish nahka)</p> | <p>næ'ædə <i>to see</i> (Finnish nähdä)
kɔ'ɔdəks <i>eight</i> (Finnish kahdeksan)</p> |
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Kiparsky proposes the following derivation. First, tone-bearing segments are high-toned in stressed syllables, but low-toned otherwise (2a). The voiceless h is not tone-bearing. Second, h dropped in Livonian. Consequently the stressed vowel spreads by compensatory lengthening (2b). Finally, the resulting long vowel being tone-bearing, it receives a default low tone (2c). This analysis accounts for both the contrastive property of stød in words like pu'udəz (low tone is assigned because of h), and the preceding branching nucleus.



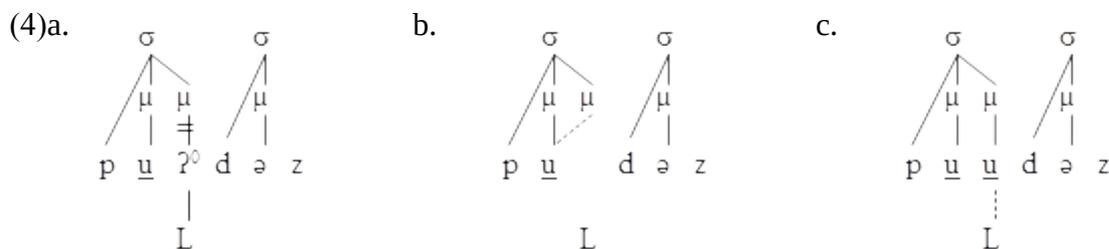
3. However, this analysis faces two difficulties. First, it is provided only for the historical derivation of stød: the presence of an underlying h is not confirmed in synchrony. Second, not all words like pu'udəz previously had a h in stressed syllable. Indeed, the table in (3) shows that words like pu'udəz can also stem from Latvian roots which don't have any h in stressed syllable (transcription is from Kettunen [1938]).

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| <p>(3) ni'idə <i>to hate</i> (Latvian nîdêt)
bæ'ædə <i>worry</i> (Latvian bēda)
nɔ'ɔvə <i>death</i> (Latvian nâve)</p> | <p>pi'inə <i>to plait</i> (Latvian pît, pinu)
ɔ'ɔrən <i>dress</i> (Latvian ârene)
sprɔ'ɔgə <i>bursting</i> (Latvian sprâgt)</p> |
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This data invalidates the diachronic basis of the proposition made by Kiparsky (2006). In this case, stød is not derived by h-dropping and stress. Thus, I point out that the null hypothesis would analyse the stød of these words as a contrastive unit originally.

5. Now, I propose a new derivation which accounts for the two possible realizations of stød: falling tone and glotal stop. Following Kiparsky (2006), I assume that the systematic preceding branching nucleus results from an assimilation or a compensatory lengthening. Accordingly, I argue that stød is a segment ʔ which stems from h in Finnic cognates, and from *broken tone* in Latvian cognates (Kettunen, 1938).

I assume the underlying representation in (4a). The segment ʔ contains two elements: ʔ^0 (occluded) and L (voiced/low) (Harris, 1990). Two solutions are possible. In the first case, ʔ^0 drops and involves a spreading of the preceding nucleus by compensatory lengthening (4b). Accordingly, the element L associates to the second part of the resulting branching nucleus, leading to a tonal realization of stød (i.e. [púùdəz]) (4c).



In the second case, ʔ^0 doesn't drop (5), but it involves a spreading of the preceding nucleus by assimilation. It results a glotal realization of stød (i.e. [puuʔdəz]).



This hypothesis is confirmed by the following data. All short codas with no element h^0 (noise) in their internal structure (i.e. sonorants and glides) involve a spreading of the preceding vowel (e.g. aambaz 'tooth', paanda 'take', niin 'town'). ʔ is one of these consonants: it doesn't contain any element h^0 (Harris, 1990). Consequently, this phenomenon is expected.

As a conclusion, I brought new data to argue that the stød occurring in words like pu'udəz is a segment ʔ , not a tone. This proposition follows the hypothesis of Haudricourt (1954) about the segmental origin of tones. In Livonian, this accounts for the variation of Livonian stød, both diachronically and synchronically.

References

Harris, J. (1990) 'Segmental Complexity and Phonological Government', *Phonology*, 7(2), 255–300. **Haudricourt, A. G.** (1954) 'De l'origine des tons en vietnamien', *Journal asiatique*, 242, 69-82. **Kettunen, L.** (1938) *Livisches Wörterbuch mit grammatischer Einleitung*. Helsinki: Suomalais-Ugrilainen Seura. **Kiparsky, P.** (2006) 'Livonian stød'. Stanford University [ms]. [<http://web.stanford.edu/~kiparsky/Papers/livonian.pdf>, 10 September 2014].