

## Segmental representation of Livonian stød

Enguehard, Guillaume (Paris 7, LLF)

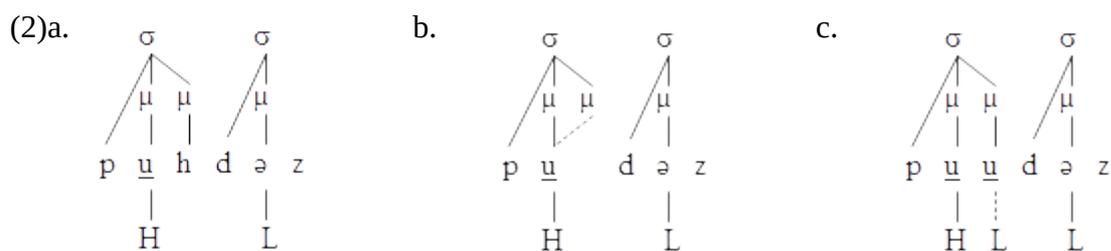
0. Livonian (Finnic, Latvia) shows a well-known phenomenon called *stød* (= /'/) and realized as: **i.** a falling tone, or **ii.** a glotal stop (Kettunen, 1938). Kiparsky (2006) suggests that this *stød* is a tone derived from stress. In this paper, I bring some new data to show that, in a specific category of words (i.e. words like *puu'dəz* 'pure'), it is a lexical segment ?. 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 *puu'dəz* 'pure'. The *støds* occurring in these categories respectively show two ranges of opposite phonological properties. In words like *puu'dəz*, the *stød* is contrastive (e.g. *ju'odə* 'lead' ~ *juodə* 'drink'), and it is always preceded by a branching nucleus (e.g. *vii'ri* 'yellow').

2. Despite the fact that *stød* is contrastive in words like *puu'dəz*, Kiparsky (2006) assumes that it is systematically derived from stress (which is not contrastive in Livonian). To this, he supposes that words like *puu'dəz* 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 *puu'dəz* in Livonian (1).

- |  |  |
|--|--|
| <p>(1) <b>puu'</b>dəz <i>pure</i> (Finnish <i>puhdas</i>)<br/> <b>vii'</b>ri <i>yellow</i> (Finnish <i>vihreä</i>)<br/> <b>nɔɔ'</b>gə <i>skin</i> (Finnish <i>nahka</i>)</p> | <p><b>nææ'</b>də <i>to see</i> (Finnish <i>nähdä</i>)<br/> <b>kɔɔ'</b>dəks <i>eight</i> (Finnish <i>kahdeksan</i>)</p> |
|--|--|

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 *puu'dəz* (low tone is assigned because of h), and the preceding branching nucleus.



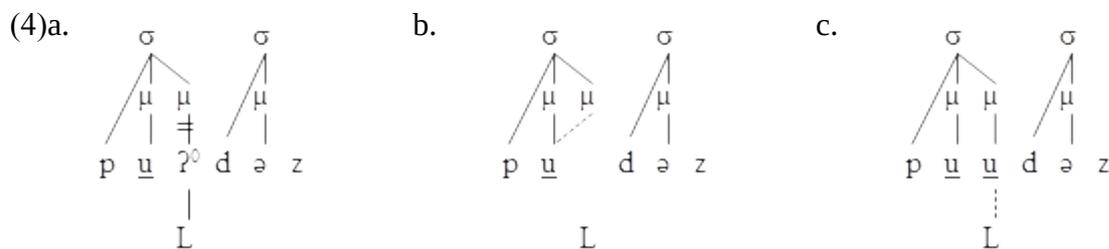
3. However, this analysis faces two difficulties. First, it is provided only for the historical derivation of *stød*: the presence of an underlying h is not confirmed in synchrony. Second, not all words like *puu'dəz* previously had a h in stressed syllable. Indeed, the table in (3) shows that words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

- |  |   |
|--|---|
| <p>(3) <b>nii'</b>də <i>to hate</i> (Latvian <i>nîdêt</i>)<br/> <b>bææ'</b>də <i>worry</i> (Latvian <i>bêda</i>)<br/> <b>nɔɔ'</b>və <i>death</i> (Latvian <i>nâve</i>)</p> | <p><b>pîi'</b>nə <i>to plait</i> (Latvian <i>pît, pinu</i>)<br/> <b>ɔɔ'</b>rən <i>dress</i> (Latvian <i>ârene</i>)<br/> <b>sprɔɔ'</b>gə <i>bursting</i> (Latvian <i>sprâgt</i>)</p> |
|--|---|

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  $\text{ʔ}$  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  $\text{ʔ}$  contains two elements:  $\text{ʔ}^0$  (occluded) and L (voiced/low) (Harris, 1990). Two solutions are possible. In the first case,  $\text{ʔ}^0$  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. [pudəz]) (4c).



In the second case,  $\text{ʔ}^0$  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').  $\text{ʔ}$  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 puu'dəz is a segment  $\text{ʔ}$ , not a tone. This proposition accounts for the variation of Livonian *stød*, both diachronically and synchronically.

## References

**Harris, J.** (1990) 'Segmental Complexity and Phonological Government', *Phonology*, 7(2), pp. 255–300. **Kettunen, L.** (1938) *Livisches Wörterbuch mit grammatischer Einleitung*. Helsinki: Suomalais-Ugrilainen Seura. **Kiparsky, P.** (2006) 'Livonian *stød*'. Stanford University [ms]. Available at: <http://web.stanford.edu/~kiparsky/Papers/livonian.pdf> (Accessed: 10 September 2014).