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The sound law that is generally referred to as Winter's law can by no means be regarded as well-established. Its reception has ranged from almost unreserved acceptance to categorical rejection. Those who dispute the validity of Winter's law, which in its original formulation is Balto-Slavic vowel lengthening before Indo-European unaspirated voiced stops, have attempted to explain away the forms that have been adduced as evidence of the law, usually by positing a lengthened grade. The protagonists of Winter's law disagree on the conditions under which the law operated and hold different opinions regarding its interpretation. Since a reluctance to accept Winter's law is necessarily accompanied by a willingness to posit Balto-Slavic lengthened grade vowels, even if they find no support in other branches of Indo-European, the argument that the PIE lengthened grade was limited to a few categories falls on deaf ears. Likewise, Kortlandt's claim that Winter's law generates acute syllables, whereas the regular Balto-Slavic reflex of a PIE lengthened grade is a circumflex, fails to convince those who reject Winter's law. Apparently, the only way to break the deadlock is a comprehensive investigation of the material.

The question whether Winter's law is a sound law or merely an illusion is of great importance to comparative Indo-European linguistics. If correct, the law enables us to distinguish between Balto-Slavic voiced stops reflecting PIE aspirated voiced stops and Balto-Slavic voiced stops reflecting what are traditionally called the PIE unaspirated voiced stops, thus increasing the value of Baltic and Slavic data in matters of etymology. Furthermore, it dramatically reduces the Balto-Slavic evidence for PIE lengthened grade vowels. Finally, Winter's law may lead us to reconsider the nature of the PIE consonant system (cf. de Lambertie 1998, 33–37). Considering the potentially far-reaching consequences of Winter's law, it should continue to be discussed until it is either conclusively proved or refuted. Regrettably, the discussion now seems to be dying down¹. In Meier-Brügger's recent introduction to Indo-European linguistics, to name but an example, the law is not even mentioned.

¹ Since the completion of the present article it has come to my attention that V. A. Dybo has recently published a comprehensive article on Winter's law.

The impact that Winter's law may have is apparent in the *Lexikon der indogermanischen Verben* (LIV), where on several occasions the law is presented as an alternative for the reconstruction of acrodynamic root presents. Surprisingly, the formulation adopted in LIV is the one advocated by Matasović (1995), who argued that the lengthening was limited to closed syllables. The present article is essentially a critical discussion of Matasović's reformulation of Winter's law. In addition, it is an attempt to revive interest in this important issue of Balto-Slavic phonology.

2. Instances of Winter's law

According to Matasović (1995, 66–67), whose discussion of the material is mainly limited to monophthongs, diphthongal bases ending in an unaspirated voiced stop are expected to show the effects of Winter's law because the first syllable will always be closed. In my opinion, it is not entirely obvious why CVRD would behave like CVD-C and not like CVD-V. Matasović goes to great lengths to explain the phonological mechanism behind this in autosegmental terms (Goldsmith 1990). I shall leave his exposition for what it is and join Matasović in referring to Young 1990, where it is shown that Winter's law applies to diphthongs as well. Note that Matasović's reformulation of Winter's law implies that the law operated in the full grade but not necessarily in the zero grade of roots of the structure Ci/uD.

Since I adhere to the view that Winter's law operated both in open and closed syllables, my main concern are those cases where the fact that the syllable was open allegedly blocked the operation of the law. Several of Matasović's examples of lengthening² in closed syllables, however, are not so straightforward that they can be presented without further comment.

2.1 In a number of cases Matasović is forced to assume that the lengthening caused by Winter's law spread analogically through the paradigm. This is the case for BSl. **sēd-* 'sit', **ēd-* 'eat', **bēg-* 'run', which had athematic presents³, and BSl. **ōd-* 'smell' (Lith. *úosti*, 1sg. *úodžiu*, OCz. *jadati* 'explore'), **pōd-*⁴ 'fall' (OCS

² Since I adhere to Kortlandt's interpretation of Winter's law as the merger of the glottal part of the unaspirated voiced stops and the PIE laryngeals, I consider the term "lengthening" misleading: it obscures the distinction between acute and circumflex long vowels and diphthongs. In the present article the term is occasionally employed in connection with the theories of Matasović and others.

³ I agree with Matasović (o.c. 59) that here the reconstruction of acrodynamic ("Narten") presents is completely unwarranted.

⁴ Matasović reconstructs BSl. (rather than Sl.) **pōd-*, presumably because Lith. *pėdas* 'footstep' may contain the same root. I do not share Matasović's and Campanile's view that the latter word contains a lengthened grade vowel (cf. Campanile 1994, 344), if only because I subscribe to Kortlandt's view that lengthened grade vowels are circumflex in Balto-Slavic.

pasti), Sl. **mazati*, 1sg. *mažō* ‘smear’, where the long vowel is assumed to have originated in a *je/o*-present (1995, 62). For **pōd-* this assumption is based on Skt. *pádyate* ‘falls, steps’. It seems to me that “BSl. **dōmi*” ‘I give’ (Lith. *dúodu*, OCS *damь*) < **dodh₃-mi*, which Matasović (l.c. 63) discusses separately because of the root-final laryngeal, belongs to the same category as OLith. *ēmi*, OCS *jamь* < **h₁ed-mi* etc.

Matasović also proposes a reconstruction with **j* to account for the long acute root vowel of Lith. *ožỹs* 3 ‘goat’, which in my opinion is questionable because the ending *-ỹs* originates from **-i(j)ó-*. Furthermore, this explanation implies that, in spite of Skt. *ajína-* n. ‘animal skin’, RuCS *jazьno* ‘skin, leather’ is a late derivation. Another case where Matasović attributes lengthening to the presence of a yod would be SCr. *čâđ* or *čâđa* ‘soot’, which may or may not be cognate with OPr. *accodis* ‘hole in the wall for the elimination of smoke’ (cf. Mažiulis 1988, 62–63; Schmalstieg 2002). Here the reconstruction of PIE **d* is based on the rather doubtful connection with Gk. *κέδρος* ‘juniper, cedar’, Skt. *kadrú-* ‘reddish brown’. Moreover, the vocalism of OCS *kaditi*, SCr. *káditi* ‘fumigate, burn incense’, which Matasović does not mention, and the *o*-stem **čadь*, cf. Ru. *čad* ‘fumes’, Pl. *czad* ‘fumes, soot’ cannot be accounted for by Matasović’s reformulation of Winter’s law. No lengthening is found in the case of Lith. *kadagỹs* ‘juniper’, a form one might have expected to be mentioned in this connection. The relationship between the latter word and Gk. *κέδρος* must be considered unclear, however (cf. EIEC 324).

2.2 In order to explain why in BSl. **nōgos* ‘naked’ (Lith. *núogas*, OCS *nagь*), Sl. **azь* ‘I’, OCS *jadь* ‘poison’ and OCS *vada* ‘guilt, slander’ we seemingly find lengthening in an open syllable, Matasović considers the possibility that at the time when Winter’s law operated these forms still contained a laryngeal: **nog^wHos*, **e-gh₂om*, **e-dh₃-o-*, **h₂wodh₂r* (o.c. 63, 65). I find it implausible that in this position the laryngeals were preserved until Late Balto-Slavic. Furthermore, the original presence of a laryngeal is questionable for three out of four examples. First of all, the laryngeal in **nog^wHos* is tentatively reconstructed on the basis of Go. *naqaps* ‘naked’, but contrast the zero reflex in OHG *kind* < **génh₁-to-*. If one wants to stick to the rule that lengthening was confined to closed syllables, it seems preferable to assume that the original Balto-Slavic form was **nogno-* (cf. OPr. *nognan* ‘leather’, Skt. *nagná-* ‘naked’), which Matasović proposes as an alternative explanation. As for OCS *jadь*, the reconstruction **h₁ed-o-* is superior, as Matasović admits himself (o.c. 65). The root-final laryngeal of **h₂wodh₂r* is not beyond doubt⁵. The connection with Hitt. *uddar* ‘word’ must probably be rejected (Melchert 1994, 49–50), while Skt. *vádati*

⁵ Rasmussen (1992, 65, 73–74) suggests that in this position *h₂* causes aspiration, which would prevent the operation of Winter’s law.

'speaks' does not show the expected aspiration. Finally, Matasović assumes that the short vowel of Lith. *aš*, Latv. *es* 'I' < **e-ǵh₂* results from an early loss of the final laryngeal and subsequent devoicing of **ǵ*. In my opinion, this type of explanation does not necessarily apply to this seemingly irregular reflex of the short form of the pronoun (cf. Kortlandt 1988, 393). We may be dealing here with an allegro form.

2.3 An amusing aspect of Matasović's hypothesis is the fact that it is in direct conflict with Rasmussen's rule (1992, 72) that Winter's law was blocked by a following resonant⁶. Thus, whereas Rasmussen (l.c.) suggests that Lith. *dubùs* 'deep' may have replaced **dubras* (cf. OCS *dъbrъ* 'abyss'), Matasović regards the short vowel as regular and would probably have assumed an analogical origin for *dъbrъ*, had this form been included in his survey.

Matasović adduces a number of examples where lengthening occurred before an unaspirated voiced stop followed by a resonant. These are partly unproblematic, e.g. BSl. **ūdrā* 'otter' (Lith. *ūdra*, Sl. **vydra*), Sl. **vědro* 'bucket', **agne* 'lamb', **bagno* 'mud, swamp', **vygnъ* 'anvil' (SCr. *vìganj*), Lith. *ėdrà* 'fodder'⁷. Some examples, however, are less convincing. The assumption that the **ā* of OCS **ablъko* 'apple' and OPr. *woble* 'id.' originated in a closed syllable means that the root vocalism of forms with full or lengthened grade of the suffix, e.g. Latv. *ābuōls* 'apple', Lith. *obuolỹs* 'id.', *obei̯is* 'apple-tree', must be analogical, which seems arbitrary. In a similar vein, it is stated that the long vowel of Lith. *úoga* 'berry' and Sl. **agoda* (Ru. *jágodá* 'berry', SCr. *jàgoda* 'strawberry, berry') "is to be explained as analogical, or in some other way" (o.c. 63), while length would be regular in SCr. *jagla* and Lith. "*uoglas* 'some plant'". This is quite unsatisfactory. The argumentation is further weakened by the fact that SCr. *jáglá* 'burst kernel of corn', Cz. *jáhla* 'grain of millet' is unlikely to be cognate with Lith. *uoglis* 1/2 'plant', which in all likelihood belongs to *áugti* 'grow'. In fact, it is also uncertain whether the Slavic etymon is cognate with the word for 'berry' (cf. ÉSSJa VIII 168–169).

2.4 Matasović (o.c. 66) admits that there are a few examples with a long vowel in an open syllable that his new formulation of Winter's law cannot account for. That does not bother him too much, however, as long as there are no genuine counter-examples to his formulation (ibidem). This raises the question what type of etyma would constitute genuine counter-examples in the case that the original reformulation of Winter's law is correct. In my view, SCr. *gnjîda*, Latv. *gnîda*, Lith.

⁶ In addition, Rasmussen (1992, 74) claims that Winter's law only applies to the syllable immediately preceding the accent (cf. Shintani 1985).

⁷ The etymological connection between Sl. **naglъ* 'sudden' and Go. *anaks* 'suddenly' is attractive but uncertain.

*glinda*⁸ ‘nit’ (cf. OE *hnutu*), Lith. *púodas*, Latv. *puôds*, OPr. *podalis* ‘pot’ (cf. MoHG *Faß* ‘barrel’), and Lith. *stógas*, OPr. *stogis* ‘roof’ (cf. Gk. *στέγω* ‘cover’, *τέγος* ‘roof’, Lat. *toga*) testify to the validity of Winter’s law in its original formulation, cf. also Lith. *védaras*, Latv. *vēdērs* ‘entrails, belly’ (Skt. *udāra-* n. ‘belly’). Matasović’s remark that *stógas* points to **ā* and may therefore be unrelated to forms reflecting **(s)teg-* is unfounded in view of the well-known East Baltic reshuffling of the ablaut relations.

A difficult example is Sl. **slàbъ* (a), Žem. *slābnas*, E. Lith. *slōbnas*, Latv. *slābs*, *slābens*, *slābans*, MLG *slap* ‘weak’. Matasović mentions OCS *slabъ* ‘weak’, E. Lith. *slōbti* ‘weaken’ and reconstructs BSl. **slāb-*, which is beside the point. As was already observed by Fraenkel (1952, 151), Lith. *slōbnas* does not correspond to SCr. *slàb*, Sln. *slàb* etc, which point to an acute. Fraenkel regarded *slābnas* as the original inherited form and suggested that *slōbnas* shows a special East Lithuanian development of *ā*. This does not solve our problem, however. Though Latvian *slābs* is in perfect agreement with Sl. **slàbъ*, I am inclined to consider the Baltic forms borrowings from Slavic (cf. Derksen 1996, 83). The Slavic etymon appears to be an example of Winter’s law. Rasmussen (1992, 72), who only considers *slābnas*, mentions this form as an illustration of his blocking rule. On the other hand, his version of Winter’s law cannot account for Sl. **slàbъ*, as this etymon has fixed stress on the root.

3. Matasović’s evidence for absence of lengthening in open syllables

Among the modifications of Winter’s law that have been proposed to account for the apparent absence of lengthening in a number of cases, the one advocated by Matasović – no lengthening in open syllables – has the widest scope. His examples, some of which have been part of the discussion since Winter 1978, are fairly heterogeneous. I have attempted to classify them into categories.

3.1 According to Kortlandt (1979, 60–61; 1988, 388–389), Winter’s law did not affect syllables followed by the clusters **-ndn-* and **-ngn-*. He uses this blocking rule to account for some of the most prominent counter-examples to Winter’s law. In the case of Lith. *vanduō* 3^a vs. Sl. **voda* ‘water’, Kortlandt assumes that the *n* of the root is original, cf. Lat. *unda*. In forms with zero grade of the suffix, e.g. the gen. sg. **(v)undnes*, the cluster **-ndn-* blocked the operation of the law. At a later stage, the *n* of the root was lost by dissimilation (in Slavic, tautosyllabic **un* had previously been

⁸ With dissimilation of *n* to *l*. Matasović does not seem to take into account the possibility that Latv. *gnīda* may go back to a form with a secondary nasal as well, presumably because we find no dissimilation here.

lowered to **on*). For Lith. *ugnìs*, Latv. *uguns*, Sl. **ognь* ‘fire’, Kortlandt reconstructs BSl. **ungnis* < *ng^wnis*. The effects of Winter’s law can be observed in SCr. *vìganj* ‘anvil’, Cz. *výheň* ‘forge’, with an originally acute initial syllable. To Matasović the short vocalism of Sl. **voda* is simply an illustration of his modification of Winter’s law, the first syllable being open (1995, 62–63). According to his hypothesis, lengthening is expected in the case of BSl. **ūdrā*, Sl. **vědro*, **vygnь* (see 2.3).

Lith. *sègti*, *sèga* ‘fasten’ must be cognate with Skt. *sájati* ‘attach’ and is therefore in conflict with Winter’s law. Matasović mentions the existence of Slavic forms with a nasal infix, e.g. SCr. *sèzati*, Pl. *sięgac* (**sengati*), but fails to observe that here the root vowel is acute. Interestingly, SCr. *ségnuti*, Cz. *sáhnouti* point to a non-acute root, which is all the more remarkable because in this formation we rather tend to find secondarily acute roots. The Slavic state of affairs can be explained with the aid of Kortlandt’s blocking rule. For Lithuanian we would have to assume that at a later stage the nasal of the root was lost (K o r t l a n d t 1979, 61; 1988, 388).

A puzzling counter-example to Winter’s law is Sl. **xodь* ‘going, course’, Gk. *ὀδός*. According to K o r t l a n d t (1988, 394), **xodь* is based on the root of BSl. **sizd-*, where **-zd-* blocks Winter’s law. As in the case of **uód* and **ségeti*, Rasmussen accounts for the absence of lengthening by assuming barytone accentuation⁹. Lith. *ugnìs*, Sl. **ognь*, is explained by his more general blocking rule, while SCr. *vìganj* ‘anvil’, Cz. *výheň*, is labelled a late *vřddhi* derivative (**ūgnjo-*). I do not want to go into Shintani’s accent rule, for a discussion of which I refer to K o r t l a n d t 1988. As for Rasmussen’s blocking rule, I am convinced that it is too general. A closer inspection of the material that Rasmussen adduces in favour of the rule already suffices to cast doubt on its validity. Rasmussen mentions *anglìs* f. 4 ‘coal’, Latv. *ùogle* (Skt. *āṅgāra-*) as evidence for a circumflex, but Lith. *ānglis* m. 1 (alongside *añglis* m. 2) and SCr. *ùgalj*, gen. sg. *ùglja*, point to an acute. The circumflex of Lith. *giēdras*, *gaidrūs* 4 ‘clear, serene’ (cf. Gk. *φαιδρός*) may be secondary in view of Žem. *giedras* (B ū g a RR II 421), Latv. *dzīdrs* ‘azure, clear’ (alongside *dzidrs*, cf. D e r k s e n 1996, 222–223). For more counter-evidence, see 2.3.

3.2 Matasović’s counter-examples to the traditional formulation of Winter’s law include a number of etyma where the reconstruction of **D* seems to depend exclusively on the Germanic evidence, viz.

OCS *debelь*, OPr. *debīkan* ‘fat’ : OHG *tapfar* ‘heavy’

Lith. *stāgaras* ‘dry stick’, Sl. **stogь* ‘stack’ : OIc. *stakkr* ‘stack’, OE *staca* ‘stake’

⁹ I have no idea what R a s m u s s e n (1992, 68) is referring to when he credits Illič-Svityč (1963, 31–37, 114–118) with the discovery of the “Balto-Slavic generalization of root accent in non-neuter *o*-stems”, of which BSl. *sódos* < **sodós* would be an example.

Lith. *gegužė*, Latv. *džeguze*, OPr. *geguse*, Ru. dial. *žegozúlja*, *žegožka* : OIc. *gaukr*, OE *gēac* ‘cuckoo’

Sl. **koby* ‘fate, augury’ : OIc. *happr* ‘happiness, success’, OIr. *cob* ‘victory’

Sl. **kogъь* ‘claw’ : OE *haced*, *hoced*, MoHG *hecht* ‘pike’ < **hakud*, **hakid*

Lith. *dubùs* ‘deep’ : Go. *diups* ‘id.’

The question is whether we are justified to reconstruct a PIE or Balto-Slavic **D* on the basis of Germanic alone. If a certain etymon has a limited geographical distribution, there is a distinct possibility that it entered the lexicon of the branches of IE in which it occurs at a comparatively late stage. Assuming that Winter’s law is to be connected with the fact that the PIE unaspirated voiced stops were actually preglottalized, it seems plausible that at a certain stage of Balto-Slavic a non-glottalized unaspirated **D* of a borrowed form was identified with **D* < PIE **D^h* with the result that the same word borrowed into Germanic has **T* < **D*. I do not claim that *Sonderübereinstimmungen* between Germanic and Balto-Slavic never show the effects of Winter’s law, cf. Lith. *púodas* : MoHG *Faß*, but we are dealing with a number of possible scenarios here.

Another matter of consideration is the fact that Germanic roots often show variation with respect to the phonation type of the final consonant. The word for ‘deep’, for instance, has been considered a borrowing from an unknown substratum language precisely because of this variation (cf. Kuiper 1995, 69–72), but the phenomenon does not seem to be limited to substratum words. Hence, it cannot be excluded that a particular Germanic form with **-T* < **-D* is cognate with etyma in other languages pointing to **-D^h*, so that Lith. *stāgaras* may be cognate with both OE *staca* and Gk. *στόχος* ‘brick pillar’. In this case, however, there is yet another, more attractive possibility. Since OE *staca* is an *n*-stem, the voiceless stop may be traced to **stokk-* < **stog^h-n-* (Kluge’s law, cf. Kortlandt 1991). Kluge’s law may be responsible for several other apparent discrepancies between Balto-Slavic and Germanic, e.g. Lith. *balžienas*, Latv. *bālziēns* ‘cross-beam, cross-bar’, where the circumflex-root points to **g^h*, vs. OIc. *bialki*, OHG *balko*, OE *balca* ‘beam’ (cf. Derksen 1996, 316).

3.3 Lith. *ligà* ‘illness’, Latv. *liga* ‘illness, misfortune’, may very well be cognate with Gk. *λοιγός* ‘ruin, havoc (from death by plague)’, Alb. *lígë* ‘disaster, illness’. As the expected acute is found in *liégti* ‘pine away’, *palíegti* ‘fall ill’, the short *i* of the zero grade may be secondary.

Matasović states that Lith. *kadà* ‘when’ and *tadà* ‘then’ are completely parallel to Skt. *kadā́*, *tadā́*. This is not entirely accurate because the ending of the Lithuanian forms contains a nasal, cf. *kadángi* ‘as, because’, E. Lith. *kadù*, OPr. *kadan* ‘when’.

We may be dealing with independent formations here¹⁰, in which case the Baltic forms may contain **d^h* instead of *d*.

The root vowel of Sl. **jьgo* ‘yoke’ does not necessarily reflect **u* because in mobile paradigms the reflexes of **i-* and **iH-* (**u-* and **uH-* after **j*) have merged in the larger part of the Slavic territory (D e r k s e n f t h c.). Sl. **jьgo* may therefore reflect **jú?go* < **iugóm*, cf. Lith. *jùngas* ‘yoke’, *jáugti* ‘yoke, harness’, Latv. *jûgs* ‘yoke’. Of course, the Baltic forms, which contain an indisputably acute root, are not in conflict with Matasović’s hypothesis, as we are dealing with closed syllables.

3.4 M a t a s o v i ć rejects Winter’s analysis (1978) of Lith. *pādas* ‘sole, threshing-floor’, Sl. **podь* ‘floor’, as < **po-d^hh₁-o-*. I think that it is an excellent etymology, cf. Lith. *priėdas* ‘addition’, Ru. *podóšva* ‘sole, foot (of a mountain)’ (K o r t l a n d t 1988, 393). I am also convinced that Winter is right in identifying Sl. **bogь* and **sedьlo* as borrowings from Iranian and Germanic, respectively.

According to F r a e n k e l (LEW II 837–838), Lith. *smagùs* ‘heavy’ may be cognate with *smōgti* ‘whip’. Nevertheless, a connection with Gk. μόγος ‘toil, trouble, distress’ cannot be excluded on other grounds than the fact that Winter’s law did not operate. Lith. *lazdà*, dial. *lazà*¹¹ ‘stick, (dial.) hazel’, Latv. *lazda* ‘hazel’, OPr. *laxde* ‘hazel’ is possibly cognate with Sl. **loza* ‘vine’. The connection with Gk. ολόγινον (Hsch.) ‘myrtea[?]’ – and therefore the evidence for **ǵ* – is highly uncertain. The first element of Sl. **edinь/edьnь* ‘one’ is obscure. Lith. *lėbeda* ‘rag’ is not cognate with Gk. λεβηρίς ‘snake or slough of serpents, shell’, nor does Sl. **-oda* have to be identical with Gk. -ας, -αδος.

4. Conclusion

Matasović’s hypothesis that the operation of Winter’s law was limited to closed syllables is not supported by the evidence. On the one hand, there are quite a number of etyma where Winter’s law seems to have operated in open syllables. On the other hand, the majority of the forms which Matasović adduces as counter-examples to Winter’s law in its original formulation can or must be explained differently. The law may have been conditioned in the sense that it was blocked by certain clusters (cf. Kortlandt’s blocking rule), but there is no need to propose a major modification such as the one proposed by Matasović.

¹⁰ According to M a y r h o f e r (EWAia I 618), there is no “Urverwandschaft” between Lith. *tadà* and Skt. *tadā*. He is even inclined to regard the Indo-Aryan and Avestan forms as independent formations.

¹¹ With *-z-* < *-zd-*, cf. B ū g a RR I 273.

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