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LIVONIAN AND LEIVU: SHARED INNOVATIONS AND PROBLEMS

Abstract. Livonian and Leivu South Estonian, both spoken in Latvia, have a common word stem in the name of their language and people, and several phonetic innovations. In this article, the traditional Estonian-based etymology of the Estonian-based name of Livonians and Leivus and their language is refuted. The common stem comes probably from an unattested Old Norse name given for Livonia by the Scandinavians, and was later borrowed into Livonian and Leivu from German. A pilot study of some shared phonetic innovations turns attention to (1) the breaking of long and short mid vowels into long and short diphthongs, (2) triphthongs, (3) the loss of intervocalic *h after a short initial syllable and the rise of the broken tone, (4) the rise of prepalatal sibilants \dot{s} and \dot{z} , and (5) the rise of voiced obstruents. All innovations have some parallels in Baltic dialects, especially in Latgalian. However, the voicing of obstruents in Livonian, Karelian, Lude and Veps cannot be considered as an influence of Latvian and Russian.

Keywords: Livonian, Leivu Estonian, etymology, sound changes, language contact.

1. Introduction

Both Livonian and the isolated Leivu South Estonian were spoken in what is now Latvia. As far as we know the Livonian language area bordered on Livonoid or Tamian Low Latvian and the Leivu language area was surrounded by Latgalian High Latvian. After the beginning of the second Soviet occupation in Latvia (1944—1991), the traditional lifestyle on the Livonian Coast in the northern tip of the Courland peninsula was dramatically changed and the younger people had to move to cities or inland towns, where they lost their Livonian language in the Latvian environment. As a consequence, Livonian has ceased to be used in everyday communication. The Leivu linguistic island, as far as it has been studied, is usually divided into two subdialects, conservative Alamõiža (Latvian Lejasmuiža) and more innovational Sältnä (Latvian Zeltiņi). Leivu was mostly replaced by the Latvian language already by the beginning of 1930s; the last Leivu speaker died in 1988. Despite their isolation, Livonian and Leivu have several shared or at least similar innovations. Hopefully, the

present pilot study, which is based on some data from Sältnä, will provoke a more thorough study of the field.

Here, the Livonian data are given orthographically, except that the East Livonian lower $\bar{\varrho}$ has been extracted from $\bar{\varrho}$ (instead of $\bar{\varrho}$ there is always \bar{a} in West and \bar{l} ra Livonian) and the $st\varrho d$ is indicated by an apostrophe as a substitute for the symbol ' of the Uralic Phonetic Alphabet. The Leivu data are taken unchanged from Niilus 1935.¹ The transcription system used by Valter Niilus differs from the contemporary one in rendering the three distinctive quantity patterns, hereinafter Q1, Q2, and Q3, of Estonian. Namely, this system leaves the final components of polyphthongs and the initial components of consonant clusters unmarked for duration (i.e. fullshort) in the initial syllable of words of Q2. As the vowel of the $2^{\rm nd}$ syllable of words of Q1 and Q2 is mostly full-short and not half-short in Leivu, this convention must not be forgotten.²

2. $L\bar{\imath}v\tilde{o}$ and leivu

Characteristically, Livonians and Leivus use the same stem in the name of their languages, cf. $l\bar{\imath}v\tilde{o}$ $k\bar{e}l$ 'the Livonian language' and $l\bar{\imath}v\tilde{u}\sim l\bar{\imath}v\tilde{u}$ $k\hat{\jmath}l$ ' 'the Leivu language'. In the most part of Leivu, the former long * $\bar{\imath}$ has been diphthongized into ei under the Latgalian influence. The stem-final \tilde{o} [$\hat{\jmath}$] in Livonian is the result of a regular reduction of vowels except *a or * \bar{a} in the 2nd syllable. The stem-final u in the Leivu name³ may be influenced by Latvian: Livonian $l\bar{\imath}v\tilde{o}$ $k\bar{e}l$ 'the Livonian language' is in literary (Low) Latvian $l\bar{\imath}bie\check{s}u$ valoda or $l\bar{\imath}vu$ valoda and $le\check{\imath}vu$ $k\hat{\jmath}l$ ' 'the Leivu language' is in Latgalian leivu $vol\bar{\imath}da$. The boldfaced u in Latvian words is the genitive plural ending and the exact meanings of the two Latvian/Latgalian phrases are 'the language of Livonians' and 'the language of Leivus'.

The origin of the name for Livonians and Leivus is unclear. SSA 2 (sv Liivi) considers it as possibly connected with the Estonian word *liiv* 'sand' and ascribes this etymology to Friedrich Kruse (1846 : 95) and adds a bare reference to Vääri 1959 : 196. Eduard Vääri does not mention Kruse at all but claims that in the second volume of August Wilhelm Hupel's "Topographische Nachrichten" (Hupel 1777 : 183—187) there is "a longer

¹ Seppo Suhonen (1989) has systematically compared Ferdinand Johann Wiedemann's and Heikki Ojansuu's notations from 1868 (cf. Wiedemann 1869) and 1911 respectively, giving thus an overview of somewhat older states of certain Leivu features under discussion here.

² In Leivu, a stressed syllable of Q1 is short, i.e. it ends in (a) a full-short or half-long (e.g. \hat{e} , \hat{o}) monophthong or (b) a diphthong whose first component is supershort (i , u , or u) and the second component is full-short or half-long; elsewhere the stressed syllable is long. A long stressed syllable is of Q2 if (1) its vocalic nucleus contains either (a) a full-short vowel (e.g. i , u , u , u), that can be preceded by a supershort i , u , or u and/or followed by a full-short monophthong and/or a consonant that is not longer than full-short, or (b) a polyphthong whose first component is not longer than half-long (e.g. \hat{e} , \hat{o}) and the second non-final component is not longer than half-long and the final component is not a half-long \hat{i} , u , or u , and (2) its coda, if present, contains only consonants that are not longer than full-short. All other long stressed syllables are of Q3.

³ Karl Kont (1954 : 4) has recorded from an informant from Onti the phrase $l\bar{i}vi$ $k\hat{\jmath}l'$. Still it is not certain that it belonged to the local usage because as in the same text also the North-East Estonian place name Narva is mentioned, a North Estonian influence cannot be excluded.

etymology of liivi". Actually, Hupel reports already in the first volume of "Topographische Nachrichten" (1774: 67–68) that the derivation of the country name by Moritz Brandis⁴ from the Livonian Liiw⁵ 'sand', Liwa ma 'sand soil' can well be accepted. In addition he claims that "In Livonian as well as in Estonian, Liiw is a small net, but also sand. In the latter sense many persons have found with a well-founded reason a motive for giving the name to the people and country" (1774: 69). To be more exact, Estonian liiv (GSg liivi) is 'a short triangular net for fishing in the shallow water', and liiv (GSg liiva) is 'sand'. Hupel obviously tries to explain why there is an [f] in the German name of Livonia, cf. Liefland ~ Livland. According to Hupel, Russians and Vends who earlier inhabited Livonia, could pronounce Liiw as Liif (Hupel 1774: 72). Hupel (1777: 183) quite on the contrary insists that the neighbors (actually Estonians) of Livonians have given them the name *Liwi rahwas* 'the Livonian people' and he is not sure whether this name is general or also *Liwa rahwas* is used. He thinks that *i* has replaced a so that Livonians could use the plural Liwid because Liwad from Liwa were "an entirely abnormal expression" (ein schlechterdings ungewöhnlicher Ausdruck). Friedrich Kruse, in addition to a laconic presentation of the same etymology (1846:95) thinks that Livonians seem to have received their names from Liw i.e. sand of the sand coast they populated (1846 : 167).

In the Nestor's chronicle (Повъсть времяньныхъ лътъ 'Tale of Bygone Years', written in Old Church Slavonic at the beginning of the 12^{th} century), Livonians are called $\hbar u \delta b \sim \hbar u \delta b$. As in Latvian Livonians are usually $l \bar{t} b i e \bar{s} i$ (singular $l \bar{t} b i e t i s$), the Old Russian term must have been borrowed from Latvian, probably from Selonian. Similarly, the Salāts Livonian name $L \bar{t} b m \bar{a}$ 'Livonia' and $l \bar{t} b$ 'a Livonian' are borrowed from or influenced by Latvian.

In view of the possibility that the name for Lithuania, which in Lithuanian is $Lietuv\grave{a}$, and the name for Lithuanians $liet\grave{u}viai$ (singular $liet\grave{u}vis$), cf. also Latvian $lietuvie\check{s}i$ (singular lietuvietis), dialectal (e.g. in Courland) $le\~isi$ (singular $le\~itis$), may be connected with the word for 'rain', cf. Lithuanian $liet\grave{u}s$, Latvian $li\~etus$, Curonian $li\~ets$, which is derived from

⁴ Moritz Brandis, who was born in about 1550 in Germany, was the first codifier of the Estonian Knighthood rights and wrote a chronicle of the older history of Livonia.

⁵ Here Hupel's and Kruse's orthography is unchanged.

the Balto-Slavic verbal root * $lei->l\bar{\imath}$ - 'to pour', it is possible that the name for Livonia and the name for Livonians may be connected either with the East Slavic stem for rainstorm, cf. Russian nusehb, or its Slavic verbal base stem * $l\bar{\imath}va$ -, which occurs in imperfective prefixal verbs, e.g. Russian bbnubeatb 'to pour out', Polish wylewac 'to overflow', Czech vylevati 'to flow out', Slovak vylievat' 'to pour out; to spill'. The stem * $l\bar{\imath}va$ - goes back to the Balto-Slavic stem *lei-. To be true, this explanation clearly requires for Livonians other Slavic neighbors than Old Russians. On the other hand the name of Lithuania has usually been connected with the Latin word $l\bar{\imath}tus$ (< *leitos) 'coast, sea shore', which is also considered to be derived from the Indo-European root *lei- 'to pour', (Fraenkel 1960, sv lietuvis; Vasmer 1950—1958, sv lietivis; Karulis 1992, sv lietuviesi). This etymology of lietuva meets the problem of location of this coast because the Grand Duchy of Lithuania subjected the coastal Baltic tribes as late as in the lietuvie century.

One could as well or even better derive the name for Livonians from Scandinavian. It is possible to speculate that for the ancient Vikings who in storms succeeded in bypassing the huge shallow water sandbank north of the Cape of Kolka and reached the eastern coast of what is now called the Gulf of Riga, the coast was a real Lifland 'land of life' and the friendly inhabitants of Lifland were naturally lifri and maybe also lifri 'brothers', cf. Swedish liver 'Livonians'. The probably unattested meaningful Old Norse placename Lifland became later the more obscure $Liefland \sim Livland$ in German and Livonia in Latin. If this stem was borrowed also by the Daugava and Gauja Livonians they must have accepted it no later than in the first half of the $11^{\rm th}$ century and not before the Vikings began to use the Daugava River as a waterway to what is now Polatsk in Belarus.

In the chronicle of Henricus de Lettis, written in Latin, Livonians are called $Livones \sim Lyvones$. The vowel o in the second syllable can be considered an argument against Moritz Brandis's etymology of the name of Livonians because of the similarity of the rounded vowels o and u in Livones and leivu. On the other hand, most peoples have names ending in ones, cf. Theutones 'Germans', Saxones 'Saxonians', $Lettones \sim Letthones$ 'Lithuanians', Curones 'Curonians', Selones 'Selonians', Estones 'Estonians'.

No matter what the origin of $l\bar{\imath}v\tilde{o}$ and leivu is, it is noteworthy that some time after the Livonians were defeated, the label Livonian became an object of desire of non-Germans in Latvia. There exists at least one Old Latvian text with an adequate translation into German that is presented as a Livonian text.⁶ Similarly, there is a doubt that Mahrz Sahrum⁷ was not

⁶ This tendency goes on even in our days. Latvian linguists translate the name of the northwesternnmost Low Latvian dialect, which characteristically has several Livonian substratum features (called *lībiskais dialekts* in Latvian and called here in section 1 as Livonoid Low Latvian) into English as *Livonian dialect*, cf. http://en.wikipedia.org/wiki/Latvian_language, the section on dialects. On the other hand, the Livonian language is often deprived of its historical Latin-based English name and called the *Liv language*, cf. e.g. the official English translation of the Official Language Law, section 18 (4) in the Latvian state portal http://izm.izm.gov.lv/laws-regulations/2292.html.

⁷ Mahrz Sahrum (1799—1859), who was born in Priekuli northeast of Cēsis, is nowadays introduced as the first known Latvian builder Mārcis Sārums (*-is* and *-s* are Latvian nominative case endings). He built the tower of St. John's church in Cēsis and restored several churches.

a Livonian although he introduced himself to a German, who had thought he was a Latvian with the following words: Herr! ich bin keine Lette, sondern der letzte Live in der Umgegend Wenden's 'Sir, I am no Latvian, but the last Livonian in the vicinity of Wenden (= Latvian $C\overline{e}sis$)', cf. Hagemeister 1849 : 78). Henricus de Lettis, who in 1204 probably attended the christening of Vends in $C\overline{e}sis$, wrote that Vends where first driven away from the Venta river in Courland and later from the area of present-day Riga, and therefore Vends escaped to Letts (Latgalians). Hence, Henricus did not associate Vends with Livonians or Latvians.

Leivus, like other Estonians, called themselves earlier *maarahvas* 'land people' (Wiedemann 1869 : 499). As Leivus were isolated from other South Estonians in their Latgalian environment and their dialect had its distinctive phonetic and lexical characteristics, they must have considered themselves different from other South Estonians. The local Germans, who also noticed this difference, probably decided that Leivus are Livonians, in German *Liven*. As there were no Livonians in the area, local Latgalians and Leivus accepted this decision and borrowed the corresponding German stem to denote Leivus.

3. Breaking of vowels in initial syllables

Both in Livonian and Leivu, the Proto-Finnic breaking of mid vowels involves both long and short vowels. Still, breaking has its own restrictions in each language.

3.1. Breaking of mid vowels in Livonian

In Livonian, breaking of mid vowels occurs both in syllables with plain (raising) tone and with broken tone:

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*\bar{e} > ie [ie]:m\bar{i}ez 'man', m\bar{i}'ed 'men'*\bar{o} > \bar{u}o [iuo]:s\bar{u}o 'marsh', k\bar{u}'odi 'direct'*\bar{o} > \bar{u}\bar{o} [iu\bar{o}] > ie:\bar{u}\bar{o} > ie 'night', i'ez\bar{o} 'night (IllSg)'*e > ie [ie]:tier\bar{a} 'grain; blade', pie'zz\bar{o} 'to wash'*o > uo [uo]:suod\bar{a} 'war', kuo'd 'home'
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The breaking of * \bar{e} , * \bar{b} , and *e did not occur (a) before a syllable containing a monophthongal *i (ve 'rri 'bloody (NSg)', $ver\bar{\imath}z$ 'bloody (GSg)' from ve 'r < *veri; te 'b < $t\ddot{o}$ 'b < * $t\ddot{o}bi$ 'epidemic', in contrast to lie 'ggi 'muddy (NSg), $lieg\bar{\imath}z$ 'muddy (GSg) from $lieg\bar{a}$ 'mud'); (b) in the diphthong *ei ($l\bar{e}ba$ < *leiba '(rye) bread', $leib\tilde{o}$ < * $leibad\tilde{o}$ 'bread (PSg)', and (c) before a palatal or palatalized consonant ($le\bar{\imath}eja$ 'grindstone', $rej\bar{a}$ 'rake', $l\bar{\imath}eja$ 'works (PSg)'). Note that the vowels $\bar{\delta}$ and $\tilde{\delta}$, which are usually transcribed as and $[\bar{\imath}e]$ and [e], are not mid vowels but high vowels, and East and $\bar{\imath}ra$ Livonian mid vowels $\bar{\delta}$ and δ go back to $\bar{\imath}u$ 0 and u0, whose components fused when preceded by p, m or v, cf. $p\dot{\imath}dd\bar{\imath}u$ 5 < $puod\bar{\imath}u$ 6 'it aches' and $p\dot{\imath}u$ 6 'q6 'vo ache' (cf. also Posti 1942 : 7, 12, 129). In the later word $pod\bar{\imath}u$ 6 'rag' (PSg $po'dd\tilde{\imath}u$ 0), the mid vowel did not undergo breaking any more. Note that word-

⁸ It is possible that Vends in Cēsis, like Vends in Germany, were West Slavs. *Cēsis*, in German *Wenden*, is *Võnnu* in Estonian. Additionally, there are two places in Estonia called *Võnnu*, one in northwestern and another in eastern Estonia.

initial ie and uo have received in Livonian a prothetic consonant j and v respectively, cf. West Livonian $v\bar{u}olda$ 'to be', vuo', $[v^uo']$ 'he was', and $jiem\grave{a}$ [$j^iem\grave{a}$] 'mother' vs. East Livonian $v\bar{o}lda$, vo', and $jem\bar{a}\sim jiem\bar{a}$.

Breaking of long mid vowels was also characteristic of Salāts Livonian.

3.2. Breaking of mid vowels in Leivu

In Leivu, long mid vowels underwent breaking only in syllables of Q2, whereas breaking of short vowels occurs in syllables of all three quantities Q1, Q2, and Q3:9

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*\bar{e} > \bar{i}\hat{e}: v\tilde{i}\hat{e} 'water (GSg)', k\tilde{i}\hat{e}l\tilde{e}^{g} 'tongues (NPI)'

*\bar{o} > \tilde{u}\hat{o}: \tilde{u}\hat{o}men 'tomorrow', \tilde{u}\hat{o}na 'lamb (GSg)', d\tilde{u}\hat{o}va 'they drink'

*\bar{e} > e: \tilde{v}\hat{e}: \tilde{v
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The breaking of long mid vowels $*\bar{e}, *\bar{o}, *\bar{o}$ has regularly occurred in long syllables of Q2 and locally in a set of stems of Q3 with a long vowel resulting from vowel contraction after the loss of an intervocalic consonant, e.g. $vi\dot{e} < *ve\check{t}en$ 'water (GSg)'. The breaking of $*\bar{e}$ was not a general innovation. Additionally, the quantity pattern of the resulting diphthongs differs from the diphthongs resulting from the breaking of $*\bar{e}, *\bar{o},$ and $*\bar{o}$. It is obvious that the diphthongs under discussion need a more thorough study. The breaking of $*\bar{e}$ has also occurred in one part of North Estonian, the Central North Estonian, where the resulting diphthong is e in Q2 and e e e in Q3, and in Hill East Votic (i.e. in Kattila and in the area south of it) where the resulting diphthong was e

The raising of $*\bar{e}$, $*\bar{o}$, and $*\bar{o}$ in Q3 and the breaking in Q2 occurred also in Kodavere East Estonian. Lauri Kettunen (1912 [1914]: 67; 1913: 176; 1962: 138) has suggested that such raised monophthongs in Kodavere and in South Estonian rose from ie, uo, and $\ddot{u}\ddot{o}$ and this has been the generally accepted view unlike the one proposed by Viitso (2003: 177). Although breaking of long mid vowels in Q3, which rose in the course of vowel contraction triggered by the loss of intervocalic *h and weakened stops preceded by a short monophthong, cf. vie < *veten 'water (GSg)', (ma) tiè < *teken 'I do', mie < *mehen 'man (GSg)', occurs only in one part of Leivu, it nevertheless makes a strong argument against the theory about the long mid vowel raising in Q3 via breaking of long mid vowels. This breaking is later than long mid vowel raising in Q3 and has taken place at the same time with breaking in Q2. Hence the diphthongs that developed from former long mid vowels in syllables of Q2 are not a residue of the once general breaking of long mid vowels, which remained untouched by the fusion of the diphthongs ie, $\ddot{u}\ddot{o}$, uo to $\hat{i} \sim \ddot{i}$, $\hat{u} \sim \ddot{u}$, $\hat{u} \sim \ddot{u}$. The diphthongs are the result of breaking that took place after long mid vowels in syllables of Q3

⁹ Although the DOMAIN of the three distinctive quantities is the foot (Q1 and Q2 are possible only in at least a disyllabic foot, the initial syllable makes the FOCUS where all possible contrasts occur and which dictates the general structure conditions of the following syllables in the foot. Moreover, an initial syllable in any of the three quantities may occur in an up to trisyllabic foot.

were already raised to $\hat{i} \sim \hat{j}$, $\hat{y} \sim \hat{y}$, $\hat{y} \sim \hat{y}$, cf. $m\hat{i} \approx *m\bar{e}s$ 'man', $n\hat{y}r < *n\bar{o}ri$ 'young', $\hat{y} < *\bar{o}$ 'night'. In another part of the Leivu area, the contracted long mid vowels underwent both the long mid vowel raising and the breaking of long high vowels component, cf. section 4. Hence the long mid vowel raising and the vowel contraction after the loss of intervocalic consonants occurred in reverse order in different Leivu subdialects.

General breaking of long mid monophthongs has also taken place in several North Estonian dialects, Hill and Pontizõo East Votic, Finnish, Karelian, and Lude; in Estonian East Finnish, and Karelian, it involved also the long contracted mid vowels. The area of breaking of long monophthongs is discontinuous; the southwestern pocket includes partially the Estonian western islands, namely the eastern Saaremaa, Muhu, and Kihnu. Additionally, both the long $*\bar{e}$ from Proto-Baltic *ei or *oi and the long $*\bar{o}$ from Proto-Baltic *ou have undergone similar breaking in Latvian and High (or Aukštaitian) Lithuanian (cf. Rudzīte 1993 : 150—153; 154—156, 163; Zinkevičius 1978 : 85—86). Low (or Žemaitian or Samogitian) Lithuanian dialects are more conservative: *ou is preserved in Northern and * \bar{o} in Western Žemaitian. As the breaking of long mid vowels occurred also in Salāts Livonian, once probably spoken up to the Pärnu River in Estonia, there are no known grounds to decide whether breaking in Livonian was somehow related with breaking on Estonian islands or took place under Latvian influence. In Leivu, the breaking of long mid vowels was a relatively late change and possibly influenced by Latgalian.

Breaking of short mid vowels is relatively rare. Still, in addition to Livonian and Latvian it was also characteristic of the Lutsi South Estonian pocket in the vicinity of Ludza in south-eastern Latvia. According to Mari Must and Aili Univere (2002: 117), irregular and also individual breaking of *e, *o, and *ö has been noted in five North Estonian parishes which can be considered four separate areas. I have heard such breaking also in the speech of one person from Simuna. The breaking of *e to ja (probably *e > *ie > *ia > ja) occurred also in Old Norse. In Livonian and Estonian, characteristically, the supershort i in such diphthongs cannot be identified with the palatalization of a preceding consonant as sometimes done by Sjögren and Wiedemann, who usually identified short ie and uo as e and o. In Leivu, the diphthong ie follows both a palatalized and an unpalatalized consonant. Lembit Vaba (1997: 41) explains this by the Latvian influence. Marta Rudzīte presents the diphthongs ie and uo in the list of 56 Livonoid Low Latvian monophthongs and diphthongs (1964: 160) and ie in a similar list of 104 High Latvian monophthongs and diphthongs (1964: 266) but she does not mention them elsewhere. In these Latvian dialects, ie and uo are probably rare local diphthongs. As the only example of ie I could find results from the shortening of a (long) diphthong, it is possible that such diphthongs in High Latvian never developed as a result of short mid vowel breaking. In Livonian, there are no examples of shortening of a long diphthong. Hence, up to now there is no known reason to substantiate breaking of short mid vowels in Livonian and Leivu by direct Latvian influence. Most probably the breaking of short mid vowels in Livonian and Leivu took place by analogy with the breaking of long mid vowels.

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4. Triphthongs

As a result of breaking of the initial mid component of a former diphthong both Livonian and Leivu have triphthongs.

In Livonian stem-initial syllables, two sequences of three different vowels *ieu* and *uoi* occur in different tone and quantity patterns:

ieu < **eu*: $lieud\tilde{o}$ [$l^ieud\tilde{o}$] 'to find', kie'v [$k^ie'u$] 'cough', $kie'vv\tilde{o}$ $[k^i e' u \breve{v} v \hat{\sigma}]$ 'cough (PSg)'

West Livonian *lieudab* [*lieudab*]¹⁰ 'he finds' $\bar{\imath}eu<*\bar{e}u$:

 $kuoig\bar{\imath}d$ [$k^uoig\dot{\imath}D$] 'ships', kuo'ig [$k^uo'ic$] 'ship', $kuo'ig\tilde{\imath}$ uoi < *oi: $[k^u o' ig \hat{\sigma}]$ 'ship (PSg)'; $suoim \tilde{\sigma}$ $[s^u o im \hat{\sigma}]$ 'to swear', tuoi

 $[t^u o i]$ 'other, second'

 $s\bar{u}oim\tilde{o}b$ [$s\hat{u}oim\hat{o}B$] 'he swears', $t\bar{u}oizta$ [$t\hat{u}oista$] 'other, $uoi < *\bar{o}i$:

second (PSg)', $t\bar{u}'oig\tilde{o}z$ [$tu'oig\hat{o}z$] 'birch bark'

In these examples breaking has been applied to (a) diphthongs of Proto-Finnic origin ($lieud\tilde{o}$, $suoim\tilde{o}$: $s\bar{u}oim\tilde{o}b$, tuoi : $t\bar{u}oizta$); (b) diphthongs resulting from contraction after loss of *h ($t\bar{u}$ 'o $ig\tilde{o}z$), (c) diphthongs resulting from fission of (*)v and (*)vv <*h ($kie'v:ki'evv\tilde{o}$), and (d) diphthongs resulting from fission of * \acute{g} and * $\acute{g}\acute{g}$ (kuoigīd, kuo'ig : kuo'ig $\~{o}$).

In Leivu the number of sequences of three different vowels is bigger:

k¹äüš 'he walked' *iäu* < *äü:

uoija 'I hold': uoitma 'to hold'; puois 'boy': GSg puoisii; uoi < *oi:

 $r^u \grave{o} i$ 'grass'

 $s^u o \dot{e}$ 'wolf (GSg)', $t^u \dot{o} \dot{e}$ 'support (GSg)' $uo\dot{e}$ < *oe:

 $k^u o \grave{a}$ 'hut (GSg)'; $uo \grave{a} \check{s}$ 'thistle' $uo\grave{a}$ < *oa:

 $m^i e i$ 'honey (GSg)', $v^i e i$ 'water (GSg)'; $m^i e i$ 'man (GSg)', iei:

 $r^i e i$ 'threshing house'

üöü: $\dot{\S}\ddot{u}\ddot{o}\ddot{u}w\ddot{a}$ 'to eat (Inf)'; $\dot{r}\ddot{u}\ddot{o}\ddot{u}\dot{\S}$ 'sputum'

In Leivu, breaking has been applied to short initial components of (1) original diphthongs ($k^i \ddot{a} \ddot{u} \dot{s}$; uoija: uoitma; puois : puois : puoiti); (2) diphthongsresulting from contraction after loss of (a) ${}^*\check{t}$ ($s^u o \dot{e}$, $k^u o \dot{a}$), (b) ${}^*\check{k}$ ($t^u \dot{o} \dot{e}$), (c) *t and *h (" $var{a}\dot{s}$ < * $var{a}\dot{$ in syllables of Q3 resulting from breaking of a long high vowel, which rose from raising of a contracted vowel after loss of (a) $*\check{t}$ (m^iei 'honey (GSg)', $v^i e i$), (b) * \check{k} ($\dot{r}^i \ddot{v} \ddot{o} \ddot{u} \dot{s}$), (c) *h ($m^i e i$ 'man (GSg)', $r^i e i$, $\dot{r}^u \dot{o} i u o \dot{a} \dot{s}$), and (4) diphthongs resulting from breaking of $*\bar{u} < *\bar{o}$ before *t > w in certain verb forms of Q2 ($\check{s}^{\check{u}}\ddot{o}\ddot{u}w\ddot{a}$). Note however, that it has not been proven that $uo\dot{e}$ and $uo\dot{a}$ are triphthongs and not heterosyllabic sequences. Cases (3) and (4) are not general, cf. section 3.2, on the other hand they are somehow related with breaking of primary long high vowels where the initial components of the resulting diphthongs have not been subject to breaking, cf. e.g. *k'öünàr vs. śüöüwä.

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*i > ei: leina 'city (IllSg)', leiva 'sand (GSg): PSg leiva
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* $\bar{u} > \varrho u$: $s \varphi u d$ 'mouth (PSg)', $d' \varphi u w a$ 'to drink'

 $^*\bar{u}>\ddot{o}\ddot{u}:~^*k\ddot{o}\,\dot{u}dz$ 'nail, claw': GSg *k $\ddot{o}\ddot{u}dz\grave{e};~^*k\ddot{o}\ddot{u}n\ddot{a}r$ 'ell' : GSg *k $\ddot{o}\dot{u}ndre$

 $^{^{10}}$ In East Livonian, u is always deleted after the long first component of a polyphthong. Note that in Livonian no consonant is deleted in this position.

What remains problematic here are the criteria of breaking vs. non-breaking of the initial components of diphthongs resulting from breaking of long raised or high monophthongs, cf. e.g. šūouva vs. *kounar.

Breaking of long high vowels was not common even in Sältnä, cf. Ariste 1931. This was most probably influenced by Latgalian as there are parallels for breaking of $*\bar{\imath}$ and $*\bar{\imath}$ in Latgalian (Rudzīte 1993 : 150, 245—246; 158—159, 246—247) and in Old Prussian (Zinkevičius 1980 : 86; Rudzīte 1993 : 163).

5. Loss of intervocalic *h after a short initial syllable

In Livonian and Leivu, the Proto-Finnic *h is lost without any provable trace in stem-initial and stem-final positions. For Proto-Finnic consonant clusters on the border of the stem-initial and the following unstressed syllable in Livonian, the preconsonantal *h is lost, giving rise to stød in the initial syllable but the postconsonantal *h is lost with no trace. In Leivu, the postconsonantal *h was removed to the beginning of the cluster, after which both the earlier and the new preconsonantal *h were either assimilated with the following consonant or lost in Q2 (i.e. at the end of primary-stressed syllables which originally were followed by a closed unstressed syllable that now may be open) and preserved in syllables of Q3. The intervocalic *h is lost in both Livonian and Leivu due to either (1) substitution with another consonant or zero, or (2) substitution with stød.

5.1. Substitution of intervocalic *h with another consonant and the total loss of *h

In Livonian, there is j instead of *h in the former sequences *iha and *eha ($vij\bar{a}$ 'poison', $kej\bar{a}$ 'body', $lej\bar{a}$ 'flesh', $rej\bar{a}$ 'rake'), and v in the environment * $\ddot{u}ha^{12}$ ($piv\bar{a}$ 'holy; holiday', $piv\bar{a}p\ddot{a}va$ 'Sunday').

Unlike in Livonian, in Leivu *h is lost¹³ in former sequences *iha, *eha > *iha, and *üha (viànu 'gotten angry (past participle)', l'ià'meat', rʻià 'rake', püàb 'Sunday'). *h is also lost in former sequences {*ehi, *ehe} > *ihi (miei 'man (GSg)'), riei 'threshing house'), *ehti > *ehi (iei 'I adorn, decorate)', *ihko > *ihu (viù 'sheaf (GSg)'), *uhka > *uha (tuà ~ tuàd 'thousand'), *ohta > *oha (uoàs 'thistle'), *ohi (ruoi 'grass'), *ohtu > *ohu (toù 'birch bark (GSg)'), *ahvu > *ahu (ruoù? 'kidneys (NPI)'), *ühkü > *ühü (püöù 'palm, hand (GSg)'). Additionally there is an intriguing group of words with the sequence ij as the substitute for *h or *hh in environments a_è and u_è: jaijè 'cool', aijèr 'barren': GSg $a\bar{n}tr$ è, vaijèr 'maple': GSg $va\bar{n}tr$ è, vijèrd 'auger', cf. also Võru South Estonian jahhe, aher, vaher, Finnish vaahtera 'maple', Erzya Mordvin ukštor 'maple'. Võru jahhe is a regular reflex of

 $^{^{11}}$ Niilus (1936 : 38) reported that he had heard an informant pronouncing the intervocalic h in two words, and that another investigator had heard even more examples. As the Leivu settlement never was compact, it is possible, that the process of the loss of intervocalic *h had not yet ended for all speakers, Note that in 1868 when Wiedemann visited the Leivus, the intervocalic h was still regularly used. 12 In Livonian, the front round vowels \ddot{u} and \ddot{o} were delabialized to \dot{i} and \dot{e} during the second half of the 19th century. People born in 1880's and later did not learn to use these vowels in Livonian.

¹³ The sequence **eha* changed to *iha* already before the loss of **h*.

the underlying stem *jaheťa, cf. also North Estonian NSg jahe (< *jaheťa), GSg jaheda (< *jaheťan). Hence, the Leivu stem jaiję could be explained when proposing a change of *h to j before e. This would entail jaiję to be a stem with a regular gemination of /j/: *jaheťa > *jahea > *jahē > *jajē > *jajjē > jajjē, = jaiję or *jaheta > *jahea > *jajea > *jajjēa > *jajjē > jajjē = jaiję. In this case, by analogy with Võru and North Estonian forms, we could expect in other nominative case forms only a single consonant †j as the reflex of the weak grade cluster *hť, cf. e.g. *vahťer > *vaher > *vajer > †vajõr = †[vajęr]. Hence, a special development, an epenthesis, must have occurred in Leivu which created preconditions for the gemination of the weak grade reflex of *hť that must have been *j, cf. e.g. *vahťer > *vaheťer > *vahēr > *vahēr > *vajēr > *vajēr > vajjęr = vaijęr.

5.2. Substitution of *h with stød

Stød, laryngealization, or creaky voice is not a segment but modulation of a sonorous segment, which is produced by means of an additional effort of vocal cords that in case of especially emphatic pronunciation may be realized even as a glottal stop but most usually as a drop (or even a break) of pitch and intensity. The latter property has induced the term BROKEN TONE. In spontaneous speech, for different reasons, stød may often be hardly noticeable if at all.

In Livonian, except in cases mentioned in section 5.1, the former postvo-calic *h that followed the vowel of the stem-initial syllable is, potentially, in all cases represented as stød, cf. e.g. $r\bar{\varrho}' < *raha$ 'money', $r\bar{\imath}' < *r\bar{\imath}hi$ 'threshing house', $p\bar{a}'z\tilde{\varrho} < *p\bar{a}hesen$ 'head (IllSg)' with stød from the former intervocalic *h and $n\bar{\varrho}'g\tilde{\varrho} < *nahga$ 'skin'), $v\bar{\imath}'m\tilde{\varrho} < *vihma$ 'rain', $l\bar{e}'\dot{\varrho} < *lehti$ 'leaf': GSg $l\bar{\imath}'ed < lehten$. In addition to stød from *h, Livonian offers even more cases of stød connected with the loss of vowels in non-initial syllables and cases of stød in Latvian borrowings.

In Leivu, *h is substituted with stød mostly in illative forms of monosyllabic vocalic stems and in stems where *h occurred between identical vowels, e.g. $n\ddot{a}$ 'a? 'skins', $p\ddot{a}$ 'ä 'head (IllSg)', $r\ddot{a}$ 'ad 'money (PSg)' (note that this way of transcribing stød in Leivu words has insisted unnecessary decisions about the position of stød in a vowel).

In Livonian, stød was first identified in 1890 by Vilhelm Thomsen. Later measurements have shown that the laryngealization in such words takes place somewhere near the midpoint of a long vowel, e.g. $l\bar{e}'d$ is actually pronounced as $[l\tilde{e}'\tilde{e}b]$ or $[l\tilde{e}\tilde{e}b]$ (Kettunen 1938 : XXI). In Leivu, stød was first mentioned in writings of Valter Niilus. Although beginning with Lauri Kettunen, stød in Livonian was mostly considered a tonal feature, some linguists considered it a sound, i.e. a segment (cf. German $Sto\beta laut$, Finnish $katko\ddot{a}me$, Estonian $katkeh\ddot{a}\ddot{a}lik$). Fanny de Sivers (1965) equated it with a glottal stop (French $le\ coup\ de\ glotte$). However, the tonal essence of stød is proved by a morphological argument: the noun stems $r\bar{e}$ 'money' and $v\bar{e}$ 'foam; wax' take in partitive and illative singular respectively the case endings $-d\tilde{o}$ and $-z\tilde{o}$ that occur only with monosyllabic stems ending in a

 $[\]overline{^{14}}$ Kettunen and several subsequent linguists have actually accepted the Balticists' terminology where both lexical tones and phrasal intonation are called INTONATIONS.

long monophthong or a long diphthong ie or $\bar{u}o$ (Viitso 2007 : 27, fn. 8). In Leivu, stød was considered a tonal feature (an intonation) by Eberhard Winkler (1999 : 202) although formally his example $n\check{a}'a'$ 'skins' does not prove it. Yet he is right, as also in Leivu the word $r\check{a}'a$ 'money' takes the partitive singular ending -d that occurs only with monosyllabic stems ending in a long monophthong, cf. $r\check{a}'ad$.

6. Prepalatal sibilants \check{s} and \check{z}

Livonian and Sältnä Leivu share their characteristic shift of sibilants from palatalized alveolar to prepalatal $[\check{s}]$ and $[\check{z}]$. This shift is probably only a part of a more general shift of palatalized dental or alveolar consonants to prepalatal consonants. Palatalized alveolar sibilants have different history. Here only some comparable examples of probabilistic development of some words of Livonian and Leivu are presented:

A. Livonian

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*\ddot{u}kti > *\ddot{u}kt'i > *\ddot{u}kt'si > *\ddot{u}ks' > *\ddot{u}ks' > *\ddot{u}ks' > *\ddot{u}ks' > *\ddot{u}s' > *\ddot{t}a\ddot{u}t'i > *\ddot{t}a\ddot{u}s'i > *\ddot{t}a\ddot{u}s'i > *\ddot{t}a\ddot{u}s'i > *\ddot{t}a\ddot{u}s'i | *\ddot{t}a\ddot{u}s'i > *\ddot{t}a\ddot{u}s'
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B. Leivu

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*ükti > *ükt'i > *ükt'śi > *üt't'śi > üt'ś 'one'

*täüti- > *täüt'i > *täüśi > *täüźi > täüź 'full'

*vīti > *vīt'i > *vīśi > *vīzi > *vīži > vīž 'five'

*et'śeh > *et'śe > *et'śi > *eśi > *eźi > *eži > ieźi 'self'

*ottsi- > *ot't'śi- > *uot't'śi- 'to seek, look for' : 3Pl uot'śiva

*asjan > *aśjan > *aźja > *ažjà > ažà 'thing' (GSg)'
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Fusion of s with j has parallels also in Baltic and Slavic (cf. Rudzīte 1993 : 308—309; Иванов 1983 : 130).

7. Voiced obstruents

In both Livonian and Leivu, Proto-Finnic single obstruents (stops and sibilants) have become voiced in voiced environments, cf. Livonian $vied\bar{a}b$ 'he pulls', $jeg\bar{a}$ 'every', $piez\bar{a}$ 'nest', $\bar{a}ndab$ 'he gives'; Leivu $v^ied\bar{a}$ 'he pulls', $ieg\bar{a}$ 'every', $p^iez\bar{a}$ 'nest', $a\bar{n}daw$ 'he gives'.

According to tradition, the voiced single obstruents (stops and sibilants) appeared into different Finnic languages under the late influence of Russian or Latvian languages. In Leivu, voicing of intervocalic single obstruents is relatively late as the geminate obstruents that have risen through gemination are voiceless ($r^i e p p an$ 'fox', $v^i e t t a$ 'to pull (Inf)'). In Livonian, on the contrary such geminates are voiced (rie'bbi, vie'ddô), i.e. voicing is older than gemination. Livonian voicing is also somehow connected with voicing in South Karelian, Aunus, Lude, and Veps, cf. the names of two berries in these Finnic dialects:

Livonian	South Karelian	Aunus	Lude	Veps	Gloss
$b ar{u} o l g \widetilde{o} z$	buola	buolu	buol arrho	bol	lingonberry
$g\bar{a}rban$	garbalo	garbalo	garbal	garbol	cranberry

However, even Leivu voicing seems to be connected with voicing in South Karelian, Lude, and Veps, and maybe even in Votic (cf. Atlas Linguarum Fennicarum 2: 483—485, 487—489):

Leivu	South Karelian	Lude	Veps	Votic	Gloss
babarn(a)	babarno	babarm	babarm	baabukka	raspberry
bauaŕ				baabukaz	

For the distribution of the names for lingonberry and raspberry see Atlas Linguarum Fennicarum 2: 475-476, 478, and 483-485, 487-489. Although the names for raspberry beginning with b in South Karelian are restricted to Ontarvi and in Lude to Kuujärvi, berry names beginning with a voiced obstruent show that voicing of initial stops is older than any Latvian and Russian influences.

8. Some typological conclusions

As can be seen, shared innovations or changes discussed above took place when Livonian and Leivu were already different. Therefore the changes met different preconditions and had different outputs. Formally identical changes could also meet different restrictions; e.g. the change *e > ie could not produce the sequence iei in Livonian because, unlike in Leivu, it was blocked before j, palatalized consonants, and i. When a change was induced by a language where the change was applied to a poorer vowel system, the change was not copied but generalized to the existing richer system.

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Abbreviations

3Sg — 3rd person singular of present indicative; GSg — genitive singular; IllSg — illative singular; Inf — infinitive; NSg — nominative singular; NPI — nominative plural; PastPple — impersonal past participle; PPl — partitive plural; PSg partitive singular

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ТИЙТ-РЕЙН ВИЙТСО (Тарту)

ЛИВСКИЙ ЯЗЫК И ЛЕЙВУСКИЙ ДИАЛЕКТ ЭСТОНСКОГО ЯЗЫКА. ОБЩИЕ ИННОВАЦИИ И ПРОБЛЕМЫ

Ливский язык и южноэстонский лейвуский диалект, на которых говорили в Латвии, имеют общую основу в названии своего языка и общие фонетические инновации. В статье высказывается предположение, что эта общая основа содержалась в возможном древненорвежском топониме Lifland. Из общих инноваций рассматриваются следующие: 1) преломление долгих и кратких гласных в долгие и краткие дифтонги, 2) трифтонги, 3) утрата интервокального *h в положении после краткого гласного и возникновение ломанного тона, 4) возникновение препалатальных свистящих \mathring{s} и \mathring{z} и 5) возникновение звонких шумных. Все инновации имеют в какой-то степени параллели в балтийских диалектах. Все же возникновение ливских, южнокарельских, людиковских и вепсских звонких смычных нельзя объяснять влиянием латышского и русского языков.