

The Chronology of Monosyllabic Circumflexion in Lithuanian

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1 Introduction

- Lithuanian belongs to the East Baltic branch.



- The first publication is a catechism written by Mažvydas in 1547.
- Lithuanian distinguishes the following three kinds of accents. The tone-bearing unit in Lithuanian is considered a mora. The description below is following Blevins (1993).
 - stress accent on monomoraic vowels:
 - (i) grave $\langle \check{V} \rangle = / \acute{V} /$

$$\begin{array}{c} [\mu]_{\sigma} \\ | \\ H \end{array}$$
 - two tonal accents on a long vowel, a diphthong, or mixed diphthong (a tautosyllabic sequence of a vowel and resonant):

(ii) acute (falling) $\langle \acute{V} \rangle = /V\acute{V}/$ (iii) circumflex (rising) $\langle \tilde{V} \rangle = /V\acute{V}/$

$[\mu \ \mu]_{\sigma}$
|
H

$[\mu \ \mu]_{\sigma}$
|
H

The Proto-Balto-Slavic long vowels inherited from PIE are supposed to obtain “acute nucleus,” which yielded “acute accent” in its daughter languages, while other long vowels with secondary origins (e.g., vowel contraction) did not obtain “acute nucleus,” resulting in circumflex accent in the daughter languages:^{1, 2, 3}

(1) a. PIE ($*\underline{\acute{g}}^h uers >$) $*\underline{\acute{g}}^h u\bar{e}r$ ‘wild animal’ \rightarrow Lith. *žvėrìs* (3), Latv. *zvērs*,

¹Acute nuclei are marked with underline following Jasanoff (2004).

²Latvian accents are:

- (i) even tone $\langle \tilde{V} \rangle$: Lithuanian acute (AP1)
- (ii) falling tone $\langle \dot{V} \rangle$: Lithuanian circumflex (AP2, 4)
- (iii) broken tone $\langle \hat{V} \rangle$: Lithuanian acute (AP3)

The “AP”s above mean “accentual paradigms (AP).” Lithuanian nominals are classified into four APs according to the pattern of the stress alternation between the stem and the ending throughout the nominal paradigm. Regarding nouns with a monosyllabic stem, the tone of the stem is connected to the AP to which the noun belongs. AP1 denotes a barytone paradigm with the acute accent on the root, while AP2 is a historically barytone paradigm where the root is non-acute and the stress alternation between the stem and the ending is caused by Saussure’s Law and other morphological factors. AP3 comprises mobile paradigms with the acute root, whereas AP4 denotes a mobile paradigm with the non-acute root where further stress alternation has been brought about by Saussure’s Law and other morphological factors.

³The notation employed for Proto-Slavic accentuation as well as for Serbo-Croatian accentuation is as follows:

- (i) \acute{V} : long rising tone
- (ii) \dot{V} : short rising tone
- (iii) \hat{V} : long falling tone
- (iv) \check{V} : short falling tone

Proto-Slavic acute syllables had long rising tone, which are reflected as short falling vowels in Serbo-Croatian, while circumflex vowels used to have a falling tone and they are remaining as such in Serbo-Croatian (but a circumflex root syllable can have a rising tone in the case where the stress was retracted to it, which is called *neo-acute*).

- (i) PIE $*\underline{\acute{u}}lHneh_2$ ‘wool’ $>$ PBS $*\underline{\acute{u}}l̃nā$ $>$ PS $*v\acute{ɫ}na$ $>$ SCr. *vŭna*
- (ii) PIE $*\underline{\acute{u}}lk^wos$ ‘wolf’ $>$ PBS $*\underline{\acute{u}}lk\acute{o}s$ $>$ PS $*v\acute{ɫ}k\bar{b}$ $>$ SCr. *vŭk*

OCS *zvěrb*, SCr. *zvĭjer*, Sln. *zvěr* (PS **zvěrb*), Gk. *ῥῑρ*

b. PIE *steh₂-* → PBS *stā-tei* > Lith. *stóti* ‘to stand,’ Latv. *stāt* ‘to stand, stop, begin,’ OCS *stati* ‘to stand,’ SCr. *stāti* ‘to stand’

c. in word final position, an acute syllable was shortened by Leskien’s Law; thematic ending of 1sg. pres. ind. PIE **-oh₂* > PBS **-ō* > **-̄ō* > **uo* > Lith. *-u* as in *vedù* ‘I lead’

(2) the gen. sg. ending of f. *ā*-stem: PIE **-eh₂-es* > PBS **-aHas* > PB **-ās* > Lith. *-os* as in *dienōs* ‘of a day’^{4,5}

2 Monosyllabic Circumflexion

In the Baltic and Slavic languages, circumflex intonation is often found in monosyllabic words instead of acute intonation based on the historical background reviewed in the previous section.

2.1 Balto-Slavic

Rasmussen (1999: 481ff.) considers the phenomenon can be traced back to Proto-Balto-Slavic since this phenomenon is observed both in Baltic and Slavic languages as follows:

(3) a. Lith. *nuõ* ‘from’ cf. *núo-jauta* ‘presentiment’ ~ *jaũt-* [the stem of the verb *jaũsti* ‘to forebode’]

b. Lith. *tiẽ* ‘those (m. mon. pl.)’ cf. *geríeji* ‘the good (def. m. nom. pl.)’, *gerì* ‘good (indef.m.nom.pl.)’⁶

⁴Modern Lithuanian ⟨o⟩ denotes a long vowel /o:/, which originates from OLith. ⟨a⟩ /a:/.

⁵The relative chronology of this series of changes is following Yoshida (forthcoming: 11). It is certainly hard to know whether the laryngeal had been preserved as such at the stage of Proto-Balto-Slavic. It is postulated here that the laryngeal was not completely dropped but still had its trace as a glottal stop or a syllable boundary, and the vowel contraction in **-a.as* (< **-e.h₂es*) had not yet taken place. The preservation of hiatus breaker originating from laryngeals until a stage later than Proto-Balto-Slavic can be supported by the following example from OCS (Yoshida forthcoming: 9⁷): gen.sg. *ženy* ‘woman’ < **-ūs* < **-ōs* < PS **-oHos* (or **-o.os*) < **-ah₂as* < PIE **-eh₂es*, cf. nom.sg. *žena* < PS **-a* < **-ā* < PIE **-eh₂*.

⁶Lithuanian has a definite form for adjectives. The definite form is built to the inflectional form of adjectives by adding the long ending, which originated from the declensional form of the 3rd person pronoun *jìs*, *jì*. Therefore, the adjective ending is not in the final syllable of the definite form, protected by the long ending. As a result, the original form of the adjective ending which is not affected by Leskien’s Law can be observed in definite forms. Additionally, the nom.pl. ending

- c. Lith. *jūs* ‘you (2pl.nom.)’ cf. *jūsų* ‘your (2pl.gen.)’, Latv. *jūs*, PIE **juH-*
- d. SCr. *pī* ‘drank’ < 2sg. **pih₃-s*, 3sg. **pih₃-t*
- e. SCr. *bī* ‘was’ < 2sg. **b^huH-s*, 3sg. **b^huH-t*, cf. OCS *by*
- f. Sln. *tī* ‘you (2sg.nom.)’ < PS **ty* < PBS **tū* < PIE **tuH*
- g. Sln. *mī* ‘we (1pl.nom.)’ < PS **my*,⁷ cf. OCS *my*
- h. Sln. *vī* ‘you (2pl.nom.)’ < PS **vy* ← PBS **jū(s)*⁸ < PIE **juH-*
- i. Sln. *tā* ‘that (f.sg.nom.) or those (n.nom.pl./acc.pl.)’ < PBS **tā* ← PIE **seh₂*

However, in my opinion, monosyllabic circumflexion cannot be traced back to the Proto-Balto-Slavic stage, but it must have occurred independently in Baltic and Slavic languages.

- The Baltic forms corresponding to (3f) and (3i) are Lith. *tū* ‘you (sg.)’ and Lith. *tà*, Latv. *tā* ‘that,’ respectively. They did not undergo monosyllabic circumflexion (at the same time, they are exceptions of monosyllabic circumflexion. Exceptions of monosyllabic circumflexion will be studied in §3).
- The tonal difference between Lith. *nósis*, Latv. *nāss* ‘nose’ and SCr. *nôs*, Sln. *nôš* (< PBS **nāsis*) also suggests that monosyllabic circumflexion took place in Proto-Slavic after the syncope, while it did not take place in Proto-Baltic.

2.2 Lithuanian

- Stang (1966: 126¹) and Senn (1966: 85) point out that Leskien’s Law did not apply on monosyllabic forms. Stang (1966: 167) also states that the acute syllable that have not been shortened by Leskien’s Law in final position became circumflex: fut. 3rd. *duōs* ‘will give’ ~ *dúosiu* ‘I will give’;

of *o*-stem adjectives has been replaced by the pronominal ending **-oi*, and therefore, the endings in *tiē* and *gerieji* are etymologically identical to each other.

⁷According to Derksen (2008: 336), “the **m-* probably originates from the ending of the first person plural. The **y* must have been adopted from **vy* ‘you (pl.)’ < **iuH-*.”

⁸According to Derksen (2008:533), “the anlaut of the pronoun was apparently remodelled after the oblique cases.”

pronominal forms *tiẽ* (m.mon.pl.), *tuõ* (m.instr.sg.), *tuõs* (m.acc.pl.) ~ *geríejì*, *gerúojù*, *gerúosius* (~ indef. *gerì*, *gerù*, *gerùs*).

- Zinkevičius (1998: 94ff.) gives some examples from Lithuanian monosyllabic words in which we find metatony (falling tone [acute] → rising tone [circumflex]). These forms have been exempted from Leskien’s Law.

- (4) a. nom.2pl. *jũs* < **jús* ‘you’. cf. gen.2pl. *jũsų*
 b. m.nom.pl. *tiẽ* < **tíe* ‘those’. cf. *geríejì* ‘good’
 c. m.acc.pl. *tuõs* < **túos* ‘those’. cf. *gerúosius* ‘good’
 d. 3fut. *duõs* ‘will give’, *dẽs* ‘will put’ < **dúos*, **dés*. cf. 1sg. *dúosiu*, *désiu*⁹
 e. prepositions: *ĩ* ‘into,’ *nuõ* ‘from,’ *põ* ‘under,’ *priẽ* ‘by, near,’ *prõ* ‘through,’ *peĩ* ‘through’ < **ĩ*, **núo*, **pá*, **príe*, **prá*, **pér*. cf. *ĩ-noris* (*norėti*, *nór-* ‘want’) ‘whim,’ *núo-taka* (*tãkas* ‘path’) ‘bride,’ *pó-traukis* (*traukà* (4) ‘attraction’) ‘inclination,’ *príe-tėmis* (*tėmti* ‘to get dark’) ‘dusk,’ *pró-tėvis* (*tėvaĩ* (4) ‘parents’) ‘ancestor,’ *pėrlipo* (*lipti* ‘to climb’) ‘climbed over.’

3 The “Minimal Word Syndrome”

Blevins (1993) discusses monosyllabic circumflexion in Lithuanian, relating it to a cross-linguistic phenomenon “minimal word syndrome.”

- McCarthy and Prince (1996: 50): a minimal word in a given language is synonymous with the structure of a licit foot therein.
- Hayes (1995: 86ff.): the minimal size of phonological words in individual languages is predictable based on the licit foot of a given language. He calls this “minimal word syndrome.”
- Blevins (1993: 243): Lithuanian nouns and verbs are minimally bimoraic, which is described as below:

⁹There are exceptions for monosyllabic circumflexion among future 3rd person forms with root vowels -*ý-* and -*ũ-*, cf. *dĩgs* (*dýgti* ‘to spring’), *bũs* (*búti*), etc. Senn (1966: 231) considers that monosyllabic future forms with -*ý-* or -*ũ-* have been shortened, while Zinkevičius (1998: 148) considers monosyllabic circumflexion is regular and the shortening in *bũs* type words are for some morphological reason. Also, Jay Jasanoff (p.c.) points out to me that Leskien’s Law could have applied to any acute endings including acute monosyllables and the long vowels are restored later for most words with some exceptions for morphological reasons.

I think this problem should be handled with a special attention at another time.

(5) MINIMAL WORD CONSTRAINT: $\text{Word}_{\min} = [\mu\mu]$.

Some exceptions for this constraint are (i) prepositions and adverbial particles: *bè* ‘without,’ *iš* ‘from,’ *nè* ‘not, no,’ etc.; (ii) conjunctions: *bèt* ‘but,’ *jùk* ‘but, well,’ *kàd* ‘so, so that,’ etc.; (iii) interjections: *màt* ‘indeed,’ *nà/nù* ‘well, there...,’ *và* ‘here,’ etc.; (iv) pronouns and numerals: *àš* ‘I,’ *dù* ‘two,’ *kàs* ‘who, what,’ *tàs/tà* ‘that,’ etc.

It would be noteworthy that the exceptions in Blevins (1993) include some monosyllabic words which have originally short vowels; *bè* (< PBS **be(z)*, cf. Latv. *bez*), *iš* (< PBS **iž* < PIE **(h₁)eǵ^h(s)*, cf. OCS *iz*, Gk. *ἐξ*), *nè* (< PIE **ne*), *àš* (OLith. *eš* < PB **ež* < PIE **eǵoh₂*, cf. Latv. *es*), *tàs* (< PBS **to-s* ← PIE **so-s*), *kàs* (< PIE **k^wo-s*). Actually, except one case of *mēs* ‘we,’ we do not find a monosyllabic word with original short vowels lengthenend in Lithuanian.¹⁰

This suggests that the constraint (5) was not effective consistently, but effective exclusively for the monosyllabic words with original long acute vowels, which had a potential to be affected by Leskien’s Law.

4 When did Monosyllabic Circumflexion Take Place?

— Informative Forms

4.1 Monosyllables as the Results of Recent Syncope

The monosyllables as the results of syncope do not exhibit the result of monosyllabic circumflexion, staying with the original acute accent. The following acute monosyllables are the results of the syncope that is observed already in the texts from 16th century (Bjarnadóttir 2003: 7, 13).

- (6) a. *tóms* ‘to those (f. dat. pl.)’ < OLith. *tómus*
- b. *tíems* ‘to those (m. dat. pl.)’ < OLith. *tíemus*
- c. *jíems* ‘to them (m. dat. pl.)’ < OLith. *jíemus*
- d. *kíek* ‘how many’ < OLith. *kíeka(s)*
- e. *jóg* ‘because’ < OLith. *jógi*

¹⁰The lengthening found in *mēs* is explained as an emphatic lengthening in Stang (1966: 254). I do not think this lengthening can be as old as 16th century when the inherited long **ē* was shifting to the narrower *é*. This must be a recent lengthening, which is different from monosyllabic circumflexion.

dvíem ‘two (m./f.dat.du.)’ (< PBS **dvěmā*) might be included here, although the exact date of the syncope in this word is unclear.

Those words do not undergo either monosyllabic circumflexion or Leskien’s Law.

4.2 Imperative Forms

2sg. imperative forms built to monosyllabic stems do not undergo either monosyllabic circumflexion or Leskien’s Law, either.

- Lithuanian imperative in 2sg.: Verbal Stem + *k(i)*
e.g., *dĩrbk* ‘work!’ ~ *dĩrbti* ‘to work,’ *dúok* ‘give!’ ~ *dúoti* ‘to give.’
- They used to be disyllabic, cf. *ṽbmuschki* ‘kill!’ (Mod.Lith. inf. *užmùšti*), *waky* ‘steal!’ (*vógti*) in *Mažvydas*,¹¹ but the final *-i* has already started to be lost as in *gielbek* ‘save!’ (*gelbėti*) in the same text.

4.3 Summary of §4

The forms handled in §4 testify that the acute monosyllabic forms that were disyllabic when Leskien’s Law was active have not been shortened by Leskien’s Law nor circumflexed by monosyllabic circumflexion, while acute monosyllables which had existed as such when Leskien’s Law was active were strongly prone to it.

This means that monosyllabic circumflexion took place only among the words which had a potential to be shortened by Leskien’s Law.

5 Conclusion

- monosyllabic circumflexion was a phenomenon closely associated with Leskien’s Law. Probably, Leskien’s Law was barred from applying to monosyllabic acute words as a result of the constraint (5) or a tendency for monosyllables to have resistance to sound changes as the Latin case discussed in Barr (1994: 540), with the acute tone of those words turning into circumflex.
- Monosyllabic circumflexion was a contemporary sound law of Leskien’s Law. Leskien’s Law is estimated to have taken place by 14th Century based on the morphological behavior of Polish loan words in Zinkevičius (1998: 93). Therefore, monosyllabic circumflexion in Lithuanian could be considered also to have taken place around 14th century.

¹¹These forms are from the edited version of *Mažvydas Catechism* in Ford (1971: 30, 36).

Bibliography

- Barr, C. R. 1994. *A Lexical Model of Morphological Change*. Ph.D. thesis, Harvard University.
- Bjarnadóttir, V. 2003. "Spread and Motivations for Apocope in Case Endings in Old Lithuanian" *Baltu filologija*, 12(2), 5–20.
- Blevins, J. 1993. "A Tonal Analysis of Lithuanian Nominal Accent" *Language*, 69(2), 237–273.
- Derksen, R. 2008. *Etymological Dictionary of the Slavic Inherited Lexicon*. Leiden Indo-European Etymological Dictionary Series. Brill, Leiden–Boston.
- Ford, G. 1971. *The Old Lithuanian Catechism of Martynas Mažvydas (1547)*. Van Gorcum & Comp. N. V. – Dr. H. J. Prakke & H. M. G. Prakke, Assen.
- Fraenkel, E. 1962–1965. *Litauisches etymologisches Wörterbuch*, Vol. I, II. Carl Winter, Heidelberg.
- Hayes, B. 1995. *Metrical Stress Theory*. The University of Chicago Press, Chicago.
- Jasanoff, J. 2004. "Acute vs. Circumflex: Some Notes on PIE and Post-PIE Prosodic Phonology" In Adam Hyllested, Anders Richardt Jørgensen, J. T. (Ed.), *Per Aspera ad Asteriscos*, pp. 247–255. Institut für Sprachen und Literaturen der Universität Innsbruck, Innsbruck.
- McCarthy, J. J., & Prince, A. 1996. "Prosodic Morphology 1986" Tech. rep., Rutgers University Center for Cognitive Science. Technical Report # 32.
- Rasmussen, J. E. 1999. "Die Vorgeschichte der baltoslavischen Akzentuierung – Beiträge zu einer vereinfachten Lösung" In *Selected papers on Indo-European linguistics, Part 2*, pp. 469–489. Museum Tusculanum Press, University of Copenhagen. First published in: B. Barschel, M. Kozińska & K. Weber (Hrsgg.): *Indogermanisch, Slawisch und Baltisch*. Materialien des vom 21.–22. September in Jena in Zusammenarbeit mit der Indogermanischen Gesellschaft durchgeführten Kolloquiums (= *Slavistische Beiträge*, Bd. 285), München: Otto Sagner 1992, pp.173–200.
- Senn, A. 1966. *Handbuch der litauischen Sprache*. Carl Winter Universitätsverlag, Heidelberg.

- Stang, C. S. 1966. *Vergleichende Grammatik der baltischen Sprachen*. Universitetsforlaget, Oslo.
- Yoshida, K. forthcoming. “The loss of intervocallic laryngeals in Sanskrit and its historical implications” To appear in the proceedings of *14th World Sanskrit Conference* [in print].
- Zinkevičius, Z. 1998. *The history of the Lithuanian language*. Mokslo ir enciklopedijų leidybos institutas, Vilnius.