1 Introduction

1.1 Preliminaries

• de Saussure (1894: 492ff.) hypothesized that PIE long vowels (and also long diphthongs (Kuryłowicz 1948: 1ff.)) are reflected with the acute tone in Balto-Slavic (BS), whereas Kortlandt (1985) considers they yielded circumflex. While žvėris (3) ‘wild animal’ (acc.sg. žvéř) < PIE *gʰu”rė̀r speaks for Saussure’s view, the nominative singular ending of consonantal stems (-uô, -ê) and many monosyllabic forms speak for Kortlandt’s view.

• The phonetic realization of “acute syllable” remains unclear. The “acuteness” of a syllable nucleus will be denoted with an underline following a convention introduced by Jasanoff (2004).

• Monosyllabic Circumflexion (MC) is a phenomenon according to which long vowels in monosyllabic words exhibit a circumflex tone instead of the expected acute (in the Balto-Slavic languages ∼ Lithuanian; Hanssen (1885: 616), Zinkevičius (1980–81: II, 161ff.), Rasmussen (1999: 481ff.));

1. pronominal forms (tîë [ < *toi pl.nom. ∼ gerîĕji ‘the good (pl.nom)’], tuôs [ < *-ôns pl.acc. ∼ gerîōsîus ‘id. (pl.acc.)’; Zinkevičius 1980–81: II, 162])

2. reflexes of PIE root nouns (Latv. gûovs ‘cow’ [ < *g’hôys ← acc.sg. *g’hôm (Larsson 2010: 73ff.); (Villanueva Svensson 2011: 20)])

3. prepositions/adverbs (nuô ‘from’ ∼ núotaka ‘bride’ [Zinkevičius: id.]; vêl ‘again’ ∼ Latv. vêl ‘still, yet’ [ < PB *vêli; Büga 1924: 95]; vôs ‘hardly’ ∼ OCS jedsva, SCr jêdva, Čak. jëdvà; PBS *edvās)

1 ūô ‘dog’ [ < *kûô] (Hanssen 1885) may be an n-stem noun, but this can be also considered to have been in the environment of MC.
4. 3rd person future forms of monosyllabic stems
   šōks – šókti ‘to jump;’ vēš – výti ‘to drive,’ etc.

1.2 Data
The data are collected from Būga (1923/24), Fraenkel (1962–65) and Dunkel (2014: vol I., II). In this presentation, the following ones will be treated.

   (1) a. Lith. dēl ‘for, because of’
   b. Lith. lai ‘let (optative particle)’
   c. Lith. nū ‘now’
   d. Lith. nuō ‘from’
   e. Lith. pe rê, dial. pa rê ‘through’
   f. Lith. priē ‘near, by’
   g. Lith. tē, dial. tē (permissive particle)
   h. Lith. vēl ‘again’
   i. Lith. vōs ‘hardly’

In the following sections, the cognates and etymologies of the particles are discussed in accordance to how far back they can be traced back. Those which have a good Indo-European etymology are discussed under §2, whereas those which can be traced back to only Proto-Baltic are discussed under §3.

2 Old Particles
2.1 nū ‘now’
Cognates: Lith. nūnaĩ, nūn, Latv. nū,2 nūr, nūr,3 OCS nyně ‘now;’ Gk. νῦν ‘now,’ Lat. num (interrogative particle), Ved. nū, YAve. nū (< PI-Ir. *nūH), and Alb. -ni (the 2nd.pl. ending of the imperative; < PIE *nū-h₁).

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2 Attested in Alūksne (E), Vārka (E), and Krustpils (E) (ME II 754), and also in Kaldabruņa (E), Liepina (E), Livāni (E), Lubāna (E), Pīlda (E), Skaista (E), Sunāksts (E), and Varakļāni (E) (EH II 29).

3 It is mentioned in Endzelēns (1923: 478) and Endzelēns (1951: 626) as an East Latvian form, which probably is a form more phonetically accurate, considering that the Std. Latv. ū corresponds to northern area of ELatv. ou. Those East Latvian forms, however, do not provide a clear information about the accentuation, since the falling tone (circumflex) and sustained tone (acute) are merged to the falling tone in the eastern dialects.
• Lith. nūn = Gk. νῦν [Trautmann (1920: 251), Fraenkel (1962–65: 509)]

• Lith. nūn is syncopated from nūnaĩ (= OCS nynĕ), which is from PIE *nuh₁-nāi (with nominal suffix *-nō- in m./n. loc. sg. or fem.dat.sg.; see Stang 1966: 276, Dunkel 2014: II, 578\(^12\)), which gave rise to PBS *nūnāi; Gk. νῦν = Lat. num < *nuh₁-m; there’s no adverbial ending *-n [Dunkel (2014: II, 580\(^25\))] 

• For Latin num, compare the secondary and longer form nunc ‘now’ which took over the primary meaning, while the secondary meaning is left in the old form num; for the semantic change from temporal to interrogative meaning, there is a parallel with OHG. nū (Lühr 1997: 340).

• Lith. nū, Ved. nū, YAve. nū, Alb. -ni < PIE *nū-h₁ [with modal/instrumental adverbial ending *-h₁ (Dunkel 2014: I, 21, 127ff.)]

• Since the long vowel is likely to be traced back to a sequence with a laryngeal, the circumflex tone in nū can be the result of MC.

2.2 vōs ‘hardly’

Cognates: Lith. vōs, advōs, adva; OCS jed(ƀ)va ‘hardly’ Fraenkel (1962–65: 1274), Ru. edvā, SCR. jēdva; Čak. jēdvā (Derksen 2008: 139–40); Germanic *-u˝ōz ‘(emphasis of multiplicative),’ Skt. kṛt-vas ‘(multiplicative) time.’

• Two of the three Lithuanian forms are of secondary origin: adva (Bretku纳斯, Širvydas) is a borrowing from Belorussian, and the dialectal form advōs is probably a blend of vōs and a Slavic adverb *odva (Fraenkel 1962–65: 2).

• For the semantics of Germanic *-u˝ōz and Skt. kṛt-vas (< *ya s) that occur with multiplicatives, Schmidt (1962: 361) explains that this sort of adverb meaning ‘just, exactly’ can be easily univerbated with a multiplicative in a pleonastic way.

• For Proto-Slavic, *ed(ƀ)vā with the final acute syllable can be reconstructed.

• PBS *edvaHs is reconstructed in Derksen (2008: 140), however, no convincing evidence for laryngeal. Rather, *edvās.

• PIE *ed ya-es (Dunkel 2009: 49ff.)
– *ed-: found also in *ed ojnom ‘that alone’ (> OCS jedins ‘one’); an anaphoric pronoun *e-d in neuter nom.-acc. sg., attested as Hitt. -at ‘that,’ Pal. -at, CLuw. -ata, Skt. adás, adó (< adá-u) ‘that one’ (Dunkel 2014: II, 185). Probably, univerbated with *ya es in PS.

– *ya-: an allomorph of *(s)ya-, which is etymologically related to Lat. suād ‘so,’ Goth. swa ‘so,’ probably the quatative particles in Anatolian, Hitt. -wa(r) and Luw. -wa, Skt. /va/ ‘as’ as in iva ‘in the way as, to the (same) degree as,’ vaí ‘indeed (emphasizing its previous word).’ The particle *(s)ya- is reconstructed for PIE, with the meaning ‘so, as’ (Dunkel 2014: II, 185).

– *-es: an emphatic particle, lexically meaning ‘entirely, completely, quite, etc.’

• *ya-es ‘*just so, barely’ > BS ‘hardly, with difficulty’ through a possible pejoration process, as could be observed in ‘he barely managed it’ to ‘he managed it with effort’ (Dunkel 2014: 765ff.).

• length and accentuation of the vowel:
  It is assumed in Dunkel (2014: II, 764) that the contraction in *yia es took place already in PIE (*yías). Such an old contracted vowel in *yías could be expected to be reflected with the acute tone. The tone of the second syllable in the Čak. jedvá ‘hardly’ may support it.

• the circumflex tone in Lith. vós can be a possibly from MC.

2.3 nuō ‘from’
Cognates: Lith. nuō, Latv. nūo, OPruess. no (< PB *nō), OCS na, Ru. na (< PS *na ‘on(to), in(to)’ < PBS *nō), Gk. ἀνω ‘above, onto.’

• Lith. nūobara ~ Latv. nuōbara ‘lamb’s wool (collected in spring).’ nūo-pelns ~ nuō-peīns ‘merit,’ etc. shows the original acute tone of the preposition? (Büga 1923/24: 97)

• Latv. nuōst ‘away’ < *nō-steh₂- rather shows the phonological tonal outcome of the morpheme.
  – An adverb formation with a preposition and one of the suffixes *-tjā-, *-jā-, and *-stā- (< *steh₂-) (Forssman 2003: 97ff.):
    (2) a. Lith. prūojais ‘for naught,’ Latv. pruōjām ‘away’ ← (PB) preposition *prō ‘forward, forth, early’ + *-jā-;
b. Latv. nuost (nuost²) ← (PB) preposition *nō ‘from’ + *-stā-;
c. Latv. bešā, bešū, bešu, beš ‘alone, solely’ ← preposition be ‘without’ + *-tiā-.
   – Possibly, *nō did not undergo MC in a disyllabic PBS *nōstā to be preserved with the acute tone in Latv. nuost.
   
• Dunkel’s (2014: I, 154,156; II, 52) analysis of PIE *nō ‘upwards, above:’
   – *no-o ← locative adverb *no ‘above, up’ + directional particle *o
   – *no: attested in *nō-h₃kʷ-o- ‘looking above/seen above’ (> Skt. nāka- ‘heavenly vault,’ OCS vznakb ‘on one’s back’)
   – directional particle *o: found in verbal prefixes, *pró ‘forward’ (> Hitt. parī, Gk. πρό, Goth. fra, OCS pro, Lith. pra), *apō ‘back’ (Gk. ἀπό, Lat. po-, Goth. af, OCS opaky ‘again’), *sūpo ‘down’ (Gk. ἄπο, Gaul. uo-, OIr. fo), etc. (Dunkel 2014: I, 154ff.).

• (2a) and (2b) can be good pieces of evidence for an inherited plain long vowel reflected with the acute tone at least in East Baltic.

• The circumflex tone of Lith. nuō and Latv. nōo is highly likely to be resulted from MC.

2.4 priē ‘to, by’
Cognates: Lith. priē/priē-, Latv. pie/piē- ‘at, near,’ OPruss. prēi ‘to, by;’ OCS pri, Ru. pri, SCR. pri, Sln. pri ‘at, by,’ which continue PS *pri (< PBS *prei); Lat. prīvus ‘specific, unique,’ prīmus ‘first,’ Gk. Cret. (Locrian Greek) πρεῖ-γυς, πρεισγυς ‘deen,’ Gaul. Rēmi (a tribal name).

• Latv. pie/piē- < prie (Endzelins 1923: 524ff.):
   – Latv. prie- is preserved as a fossilized form (e.g., prieds, pl. priedi, prieži, priedes, etc.⁴ ‘bonus, addition.’)
   – an attestation of a place name in the 13th. c. Priebalga, which is now called Piēbalga, where the loss of -r- is observed.

• Just as the case of Lith. nuō ∼ Latv. nōo above, Büga (1923/24: 97) considers that the circumflex tone is metatonical based on the acute tone of the prefix form priē-, e.g. priē-puolis ‘coincidence,’ priē-žodis ‘proverb.’

⁴Some tonal information found in Milenbahs and Endzelins (1923–32: II, 392): priēds, priēds².
Adopting the equation Lith. priẽ = Latv. pie, he considers that Latv. pie also exhibits the metatonical circumflex tone, cf. piẽ- in piẽdegas/piẽdagas ‘the burned part in the pots/panes,’ piẽdaĩbs ‘flail.’

• But some other related forms (Lith. priẽdas (2) in Donelaitis (Buch 1961: 20), SCR. (dialect.) ūd, ūda ‘addition, supplement,’ Sln. prįd, prida [ < PIE *priẽdʰh₁-o-m ‘something added’]) suggest that the phonological tone of *preį was non-acute (Illich-Svitych 1963 [1979]: 112, 166[71]).

• Reconstructions: PB. preį, PS *pri, PBS *pre, PIE *preį.

No long diphthong is included, therefore, there’s no etymological source of the acute tone, etymologically.

• Lith. priẽ/priẽ- and Latv. pie/piẽ- ‘at, near’ do not constitute a good example of MC.

2.5 peĩ ‘through’

Cognates: Lith. peĩ (dialect. paĩ), Latv. par, pãr, OPruss. per, per-; OCS pɾě-, Ru. pêre- ‘over, through’ (< PS *per/*per- ‘over, through’); Goth. fare (< PGmc. *fer- ‘over, through’), Lat. per ‘through,’ Skt. pāraśad- (f.) ‘assembly,’ Lat. per, Osc. per, Alb. pêr ‘for (prep. [+ acc.]), through (verbal prefix).’

• Lith. peĩ, pêr- ~ Lith. dialect. paĩ, Latv. par, pãr may be ablauting forms (Endzelins 1923: 518ff).

• Büga (1923/24: 97) includes this pair, Lith. peĩ (dialect. paĩ) ~ Latv. pãr, as a case of metatony. Contrary to the case of nuõ and priẽ, the Latvian form has the acute tone both as a preposition and a prefix.

• Latv. pãr is shortened from the adverb pãri ‘over,’ cf. caũr ‘through’ after caũri ‘through (prep.).’ In many dialects (Valmiera, Rauna, Drusti, etc.), only par is found, and in some other dialects (Ogre, Brocêni, etc.), pãr is used beside or instead of par (Endzelins 1923: 517ff; 1951: 670ff).

• Long pêr- is attested in some Lithuanian dialects, e.g., Dusetos pêreiti ‘cross’ and Kupiškis pêrsopêjo ‘stopped aching.’ However, if this particle existed with a long diphthong as *për throughout from PIE to Proto-Balto-Slavic, it is expected to be shortened to *për through Osthoff’s shortening.
A proto form with a short vowel *per- is reconstructed for PIE and PBS, and probably the Lithuanian form does not constitute a good example of MC. The acute tone often found in prefix forms is unclear.

2.6 *t̥e, t̥e (permissive particle)

Cognates: Lith. *t̥e, t̥e, Latv. te, OAVE., YAVE. tā (hortative), Gk. τῇ (hortative), in addition, Goth. þe ‘um so,’ and OPruss. tít ‘thus, therefore’

- dial. t̥e (Kvédarna, Rietavas, Dusetos, Mosėdis, Salantai)
  - equated with Gk. τῇ ‘there,’ which initiates an imperative always in Homer and mostly later, often in the sequence τῇ νῦν (Trautmann 1910: 449; Endzelins 1923: 478; Büga 1958–61: vol II, 4542; Fraenkel 1962-65: 1071; Dunkel 2014: II, 789)
  - OPruss. tít ‘thus, therefore’ also related; ← tī (cf. Gk. τῇ) + -t (cf. Cze. tak ‘so’) (Trautmann 1910: 449). According to Dunkel’s (2014: I, 178; II, 789) further analysis, *te-h₁ (instr.sg.) + -te (temporal particle, attested in Southern Greek dialects, e.g., τότε ‘at that time’ < *tó-te).

- the relation between *t̥e and t̥e:
  - *t̥e has been shortened from t̥e:
    * Hirt (1892: 29):
      *t̥e, an i-less locative of ei-stem to *to- with the lengthening in the root, got shortened (possibly in the proclitic position [Endzelins 1923: 478 ]).
    * Dunkel (2014: II, 789)(?):
      the instrumental singular form to pronominal *to- can be reconstructed: *te-h₁ with the meaning ‘thus’ and also hortative function.
  - *t̥e and t̥e continue different proto forms [Streitberg (1892: 270ff.); Fraenkel (1962-65: 1071)]
    short *t̥e may be from the old i-less locative form, with the parallel of OCS te ‘and;’ cf. Lat. que, Gk. τε, Skt. ca, while the long form is from the old instrumental singular form, cf. Gk. τῇ.
  - but Lat. que, Gk. τε, Skt. ca are at least not from old locative forms (Dunkel 2014: II, 445ff., 689ff.)
  - still, OCS ti (< loc. *te-i) and te (< endingless loc. *te?) ‘and’ may point to a de-locative formation.
• Whichever hypothesis is true, the circumflex tone on the long form, despite the proto form with the instrumental ending *-h₁, is likely to have resulted from MC.

3 Baltic Particles

3.1 lai̯ (optative particle)
Cognates: Lith. lai̯, Kupiškis lói; Latv. laî.

• no such particles are found outside of East Baltic. (OPruss. conditional particle -le is not a direct cognate, cf. Stang (1966: 443))

• Lith. lai̯ is from the 3rd person optative form of léisti (dial. láisti) ‘let,’ and Latv. laî also from laid, the shortened imperative form of laîst ‘let.’

• Lith. lai̯ and Latv. laî can be historically traced back to Proto East-Baltic at most. Consequently, the circumflex tone of std. Lith. lai̯ cannot be attributed to the Monosyllabic Circumflexion which was in operation in PBS, but to an inner-Lithuanian phenomenon.

• This view is also supported by the acute lói in east Aukštaitian (< pre-Lith. *lái), for this form indicates that the metatony that affected lai̯ happened after the divergence of Lithuanian dialects.

3.2 dél ‘for, because of’

• (Fraenkel 1962 1965: 86ff.) and ME (I, 463) point out an etymological connection of Lith. dél/Latv. dél to OCS/ORuss. délja ‘regarding, concerning’ and Sl. *dělo (a) neut. ‘work, deed’ (> Ru. déro ‘business, matter,’ SCR. djělo ‘deed, act’) which are ultimately derived from a PIE root *dʰeh₁-‘to put.’

• therefore, the circumflex tone of Lith. dél is unexpected, while the acute tone of Latv. dél seems regular.

• However, since two of the Lithuanian disyllabic “older and fuller” forms, déliai and délai have the circumflex tone, dél cannot be attributed to MC.

5Standard Lithuanian is based on the southern West Aukštaitian dialects.
• Since the adverbial ending -(i)ai has started to be attached to more parts of speech than adjectives (e.g., dovanaĩ ‘in vain’ from dovana (3a) ‘gift,’ visaĩ ‘at all’ from visas ‘all (pron.);’ Forssman 2003: 119ff.), dėliai could be derived directly from the noun *dėla(n). The adverbial suffix -iai seems to also cause mėtatonie douce (?), e.g., drūčiai ‘thickly’ to drūtas (3) ‘thick,’ similarly to the suffix *-įjo- (cf. Stang (1966: 160)).

3.3 vėl ‘again’
Cognates: Lith. vėl’, vėl, Latv. vēl (ELatv. viēl) ‘still.’

• Büga (1923/24: 95ff.) considers that Lith. vėl and ELith. vēl’ are originated from *vēli, and vēl (and vēl’ei, vēlek) from *vēli(a);
Latv. vēl (dial. viēl) should be from Baltic *vēli (with accent on -i̯ê), where the final adverbial ending *-i was lost later, as the narrow root vowel ē implies (also Endzelins (1923: 465)).

• It is known that PIE knew two ways to form adverbs from adjectives: a particular case form and contrastive accent shift. In Lithuanian, we often find pairs like ilgaĩ ∼ ｉｌｇai (ｉｌgas ‘long’); skersaĩ ∼ skeršai (skeršas ‘across’). Such accent alternation may be a remnant of the old contrastive accent shift (Forssman 2003: 119). *vēli and *vēli(a) above may represent one of such cases.

• Lith. vēl/Latv. vēl is an deadjectival particles, descended from an adjective stem *vēlu- which is attested as adjectives, Lith. vēlūs (4) ‘late’ and Latv. vēls ‘id’ (Forssman 2003: 221).

• The circumflex tone attested in Lithuanian but not in Latvian can be explained by the mėtatonie douce which affected Lithuanian u-stem adjectives, observed in a relatively recent history of Lithuanian: e.g., saldūs (3) ‘sweet’ [Daukša’s Postilė (1599)] → saldūs (4), cf. Latv. salīds (Stang 1966: 160).

• The particle itself is not found as such outside of East Baltic. It is a Baltic formation, and had not existed in Proto-Balto-Slavic yet as a monosyllabic particle. It can be hardly a result of MC.

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*It can be inferred that the form meant by him is probably interpreted as *vēli (with the acute root and accented ending)."
4 conclusion

- Baltic particles often show the circumflex tone in Lithuanian, and the acute tone in Latvian (Lith. laî ~ Latv. lai̇; Lith. dēl ~ Latv. dēļ Lith. vēl ~ Latv. vēl). In the last two cases, Lithuanian métatonie douce caused the circumflex tone in Lithuanian, while it did not happen in Latvian.

- For old particles, mostly Lithuanian forms show the circumflex tone, while the tone information of the Latvian material is unclear or unavailable (Lith. nū ~ ELatv. nū², nū²; Lith. vōs; Lith. dial. tē ~ Latv. te). In one case, both Lithuanian and Latvian undoubtedly exhibit the circumflex tone (Lith. nuō ~ Latv. nūo).

- This result agrees on the view presented by Kortlandt (1985: 115; 2014: 217ff.) that there are two chronological layers of MC, although it is based on different analyses. In my view, the first layer lies in PBS period, which caused the circumflex tone in root nouns (Latv. gūovs ‘cow’ < *gʷoüs [← *gʷouš]) and (old) 3rd person future forms (duōs ‘will give’ < *dō-s(-t); Villanueva Svensson (2011: 19ff.); for the 3rd person future forms also in Kortlandt (2014)). The second layer is in Lithuanian, as Lith. laî ~ Latv. lai̇ shows. Those particles did not exist as such yet in PBS, but came into existence probably in East Baltic. Therefore, in Latvian, where MC has not taken place, the acute tone is retained, while the circumflex tone is attested in Lithuanian where MC possibly took place (at the Lithuanian stage).

- For the relative chronology of the Lithuanian MC, EAukš. lói may provides a piece of evidence that it took place after the divergence of the dialects of Lithuanian.

Bibliography


