Some Notes on the 3rd Person Future Forms in Lithuanian
Yoko Yamazaki, Stockholm University

The Lengthened Grade in Indo-European, Leiden University July 30th, 2013

1 Introduction

1.1 Monosyllabic Circumflexion

  - pronominal forms (tiė [ < *toi pl.nom. ~ gerféji ‘the good (pl.nom)’], tūos [ < *tons pl.acc. ~ gerúiosius ‘id. (pl.acc.);’ Zinkevičius 1980–81: II, 161])
  - former root nouns (Latv. gūvs ‘cow’ [ < *gʷōus ← acc.sg. *gʷōm (Svensson 2011: 20)]; šūo ‘dog’ [ < *kūō Hanssen 1885])
  - prepositions/adverbs (nuō ‘from’ ~ nūotaka ‘bride’ [Zinkevičius: id.]; vēl ‘again’ ~ Latv. vēl ‘still, yet’ [ < PB *vēli; Būga 1924: 95]; vōs ‘hardly’ ~ OCS jedv’a, SCr jēdv’a, Čak. jēdvā; PBS *edvās, [my identification])
  - 3rd person future forms of monosyllabic stems

1.2 MC in the 3rd Person Future Forms

- the infinitive stem + -s- + personal ending (-∅)
- many monosyllabic acute stems show the Monosyllabic Circumflexion:
  sōks – sōkti ‘to jump;’ vūs – vūti ‘to drive,’ etc.

1.3 Irregularity among the 3rd p. Future Forms of Monosyllabic Stems

Whereas the majority of the 3rd p. future forms of monosyllabic stems follow the metatony rule (vūs ‘will drive,’ lūs ‘will become meager;’ sōks ‘will jump,’ vēs ‘will get cool’), quite a few exhibit the shortening by Leskien’s Law (būs ‘will
For such exceptions:

- Zinkevičius (1980–81: II, 161ff.): they can be the result of the analogy from their polysyllabic variants, e.g. *būs* from *nebūs* ‘won’t be’ (< *nebūs*). However, every monosyllabic verb has polysyllabic variants at least in the negative forms.

- Kazlauskas (1968: 104): the shortening is regular for monosyllabic 3rd p. future forms; some of them remain long due to the expected homonymic clash (*vūs* ‘will droop,’ *siūs* ‘will sew’ vs. *vīs* – *vīsti* ‘to fall apart,’ *siūs* – *siūsti* ‘to rage’). However, why do *gnūbs* – *gnūbtī* ‘to pinch,’ *žnūbs* – *žnūbtī* ‘to tweak,’ etc. remain long (*Xgnūpti* or *Xžnūpti*)?; why is *līs* – *līti* alone shortened and not *lūs* – *lūsti* ‘to become thin’?

In this paper, I will try to seek for a more convincing solution by examining the data provided by Senn (1966) and Petit (2002).

## 2 Senn’s (1966: 231) List

Senn (1966: 231) provides a list of the verbs of monosyllabic acute stems which exhibit Leskien’s shortening. In his view, Leskien’s shortening is regular with *ū* and *ū* in the final syllable (including monosyllables) of the 3rd person future forms, but otherwise metatony is regular. Therefore, he regards the metatony of *ū* and *ū* in the final syllable of some 3rd person future forms as “counterexamples.”

(1) Leskien’s shortening instead of metatony (regular for Senn)

- b. *gūti* – *gūs* ‘get better’
- c. *lūti* – *lūs* ‘to rain’
- d. *su-lūti* – *su-lūs* ‘to get wet in the rain’
- e. *plūšti* – *plūš* ‘to tear, rip’ (note: Petit (2002) gives *plūš*)
- f. *rūti* – *rūs* ‘to swallow’
- g. *būti* – *būs* ‘to be’
- h. *dūjtī* – *dūjos* ‘to dry, wither’
- i. *grūtī* – *grūs* ‘to fall down, to lie down’

¹Moreover, some forms are listed with long or short vowels by different researchers. Those disagreements on the primary data may reflect the dialectal difference, but the dialect-related problem will be set aside in this current survey.
k. půti – půs ‘to rot’
l. růgti – růgs ‘to grow/turn sour’
m. slūgti – slūgs ‘to subside’
n. žūti – žūs ‘to perish, die’

(2) metatony (irregular for Senn)
   a. výti – výs ‘to drive, wind’
   b. výsti – výs ‘to fade, droop’
   c. lýsti – lýs ‘to get/become thin’
   d. su-lyšíti – su-lýs ‘to loose weight’
   e. (at)lympsti – lýs ‘to slacken’
   f. sižti – sižs ‘to sew’

However, Senn fails to explain why shortening is regular for those verbal roots
with ĭ and ľ as well as why the verbs in (2) exhibit metatony.

3 Petit’s (2002: 247ff.) List
Petit (2002) also discusses the unexpected distribution of metatony and shortening
in 3rd person future forms with monosyllabic acute roots. He lists the data in
accordance to the root vocalism.

3.1 Data
I. shortening instead of metatony (violation of the rule)

(3) ľ → ľ
   a. būti – būs ‘to be’
   b. pūti – pūs ‘to rot’
   c. srūti – srūs ‘to stream’
   d. žūti – žūs ‘to perish, die’
   e. džiúti – džiūs ‘to dry, wither’
   f. bliúti – bliūs ‘to bleat’
   g. kliúti – kliūs ‘to touch’
   h. griúti – griūs ‘to fall down’

(4) ĭ → ĭ
   a. gýti – gís ‘to get better’
   b. rýti – rís ‘to swallow’
   c. sýti – sis ‘to link to’
II. metatony (regular)

(5) ŭ → ŭ
   a. siŭti – siūs ‘to sew’
   b. trŭkti – trūks ‘to lack’
   c. grūsti – grūs ‘to crush’
   d. lūžti – lūš (note: Senn (1966) gives lūš)

(6) ŭ → ŭ
   a. gnūybtı – gnūybs ‘to pinch, bite’
   b. žnūybtı – žnūybs ‘to pinch, to tweak’
   c. dūytı – dūys ‘to spring, shoot’ (note: Senn (1966) gives gis)
   d. klūyjtı – klūys ‘to be mistaken’
   e. slūystı – slūys ‘to slide’
   f. vūystı – vūys ‘to fade, droop’
   g. plūyşti – plūyš ‘to tear, rip’ (note: Senn (1966) gives plīš)

3.2 Three Relevant Points from Petit’s Proposals

- syllable structure is one of the conditions of metatony/shortening.
  - ČVC → ČVC [V = i or u]
    e.g., dūytı – dūys; trūktı – trūks
  - ČV → ČV
    e.g., gūyti – gis, būtı – būs, pūtı – pūs
    Counterexamples:
    lūžti – lūž ‘to break,’ rūgtı – rūgs ‘to turn sour,’ slūghtı – slūgs ‘to subside;’ vūytı – vūys ‘to drive,’ sūūti – sūūs ‘to sew.’

- Petit (2002: 272) also points out the correlation between the short vowels in the 3rd p. future forms and preterit forms, e.g., būtı – būvo – būs, gūyti – gis, etc.
  Counterexamples:
  dūžıtı – dūžıuo – dūžıus, rūgtı – rūgs, slūgtı – slūgs, sūūti – sūūvo – sūūs

- Petit (2002) explains why the shortening in 3rd p. future forms is limited to the roots with ŭ and Ļ by presuming that Ļe and ŭo were already diphthongs,
and therefore Leskien’s Law did not affect them (e.g., *dūoti – duōs* ‘to give,’ *liēsti – liēs* ‘to touch’). Also, the failure of the shortening of the roots with ó and í can be attributed to the phonetic asymmetry of them and their corresponding short vowels a and e; therefore we find *jōti – jōs* ‘to go by horseback,’ *dēti – dēs* ‘to put,’ instead of expected *Xjās* or *Xdēs.*  

> this will be discussed later

4 Examining the Verbs in the Lists Again

A close examination of Senn’s and Petit’s lists reveals a fairly clear tendency of their present paradigms to be involved in the nasal-infix formation. Below are the verbs which have nasal-infix presents in the lists. The forms are listed in the order of infinitive, 3p.pres., 3p.pret., – 3p.fut.


(7) a. *būti, yra/būna/būva/ēsti, būvo – būs* ‘to be’  
b. *pūti, pūva/pūna/pūsta/pūs* – *pūs* ‘to rot’  
c. *srūti, srūva/srūna/srūsta, srūvo – srūs* ‘to stream’  
d. *žūti, žūva/žūna/žūsta, žūvo – žūs* ‘to perish, die’  
e. *džūti, džūva/džūna/džūsta, džūvo – džūs* ‘to dry, wither’  
f. *blūti, blūva/blūna, bļūvo – bļūs* ‘to bleat’  
g. *kliūti, kliūna/kliūsti, kliūvo – kliūs* ‘to touch’  
h. *griūti, griūva/griūna, griūvo – griūs* ‘to fall down’  
i. *slūgti, slūgsta/slūnga, slūgo – slūgs* ‘to subside’  
j. *gūti, giļa/giļna/giļo, giļo – giļs* ‘to get better’  
k. *lūti, lūja/lūna, lūjo – lūs* ‘to rain’  
l. *rūti, rūja/rūna, rūjo – rūs* ‘to swallow’  
m. *rūgti, rūgsta/rūnga, rūgo – rūgs* ‘to turn sour’  
n. *sūti, sūja/siūs* ‘to link to’  
o. *šlūti, šlūja/šlūna/šlūja/šlūta/šlūsta/šlūva, slijo – šlūs* ‘to lean, tilt’  

However,  

☆ *vūsti, vūsta/viņsa/viņa, vīto – vīs* ‘to fade, droop’  
☆ *trūkti, trūksta/trūka, trūko – trūks* ‘to lack’  
☆ *siūti, siūva/siūna/siūs, siūvo – siūs* ‘to sew’  

On the other hand, the majority of the verbs whose 3rd person future forms are not shortened do not have nasal-infix presents.

(8) a. *vūti, vēja/viņa/vīna, vijo – vīs* ‘to drive, wind’
b. **grústi, grúda, grúdo** – grūs ‘to crush’
c. **gnýbti, gnýba, gnýbo** – gnýbs ‘to pinch, bite’
d. **žnýbti, žnýbia, žnýbě** – žnýbs ‘to pinch, to tweak’
e. **dýgti, dýgsta, dýgo** – dýgs ‘to spring, shoot’
f. **klýsti, klýsta, klýdo** – klýs ‘to be mistaken’
g. **slýsti, slýsta, slýdo/slído** – slíys ‘to slide’
h. **lýsti, lýsta, lýso** – lýs ‘to become thin’
i. **lýžti, lýžta, lýžo** – lýž ‘to slacken’

Although there are 3 verbs whose 3rd person future forms are not shortened despite their nasal infix presents, they all show the metatony which the majority of the 3rd p. future forms exhibit.

How could we explain any possible correlation between shortening in 3rd person future forms and their nasal presents?

5 Historical Backgrounds of Baltic Nasal Presents

Stang (1942: 132ff.) followed by Gorbachov (2007: 152ff.):

- originally an intransitive and inchoative category, but later became productive;
  - būva [3p.pres.] (< būva; būti ‘to be’)
  - līya [3p.pres.] (< līya; līti ‘to rain’)
- the root vocalism of the nasal-infix presents (as well as sta-presents, another inchoative category) is regularly zero-grade.
- loss of the nasal segment:

\[
Vn > \tilde{V} > \tilde{V} / \{ r, l, m, n, j, v, s, š, ž \}.
\]

- gūja [3p.pres.] < gūja (gūti ‘to heal, get better’)
- often, when an inchoative verb loses the nasal segment phonologically, its inchoative function gets reinforced by attaching the other productive inchoative intransitive suffix -sta-.
  - žūti ‘to perish:’ žūv-a > žūva → žūsta → žūsta [3p.pres.]
  - pūti ‘to rot:’ pūv-a > pūva → pūsta → pūsta [3p.pres.]
The expected original nasal formations of puva, gỹja, lỹja are: *pu-n-H-e/o- ‘to rot, decay,’ *g"-i-n-h3-e/o ‘to become alive,’ *li-n-H-e/o- ‘to start raining,’ which would have given rise to Proto Baltic *puna(t), *gina(t), *lina(t). The length on the root syllable in puva, gỹja, lỹja was acquired analogically (Gorbachov 2007: 167ff.);

<table>
<thead>
<tr>
<th></th>
<th>infinitive</th>
<th>present (3p.)</th>
<th>preterit (3p.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(PB)</td>
<td><em>mig-tei</em></td>
<td>*mi-n-g-o(t)</td>
<td><em>mig-ã</em></td>
</tr>
<tr>
<td></td>
<td>‘to fall asleep’</td>
<td></td>
<td>[PIE root: *meig⁽w⁾H⁻]</td>
</tr>
<tr>
<td>&gt;migti</td>
<td>&gt;miŋga</td>
<td>&gt;*mìgã</td>
<td>&gt;mìgo</td>
</tr>
</tbody>
</table>

(10) Proportion of Analogy:
miŋga : *mìgã = X : *liŋja,
X = *liŋja > łyja > lỹja

6 Interpretation of the Data
In this section, I would like to discuss what the data listed in (7) could imply.

6.1 Zero-Grade Vocalism
As we can see, all the verbs listed in (7) have the root vocalism either in y or ū. Those vowels in Baltic, if inherited from the proto language, are often reflections of the PIE *-iH- or *-uH-. Suppose that PIE root structure with a root-final laryngeal can be *CVRH- or *CRVH-, *-iH- and *-uH- can be a part of the zero grade forms of PIE verbal roots.

(11) full-grade: *CεuH⁻/*CueH- or *CεiH⁻/*CiH-
~ zero-grade: *CuH- or *CiH-

Actually, this is the case with some of the data in (7).

(12) a. bûti, yra/bûna/bůva/c̣esti, bûvo – bûs ‘to be’
cf. PIE *b⁽h⁾uĉH₂/*b⁽h⁾eûH₂- ‘to become’ (Skt. bhāvati) (LIV 98ff.)
b. pûti, pûva/pûna/pûsta/pûsta, pûvo – pûs ‘to rot’
cf. PIE *peûH⁻ ‘to be rotten’ (LIV 480)
c. džiûti, džiûva/džiûva/džiûna/džiûsta, džiûvo – džiûs ‘to dry, wither’
cf. PIE *deûH₂⁻ ‘to catch fire’ (LIV 104)
d. bliûti, bliûva/bliûna, briûvo – bliûs ‘to bleat’
cf. PIE *b⁽h⁾leûH⁻ ‘to overflow’ (LIV 90)
The following items are not traced back to set-roots, and the long vowels in their roots may be considered to be secondary. They could have been taken from their sta-presents.

(13) a. srúti, srūva/srūna/srústa, srūvo – srūs ‘to stream’
   cf. PIE *sreu- ‘to flow’ (Mayrhofer 1986–96: II, 784)

b. žūti, žūva/žūna/žūsta, žūvo – žūs ‘to perish, die’
   cf. PIE *gheu- ‘to disappear, vanish’ (IEW 448)

c. slúgti, slúgsta/slunga, slūgo – slūgs ‘to subside’
   cf. PIE *(s)leyu- ‘to be limp’ (IEW 962)

d. rūgti, rūgsta/ruŋga, rūgo – rūgs ‘to turn sour’
   cf. PIE *reug- (IEW 871)

e. šlýti, šlýja/slēja/slỳna/slīnta/šlỳsta/šlýva, šlijo – šlis ‘to lean, tilt’
   cf. PIE *klej- ‘to lay oneself back’ (LIV 332)

6.2 The Future Forms in the Verbal System
In order to identify what may have happened to the 3rd person future forms in (7), let us look into the stage slightly after the above-mentioned analogical process (10) took place, taking up a few more verbs, listi ‘to fall apart’ and slúgti ‘to subside.’ Note that at this stage, the process described in (9) had not taken place yet.

2The asterisk mark is not given to the forms identical to the attested form.
<table>
<thead>
<tr>
<th>Verb</th>
<th>Present</th>
<th>Preterit</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>mğti</td>
<td>mingu</td>
<td>mığa</td>
<td>mğiù</td>
</tr>
<tr>
<td>1sg.</td>
<td>mingu</td>
<td>mığa</td>
<td>mğiù</td>
</tr>
<tr>
<td>2sg.</td>
<td>mingga</td>
<td>*miga</td>
<td>migs</td>
</tr>
<tr>
<td>3p.</td>
<td>mingga</td>
<td>*miga</td>
<td>migs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verb</th>
<th>Present</th>
<th>Preterit</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>slğti</td>
<td>slungu</td>
<td>slugau</td>
<td>slûgsiu</td>
</tr>
<tr>
<td>1sg.</td>
<td>slungu</td>
<td>slugau</td>
<td>slûgsiu</td>
</tr>
<tr>
<td>2sg.</td>
<td>slungi</td>
<td>slugai</td>
<td>slûgsi</td>
</tr>
<tr>
<td>3p.</td>
<td>slunga</td>
<td>*slûga</td>
<td>*slûgs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verb</th>
<th>Present</th>
<th>Preterit</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>lîti</td>
<td>(*lînô →) lînju</td>
<td>(*lî(H)aû &gt;) lîja</td>
<td>lîsù</td>
</tr>
<tr>
<td>1sg.</td>
<td>(*lînô →) lînju</td>
<td>(*lî(H)aû &gt;) lîja</td>
<td>lîsù</td>
</tr>
<tr>
<td>2sg.</td>
<td>(*lînê →) lînji</td>
<td>(*lî(H)aì &gt;) lîja</td>
<td>lîsì</td>
</tr>
<tr>
<td>3p.</td>
<td>(*lînù →) lînjava</td>
<td>(*lî(H)aì &gt;) lîja</td>
<td>*lîs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verb</th>
<th>Present</th>
<th>Preterit</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>lîsti</td>
<td>linsu</td>
<td>lisa</td>
<td>*lisiù</td>
</tr>
<tr>
<td>1sg.</td>
<td>linsu</td>
<td>lisa</td>
<td>*lisiù</td>
</tr>
<tr>
<td>2sg.</td>
<td>linsi</td>
<td>lisa</td>
<td>*lisiù</td>
</tr>
<tr>
<td>3p.</td>
<td>lînsa</td>
<td>*lîsa</td>
<td>lîs</td>
</tr>
</tbody>
</table>

- nasal present paradigms are usually paired to thematic aorists as their preterit paradigm; zero-grade vocalism is morphologically regular with both nasal present and thematic aorist (Stang 1942: 138ff; for the IE perspective, LIV 17 (nasal infix present), Jasanoff (2012) (thematic aorist)).

- irrelevant to the length of the root vowel in preterits and infinitives, the majority of the nasal presents certainly had a sequence of ‘i/u + *-n-’ in its stem before the sound change in (9) took place.
(14) 3p. present preterit future infinitive

<table>
<thead>
<tr>
<th></th>
<th>present</th>
<th>preterit</th>
<th>future</th>
<th>infinitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>mińga</td>
<td>*migā</td>
<td>mīgs</td>
<td>migti</td>
<td></td>
</tr>
<tr>
<td>sluńga</td>
<td>*slūgā</td>
<td>*slūgs</td>
<td>slūgti (13c)</td>
<td></td>
</tr>
<tr>
<td>*lińja</td>
<td>*lijā</td>
<td>*lis</td>
<td>līti (12h)</td>
<td></td>
</tr>
<tr>
<td>lińsa</td>
<td>*lisā</td>
<td>lis</td>
<td>listi</td>
<td></td>
</tr>
</tbody>
</table>

root: \( C\bar{V}C- \)

(13c, d) secondary long roots

root: \( C\bar{V}- \)

(13a, b, e) secondary long roots

(15) another proportion of analogy:

<table>
<thead>
<tr>
<th>present</th>
<th>future</th>
</tr>
</thead>
<tbody>
<tr>
<td>3p. mińga : mīgs</td>
<td></td>
</tr>
<tr>
<td>= 3p. sluńga : ( X_1 )</td>
<td></td>
</tr>
<tr>
<td>= 3p. *lińja : ( X_2 )</td>
<td></td>
</tr>
<tr>
<td>= 3p. lińsa : lis</td>
<td></td>
</tr>
</tbody>
</table>

\( X_1 = slūgs, X_2 = lis \).

Whereas Leskien’s Law explains why the shortening in the monosyllabic stems is limited to the 3rd person forms (and it didn’t take place to other personal forms), (15) could explain why the shortening in question is limited only to particular verbal stems.

7 Results So Far

The interpretation of the shortened future forms of monosyllabic acute roots in relation to the nasal-presents presented above does not necessarily contradict the observations made by Petit (2002) [see §3.2]. Moreover, this interpretation can even explain what lies behind his observations from a different perspective.

- since nasal presents and thematic aorists are built to zero-grade and their infinitives are also found in the zero-grade, it is not surprising that the shortening in the 3rd future forms is most frequently found among the roots in \( C\bar{I}(C) \) and \( C\bar{I}(C) \), which are often the reflexes of the zero-grades; this explains why the preceding works recognized the shortening of the 3rd person future forms exclusively among the roots with -\( y- \) and -\( ū- \).
the effect of the root structure and the short vowels in the preterit forms on
the shortened future forms:
nasal presents and thematic aorists are often paired; and CVC- roots tend
to keep their long vowels in the preterit forms traced back to the thematic
aorist (*CiC-ā or *CiC-ā-), while C(R)V- (< *C(R)VH-) roots phonolog-
ically got a short vowel (*CiH-ā > *CiH-ā- or *CuH-ā > *CuH-ā-); this
could explain why the CV- verbs often have preterit forms with short vow-
els (būti – būvo, lūti – lūjo, etc.); this can explain why Petit (2002) observed
a tendency for a shortened future form to have a preterit form with a short
root vowel.

Bibliography

Winter, Heidelberg.

Gorbachov, Y. 2007. Indo-European Origins of the Nasal Inchoative Class in

Hanssen, F. 1885. “Der Griechische circumflex stammt aus der ursprache”
Zeitschrift für vergleichende Sprachforschung, 27(Neue Folge 7), 612–617.

II. Francke Verlag, Bern – München.

Jasanoff, J. 2012. “*yeid- ‘notice’ and the PIE thematic aorist” Handout at
14th Fachtagung of the Indogermanische Geselschaft, University of Copen-
hagen, 17–22 September 2012.


Ruprecht, Göttingen.

LIV = Rix, H., & et al. (Eds.). 2001. Lexikon der indogermanischen Verben. DR.
Ludwig Reichert Verlag, Wiesbaden.

Mintis/Mokslas, Vilnius. (online: http://www.lkz.lt/).


