

On the Intonation of the Nominative Singular Ending of *n*-stems in Lithuanian and the Minimal Word Syndrome

Yoko Yamazaki, Kyoto University
anaconite@ling.bun.kyoto-u.ac.jp
Stockholm University June 12th, 2010

1 The Reconstruction of the nom.sg. Ending of *n*-stems in PIE

- The nom.sg. ending of Lithuanian *n*-stems is *-uō*, as in *akmuō* ‘stone,’ which exhibits circumflex accent.
- The comparison of Lithuanian *n*-stems and those in other IE languages:
 - (1) a. Lith. *akmuō/akmeñs* ‘stone:’ Ved. *ásmā/ásmanas*, Gk. ἄκμων/ἄκμονος, OCS *kamy/mamene*
b. Lith. *šuō/šūñs* ‘dog:’ Ved. *śvā/śúnas*, Gk. κύων/κυνός, OIr. *cú^L*
c. OLith. *žmuō* ‘man:’ Lat. *homō/hominis* (OLat. *hemo*)
d. Lith. *-uō* : Ved. *-ā* : Lat. *-ō* : Gk. *-ων* : OIr. *-ú^L*.
- The final syllable of *n*-stem nom.sg. forms of the type cited above can be phonologically connected to that of PIE amphipikinetik ablaut pattern [R (é)–S (o)–E (∅)/R (∅)–S (∅)–E (é), e.g., **h₂ék-mon-s/*h₂k̂-mn-’* ‘stone’].
- Therefore, the final syllable of the nom.sg. form of *n*-stems can be reconstructed as **-on-s*, which underwent the following sound change in PIE:¹
 - (2) **-on-s* > **-ōn* > *-ō* / __#.

cf. Szemerényi (1996: 115f.), Jasanoff (1989: 138)

2 Discussions on Acute Assignment and a Problem

2.1 Jay Jasanoff

2.1.1 OBSERVATION

According to Jasanoff (2004), there are four kinds of long vowels which Proto-Balto-Slavic inherited from PIE.

- (3) a. ordinary lengthened grades (e.g., nom.sg. **ph₂-tér* ‘father’ [< **ph₂-tér-s*], **uōrn-eh₂* ‘crow’)

¹The final *-v* of the Greek mon.sg. forms could have been restored under the influence of the oblique forms.

- b. inner-PIE contraction products (e.g., nom.pl. ending of *o*-stems: $*h_1\acute{e}\hat{k}u\bar{o}s < *-o-es$ ‘horses’)
- c. products of compensatory lengthening (e.g., 1sg.pres. ending: $*b^h\acute{e}r\bar{o} < *-oh_2$ ‘I bear’)
- d. products of contraction across a laryngeal hiatus (e.g., nom.pl. ending of \bar{a} -stems: $*h_1\acute{e}\hat{k}u\bar{a}s < *-eh_2-es$).

The long vowels of (a), (b), and (c) have been assigned with an “acute nucleus.” The acute nucleus is underlined in the following examples.

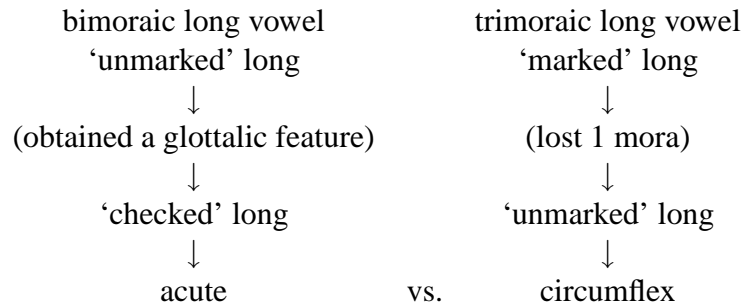
- (3a) $*\underline{u}\bar{o}rn-eh_2 > *\underline{u}\bar{o}rnah_2$ ‘crow’ (> Lith. *várna* [with the ending shortened by Lesken’s Law]), $*\underline{g}^h\bar{u}ēr- > *\underline{g}^h\bar{u}ēr- \rightarrow$ Lith. *žvėrį* ‘wild animal (acc.sg.)’
- (3c) a. word-internal position: $*steh_2-tei > *stah_2-tei > *stāti$ (> Lith. *stóti*) ‘to stand,’ $*d^h\bar{u}-moi$ (> Lith. *dūmai*) ‘smoke,’ $*\underline{g}^h\bar{f}h_2-no- > *\underline{g}^h\bar{f}no- > *\underline{g}^h\bar{f}no-$ (\rightarrow Lith. *žirnis*) ‘pea’
- b. word-final position: the nom.sg. ending of \bar{a} -stems: $*-eh_2 > *-ah_2 > *-\bar{a} > *-\underline{\bar{a}}$ (> Lith. *-a*) [e.g., $*\underline{u}\bar{o}rnah_2 > *\underline{u}\bar{o}rn\bar{a} > várna$ ‘crow’]; 1sg. pres. ending of thematic verbs: $*-oh_2 > *-\bar{o} > *-\underline{\bar{o}} > *-\underline{uo}$ (> Lith. *-u*) [e.g., $*\underline{u}ed^h-oh_2 > *\underline{u}ed-\bar{o} > *\underline{u}ed\underline{uo} > Lith. vedù$ ‘I lead’]

Those of the type seen in (3d) have not been assigned with an acute nucleus.

- (3d) gen.sg. ending of \bar{a} -stems: $*-eh_2-es > *-ah_2as > *-\bar{a}s$ (> Lith. *-os*) [e.g., *várnos*; note the nucleus is not acute.]

2.1.2 EXPLANATIONS FOR THE CONTRAST: “ACUTE VS. CIRCUMFLEX”

- The sound change proposed in Jasanoff (2004: 251): $*-VH.V(C)\# > *-\bar{V}.V(C)\#$ [compensatory lengthening caused by the loss of an intervocalic laryngeal] $> *-\tilde{V}(C)\#$ [trimoraic long vowel generated by vowel contraction]



- Inherent (i.e., non-laryngeally generated) long vowels in *absolute final position*, including the nom.sg. ending of *n*-stems, were redundantly pro-

longed by an extra mora.

2.2 Kazuhiko Yoshida

- Counterarguments against Jasanoff (2004) presented in Yoshida (2009):
 - (4) a. Trimoraic vowels are very rare in the world's languages.
 - b. When compensatory lengthening is observed, it is a segment in coda position that is deleted. Deletion of a segment in onset position does not result in lengthening; cf. Hayes (1989).
- Intervocalic laryngeals in **-VHV-*, where **H* was in an onset position, must have been preserved longer than those in coda positions, while final laryngeals in simple codas disappeared very early, as is suggested by the nom.-acc.pl. ending in **-ōr* (pre-PIE **-or-h₂*; e.g., Gk. ὕδωρ, Hitt. *uidār* < **uédor-h₂* ‘water (collective).’)

	<i>*-o-h₂</i>	<i>*-ah₂</i>	<i>*-a.h₂-as</i> ²
loss of laryngeals in coda position	<i>*-ō</i>	<i>*-ā</i>	—
acute assignment	<i>*-ō̃</i>	<i>*-ā̃</i>	—
loss of the remaining laryngeals	—	—	<i>-ās</i>
<i>*ō̃ > uo</i>	<i>*-uo</i>	—	—
Saussure's Law	<i>*-úo</i>	<i>*-ā̃</i>	—
Leskien's Law	<i>-ù</i>	<i>-à</i>	—
<i>ā > ō</i>	—	—	<i>-ōs</i>
	<i>vedù</i>	<i>rankà</i>	<i>rañkos</i>

2.3 Problem

The nom.sg. ending of *n*-stems in Lithuanian is assigned with an acute nucleus and is expected to be *✕-ù* in the framework given in Yoshida (2009), while it actually reflects a non-acute nucleus.

3 Suggestion

I consider that the nom.sg. ending of *n*-stems lost its acute feature (i.e., de-marking of acutes) for a certain reason in its prehistory. In what follows, I will argue that the idea presented in Hanssen (1885) can be supported by the “minimal word syndrome,” a tendency for monosyllabic words to show some characteristic behaviors in many languages, e.g., they comprise a heavy syllable or a long vowel,

²The possibility that the laryngeal had not been preserved as such at this stage cannot be denied. Even so, however, it is postulated here that the laryngeal was not completely dropped but still had its trace as a glottalic stop or a syllable boundary, and the vowel contraction in **-a.as-* (< **-a.h₂-as*) had not yet taken place.

3.1 Friedrich Hanssen

Hanssen (1885: 616) suggests the possibility that the nom.sg. ending of polysyllabic *n*-stems could have acquired the ending *-uō* analogically after the two monosyllabic *n*-stems, *šuō* and *žmuō*. The phenomenon that he mentions there corresponds to what is now called “monosyllabic circumflexion.”

3.2 Monosyllabic Circumflexion

- Rasmussen (1999: 481ff.) states that it seems that monosyllabic words can have only falling intonation (short or circumflex) in Balto-Slavic, e.g., Lith. *nuō* ‘from’ (cf. *núo-jauta* ‘presentiment’ ~ *jaūt-* [the stem of a verb *ja usti* ‘to forebode’]), *tiẽ* (masc.nom.pl. of the demonstrative pronoun *tàs*; cf. *geríe-ji* ‘the good’), S-Cr. *pî* ‘drank’ (< 2sg. **pih₃-s*, 3sg. **pih₃-t*), S-Cr. *bî* ‘was’ (< 2sg. **b^huH-s*, 3sg. **b^huH-t*; cf. OCS *by*).
- 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.
 - (5) a. nom.2pl. *jūs* < **jūs* ‘you’. cf. gen.2pl. *jūsų*
 - b. nom.pl.masc. *tiẽ* < **tíe* ‘those’. cf. *geríe-ji* ‘good’
 - c. acc.pl.masc. *tuōs* < **túos* ‘those’. cf. *gerúosius* ‘good’
 - d. 3fut. *duōs* ‘will give’, *dēs* ‘will put’ < **dúos*, **dēs*. cf. 1sg. *dúosiu*, *désiu*
 - e. prepositions: *ĩ* ‘into’, *nuō* ‘from’, *pō* ‘under’, *priẽ* ‘by, near’, *prō* ‘through’, *peĩ* ‘through’ < **ĩ*, **núo*, **pá*, **príe*, **prá*, **pér*. cf. *ĩ-noris* (*norėti*, *nór-* ‘want’) ‘whim’, *núo-taka* (*tākas* ‘path’) ‘bride’, *pó-traukis* (*traukà* (4) ‘attraction’) ‘inclination’, *prie-tėmis* (*tėmti* ‘to get dark’) ‘dusk’, *pró-tėvis* (*tėvaĩ* (4) ‘parents’) ‘ancestor’, *pėrlipo* (*lipti* ‘to climb’) ‘climbed over.’
- The spread of circumflex intonation in monosyllabic forms to polysyllabic forms:
 - (6) a. 3fut. forms; e.g., *žinōs* ‘will know’ (*žinóti*), *kalbēs* ‘will speak’ (*kalbėti*), *turēs* ‘will have’ (*turėti*), etc. (Zinkevičius 1998: 148–149).
 - b. The nom.sg.pl.masc ending of pronouns in *-iẽ*; e.g., *aniẽ* ‘those,’ *kuriẽ* ‘which,’ etc. (Hanssen 1885: 616).

3.3 Minimall Word Syndrome

- McCarthy and Prince (1996) show that in many languages there is a minimum placed on the size of a word. They point out that a ban on degenerate feet makes predictions about possible word shapes.
- Hayes (1995: 88) examines minimal words in many languages in the world and calls this phenomenon the “minimal word syndrome.”

- Blevins (1993: 243) shows that Lithuanian nouns and verbs are minimally bimoraic.

(7) 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,’ *jì* ‘she,’ etc.

She further notes that a rule is barred from applying if its output would violate the minimal word constraint. Thus, Leskien’s Law only applies in polysyllabic words, since the application of this rule is barred only in cases where a monomoraic word would result.

- The minimal word syndrome can be a factor of the phenomenon known as monosyllabic circumflexion, which caused the “de-marking of acutes” in monosyllables:

- (8) a. $*\hat{k}\hat{u}\acute{o}n-s > *\hat{k}\hat{u}\acute{o}$ [cf. (2)] $> *\hat{k}\hat{u}\acute{o}$ [acute assignment] $>$ pre-Lith. $*\hat{s}\hat{u}\acute{u}\acute{o}$ [$*o > uo$] $> *\hat{s}\hat{u}\acute{o}$ $>$ *šuõ* [de-marking of monosyllables]
 b. nom.sg. $*d^h\hat{g}^h-\bar{o}m$ ‘earth’ \rightarrow loc.sg. $*d^h\hat{g}^h-m-\acute{e}n$ ‘on earth’ \rightarrow nom.sg. $*d^h\hat{g}^h-m-\bar{o}n-$ ‘human’ [cf. Nussbaum (1986: 187f.)]
 $> *d^h\hat{g}^h-m-on-s > *d^h\hat{g}^h-m-\bar{o}$ $>$ pre-Lith. $*\check{z}m\acute{o}$ $> *\check{z}m\acute{u}\acute{o}$ $>$ *žmuõ*

3.4 Basic Words as the Model of an Analogical Process

We have an interesting case from Sogdian where the nom.-acc.pl. ending, $-y\check{a}$ and $-y\check{i}$, observed in animal names, have been generalized from the word for ‘dog,’ Sogd. $(\acute{e})kwt-$, which must have been one of the most frequently used animal names (Sims-Williams 1979: 343–344). A similar phenomenon may be seen in Lithuanian in the fact that both *šuõ* and *žmuõ* were basic words and could have facilitated the spread of the ending derived from them.

4 Conclusions

- If the Minimal Word Constraint in (7) also prevented the monosyllabic *n*-stems from acquiring the expected ending $\text{X}-\bar{u}$ in polysyllabic forms, it would have helped the replacement of the ending from polysyllables with that of monosyllables. As a result, the ending $-u\bar{o}$ would eventually have been acquired as the nom.sg. ending of *n*-stems.
- The possibility for the two monosyllabic items to be the models of analogy can be supported by the analogical spread from monosyllabic to polysyllabic forms seen in (6) and the case in Sogdian mentioned in §3.4.

References

- Blevins, J. 1993. "A Tonal Analysis of Lithuanian Nominal Accent" *Language*, 69(2), 237–273.
- Hanssen, F. 1885. "Der Griechische circumflex stammt aus der ursprache" *Aeitschrift für vergleichende Sprachforschung*, 27(Neue Folge 7), 612–617.
- Hayes, B. 1989. "Compensatory Lengthening in Moraic Phonology" *Linguistic Inquiry*, 20(2), 253–306.
- Hayes, B. 1995. *Metrical Stress Theory*. The University of Chicago Press, Chicago.
- Jasanoff, J. 1989. "Old Irish Bé 'Woman'" *Ériu*, 40, 135–141.
- 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. Akaprint, Budapest.
- McCarthy, J. J., & Prince, A. S. 1996. "Prosodic Morphology 1986" Tech. rep., Rutgers University Center for Cognitive Science.
- Nussbaum, A. J. 1986. *Head and horn in Indo-European*. Walter de Gruyter, Berlin – New York.
- 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. Kozianka & 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.
- Sims-Williams, N. 1979. "On the plural and dual in Sogdian" *Bulletin of the School of Oriental and African Studies, University of London*, 42, 337–346.
- Szemerényi, O. J. L. 1996. *Introduction to Indo-European linguistics*. Clarendon Press, Oxford. Translated from *Einführung in die vergleichende Sprachwissenschaft* 4th edition, 1990, with additional notes and references.
- Yoshida, K. 2009. "The loss of intervocallic laryngeals in Sanskrit and its historical implications" 14th World Sanskrit Conference [in print].
- Zinkevičius, Z. 1998. *The history of the Lithuanian language*. Mokslo ir enciklopedijų leidybos institutas, Vilnius.