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THE ACCENTUATION OF THE INFINITIVE TYPE LATV. *kaĨt*, SL. **kőlti* AND THE DEVELOPMENT OF INDO-EUROPEAN *molō*-PRESENTS IN BALTO-SLAVIC

1. Building on earlier work by Dybo (1981, 233ff.), Rasmussen (1985[1999], 184ff.) has argued convincingly that the Balto-Slavic infinitive was originally accented on the ending. Root or suffix accentuation would in principle reflect the effects of Hirt's law. After a brief discussion of the evidence supporting this reconstruction (§ 2–4), in this article I will deal with apparent exceptions to the general rule.

2. The Baltic evidence is basically restricted to Latvian. Lithuanian has generalized root accentuation for all infinitives (*nèšti* "carry", *gérti* "drink", *dúoti* "give", etc.), except where it shifted to the following syllable according to Saussure's law (e.g. *darýti*, *dãro* "make" vs. *mókyti*, *móko* "learn"). The Old Prussian facts are more complex and not entirely clear.[1] To judge from examples like *rānctwei* "steal" or *tiēnstwei* "attract", with non-acute accented root vowel, root accentuation was generalized in primary verbs. Since Saussure's law did not operate in Old Prussian,[2] suffixal verbs like *laikūt* "hold" (pres. 3 *lāiku*), *giwīt* "live" (pres. 2 sg. *gīwu*), *billīt(wei)* "say" (pres. 3 *billā*), or *turrītwei* "have" (pres. 3 *turri*) have probably retained the old place of stress in the infinitive. Root accentuation, although less frequent, is also attested (e.g. *prei-dīnkaut* "thank", *schlūsitwei* "serve", *līgint(on)* "judge", *smūnint* "honor").

2.1. The Latvian facts, on the other hand, can hardly be understood otherwise than by assuming original ending accentuation. The vast majority of primary verbs with acute roots show *Dehnton* (reflecting earlier root

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[1] See Rinkevičius 2009, 188ff. for a survey of the Old Prussian verb from an accentological point of view.

[2] Cf. Rinkevičius 2009, 85ff., with references.

accentuation) if they go back to original structures *TṚH-téi-,[3] *TUH-téi- or *TEH-téi- (where the accent was retracted to *TṚH-tei-, *TÚH-tei-, *TÉH-tei- according to Hirt's law), but *Brechton* (reflecting earlier ending accentuation) in cases where Hirt's law did not apply, e.g. full grade *TERH-téi- or T(E)(R)D-téi- (with acute intonation due to Winter's law):[4]

a) *TṚ́H-tei-: *bur̃t* "conjure", *dur̃t* "stab", *dzir̃tiês* "revere", *ir̃t* "row", *kul̃t* "thresh", *kur̃t* "kindle", *mĩt* "step on", *šķil̃t* "strike fire", *šķir̃t* "cut", *šķĩt* "pluck", *stum̃t* "push", *trĩt* "rub, sharpen"; *TÚH-tei-: *gũt* "grab", *rĩt* "swallow", *skũt* "shave", *šũt* "sew"; *TÉH-tei-: *duõt* "give", *mãt* "wave", *rãt* "scold", *sẽt* "sow", *spẽt* "manage".

b) *TERH-téi-: *ar̂t* "plough", *cel̂t* "lift", *dzel̂t* "pierce", *dzer̂t* "drink", *ķer̂t* "seize", *ner̂t* "contract", *pel̂t* "scorn", *sal̂t* "freeze", *smel̂t* "pour", *sper̂t* "kick", *šķel̂t* "cleave", *tver̂t* "seize, grasp", *vel̂t* "roll over", *zel̂t* "become green", *zvel̂t* "overthrow".

c) Length due to Winter's law: *aûgt* "grow", *bêgt* "run", *êst* "eat", *jûgt* "yoke", *laûzt* "break", *lîst* "clear", *mil̂zt* "swallow", *pir̂st* "fart", *plaûst* "wash", *sêstiês* "sit down", *šķiêst* "scatter". Without clear evidence supporting the reconstruction of a voiced stop: *aûst* "weave", *ber̂zt* "rub", *briêst* "ripen", *griêzt* "cut", *grûst* "push", *kliêst* "spread", *klîst*

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[3] In what follows I will schematically note the Balto-Slavic infinitive suffix as *-tei-. To be sure (as Frederik Kortlandt reminded me at the conference), it is not absolutely certain that Balto-Slavic actually had an infinitive, at least at the early stage of its development when Hirt's law took place. Such a view could find mild support in the different infinitive suffixes of Old Prussian (*-twei* < *-tu̯ei*, *-t* < *-ti*?), on the one hand, and East Baltic and Slavic, on the other (Slavic continues *-tēi* or *-tei*; it is at present unclear to me whether we have to assume two or three variants *-tēi*, *-tei*, *-ti* for East Baltic, as per E n d z e l i n 1923, 710 or S t a n g 1966, 447f., or whether we can do with a single inherited ending *-tēi* or *-tei*, as per O t r ę b s k i 1956, 243). This argument is not conclusive. Much more variance is found, for instance, in ancient Greek, a language that nevertheless had an infinitive. The close resemblance of the Baltic and Slavic infinitives can hardly be due to chance and rather points to common inheritance.

[4] To be sure, the possibility can hardly be excluded that the intonation of the infinitive has been systematically adapted to that of the present and/or preterit (as in *duôt* for dial. *duõt* after pres. *duôdu*). This seems to be the position of S t a n g (1966, 472). The distribution we find, however, is consistent enough to assume, at least as a reasonable working hypothesis, that the Latvian infinitive directly reflects the place of stress of the Balto-Slavic infinitive. Latvian data are taken from E n d z e l i n 1923, 555ff.

"make a mistake", *rûgt* "ferment", *spiêst* "press, squeeze", *spriêst* "stretch, decide", *sviêst* "throw", etc. With old lengthened grade perhaps *smiêtiês* "laugh".

2.2. Although the Latvian facts are, in general terms, almost surprisingly clear, we have a number of exceptions. Cases with unexpected *Dehnton* will be discussed below. Cases with unexpected *Brechton* are more numerous. As observed by R a s m u s s e n (1985[1999], 189), they can easily be explained by a tendency of the *Brechton* to expand beyond its original domain (or, alternatively, by an earlier tendency towards mobility, which would yield the same result):

*TUH-tei-: *bût* "be", *dzît* "recover", *liêt* "pour", *lît* "rain", *mît* "exchange", *vît* "twist" (contrast Sl. *bȳ́ti "be", *žȳ́ti "live", *lī́ti "pour", *vī́ti "twist"); *TEH-tei-: *blêt* "bellow", *dêt* "suck", *jât* "ride", *klât* "cover", *stât* "stand up" (contrast Sl. *stắti); *TN̥H-tei-: *pît* "braid", *tît* "twist, envelop";[5] *TR̥H-tei-: *vil̂t* "deceive", *vir̂t* "boil"; *T(R)EHT-tei- (?): *diêgt* "sting", *plêst* "tear", *sprâgt* "burst, blossom", *sâkt* "begin", *glêbt*, *glâbt* "save", *slêgt* "close".[6]

It is important to emphasize that the intonation of these infinitives *must* be secondary under any theory of the Balto-Slavic infinitive (if the accent was originally on the ending, it should have been retracted according to Hirt's law; if it was on the root, there was no reason for it to shift to the ending).

Verbs in *-aut* (Lith. *-áuti*) present both intonations, e.g. *bļaût* "bleat", *kaût* "fight", *maût* "swim, submerge" vs. *pļaût* "cut, mow", *spļaût* "spit", *šaût* "shoot". It is unclear to me whether *bļaût*, *kaût*, etc. reflect the same expansion of the *Brechton* or are rather to be explained in a different way.[7] This class has been strongly regularized in (East) Baltic and it

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[5] As Rasmussen observes (*loc. cit.*), Slavic *pęti̇, *tęti̇ (< *penH-téi-, *tenH-téi-), suggest that *pît*, *tît* (Lith. *pìnti*, *tìnti*) have secondarily adopted their zero grade from the present (Lith.) *pìna*, *tìna*, but have preserved the original place of stress.

[6] The prehistory of most of these verbs is somewhat obscure and it is not absolutely certain that they actually contained a laryngeal. Thus, I am not sure that Latv. *diêgt* (: Lat. *fīgere* "fix in, fasten") must be connected with TB /tsaka-/ "bite" (so R i n g e 1988–90, 71), Latv. *slêgt* need not be related to Gk. λώβη "insult" (cf. R a g o t 2002), Latv. *plêst* may continue *plēk̂- (as recognized in LIV, 484), etc.

[7] For instance, *bʰleuH-téi- (*bļaût*) vs. *pi̯aHu-téi- > *pi̯áHu-tei- (*pļaût*) by regular sound change (see below § 8.3), but Sl. *bl'ьváti "vomit" suffices to cast some doubts on the reconstruction of a Balto-Slavic infinitive *bʰleuH-téi-.

cannot be excluded that the double accentuation in part reflects a complex morphological prehistory.

3. We can now turn to Slavic, where the accentuation of the infinitive is best studied in relationship to the accentual paradigm of the present.[8]

3.1. Verbs with a mobile present (Accentual Paradigm *c*) strongly confirm the picture that emerges from Latvian. The clearest piece of evidence is provided by a small group of full grade infinitives to *TERH-roots with accent on the ending: *žertì "swallow, devour", *dertì "tear" (?),[9] *stertì "stretch", *pertì "lean",[10] probably *pętì "expand", *tętì "cut", which are ambiguous between full and zero grade (pres. *žь̏rǫ, *žь̏retь, etc.). As correctly observed by D y b o (1981, 251), the final accent of *žertì, etc. can only be understood if the accent originally stood on the ending and was not retracted in full grade *gʷerH-téi-.

The accentuation of other infinitives to mobile presents is fully predicted within this reconstruction. We have final accent in roots without a laryngeal (*mertì "die", *nestì "carry, bring", etc.), root accentuation in original structures *TUH-téi- > *TÚH-tei- (*bЎ̋ti "be", *pī̋ti "drink", etc.), *TEH-téi- > *TÉH-tei- (*znăt̋i "know", *dăt̋i "give", etc.), and suffix accentuation in verbs in *-aH-téi- > *-áH-tei- (*bьrăt̋i, *blějăt̋i "bleat", etc.).

An exception is constituted by a small group of root-accented infinitives with roots that did not contain a laryngeal: *grЎ̋zti "gnaw", *strě̋ći "twist", *mě̋lzti "milk", *prę̋sti "extend" (with length due to Winter's law), *sě̋ći "cut" (with old lengthened grade).[11] As per D y b o 1981, 254f., *grЎ̋zti, etc. almost certainly reflect an analogical root stress in stems with acute

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[8] Reconstructions of Slavic accentual paradigms are taken from D y b o 1981, 203ff.

[9] The inclusion of *dertì in the list is problematic. As argued by P r a u s t (2000), all diagnostic evidence indicates that *der- "tear" was an *aniṭ*-root. In Balto-Slavic, on the other hand, we find both circumflex and acute intonation.

[10] But see below § 9.2.2 on this verb.

[11] Dybo also includes here *pǎ̋sti "pasture", *klǎ̋sti "put", but *pǎ̋sti can be regularly derived from a Balto-Slavic infinitive *paHs-téi- > *páHs-tei- (cf. OLith. *pósėti*, *pósa* "worship", with unexpected root accentuation in a verb with second stem in *-ė*-). The prehistory of *klǎ̋sti is more problematic, but Lith. *klóti*, Latv. *klât* "cover" suggest a Balto-Slavic infinitive *klaH-téi- > *kláH-tei- (the Latvian *Brechton* is clearly secondary).

intonation of the root. Dybo further plausibly considers **sterćı* "guard" (: Lith. *sérgėti*, *sérgmi* "id.") a more archaic form that somewhat managed to escape this analogy. The secondary character of the root accent of Sl. **grỹzti*, **mḗlzti*, etc. is confirmed by the *Brechton* of Latv. *graûzt* "gnaw", *mîlzt* "swell", *spriêst* "stretch, press".

3.2. Infinitives of verbs with an immobile present (Accentual Paradigms *a* / *b*) show a partially different picture.

Root verbs with circumflex intonation (Accentual Paradigm *b*) show ending accentuation (**jętı* "take", **žętı* "press, squeeze", etc.) except where it should have been retracted according to Hirt's law: **tŏ̑rti* "rub", **žь̑rti* "sacrifice", **dŏ̑ti* "blow", probably also **žę̑ti* "harvest", **mę̑ti* "crush" (if from zero grade **mn̥H-téi-*, cf. Latv. *mĩt* "trample"). The only exception is the small group of **kȍlti* "pierce", **mȅlti* "grind", etc. (: Latv. *kaȋt*, *maȋt*), to be discussed below.

Verbs with acute intonation (Accentual Paradigm *a*), on the other hand, show columnar root accentuation except where the accent could have been advanced according to Dybo's law (e.g. **sovǎti* "shove", pres. **sǔjǫ*, **lećı* "lie down", pres. **lę̃gǫ*, with acute intonation no doubt analogical to that of **sę̃sti*, **sę̃dǫ* "sit down"). Root accentuation occurs not only in structures where Hirt's law should have applied (**mỹti* "wash", **znǎti* "know", etc.), but also in verbs whose acute intonation is not due to a laryngeal (**sę̃sti* "sit down", **pǎsti* "fall").

Suffixal formations regularly accent the root in Accentual Paradigm *a*, the suffix in Accentual Paradigm *b* (e.g. **vỹknǫti* "get used to" vs. **to(p)nǫ́ti* "sink, drown (intr.)", **plǎkati* "cry, weep" vs. **pьsǎti* "write", **stǎviti* "place, put" vs. **nosĩti* "carry, bear").

4. As far as I can see, these facts can be interpreted in three possible ways:

a) Slavic continues the Balto-Slavic distribution: immobile paradigms had root accentuation in the infinitive, mobile paradigms had ending accentuation. This is basically Dybo's position.

b) The Balto-Slavic infinitive was always accented on the ending except where Hirt's law applied. This is continued in the Slavic Accentual Paradigms *c* and *b*. In Accentual Paradigm *a* we have secondary root accentuation in the infinitive. This is basically Rasmussen's position.

c) The Balto-Slavic infinitive was always accented on the ending except where Hirt's law applied. Slavic generalized root accentuation in immobile paradigms. Ending or suffix accentuation is due to Dybo's law.

I provisionally favor assuming ending accentuation for Balto-Slavic (scenarios *b* or, perhaps more likely, *c*). The Latvian facts are fully consistent with such a reconstruction, whereas the analogy we have to assume for Slavic seems perfectly reasonable. Notice, in addition, that the infinitives of Slavic verbs belonging to Accentual Paradigm *c* cannot be characterized as *enclinomena*, but had a real final accent (as Olander [2009, 178] observes, unaccented **der(H)ti* would yield Štokavian †*drȉjeti*, not the actually attested *drijèti*). It must be recognized, in any case, that the issue clearly deserves a thorough study.

5. As we have seen, most exceptions to the original accentuation of the infinitive in Latvian and Slavic can be subsumed under two major principles: a tendency to extend mobility in Latvian, and a tendency to acquire root accentuation for verbs with acute intonation in Slavic. The original place of stress is frequently preserved in one of both branches (Sl. **bȳ́ti* vs. Latv. *bût*, Latv. *spriêst* vs. Sl. **prę̋sti*, etc.). We are left with a limited number of exceptions that do not easily enter into these explanatory schemas, all of them with full grade and unexpected root accentuation. Rasmussen (1985[1999], 184ff.) establishes the following groups:

a) *o*-grade verbs with original root accentuation in both Baltic and Slavic: Latv. *kal̃t* "forge" / Sl. **kőlti* "pierce", Latv. *bãrt* "scold" / Sl. **bőrti* "pierce", Latv. *mal̃t* "grind" / Sl. **mĕ́lti* "grind" (*e*-grade!), Latv. *kãrt* "hang up", Sl. **pőrti* "unstitch", **pőlti* "stir, fan, scoop", **pőlti* "blaze". All Slavic verbs have a *je*-present belonging to Accentual Paradigm *b* (**koljǫ̇*, **koljètь*; **borjǫ̇*, **borjètь*, etc.). In Baltic we have simple thematic presents in Lithuanian (*kãla*, *bãra*, etc.), but *ia*-presents in Latvian (*kaļu*, *baṟu*).

b) Slavic verbs with infinitive in **°ȗti* (< **°eHu-téi-*): **kȗti* "forge", **rjȗti* "roar", **snȗti* "warp", **trȗti* "feed", **žȗti* "chew". They are paired with a simple thematic present belonging to Accentual Paradigm *c* (**kòvǫ*, **kovètь*; **tròvǫ*, **trovètь*, etc.).

c) Some Latvian verbs with *e*-grade and *Dehnton*: *bẽrt* "scatter", *sẽrt* "arrange corn for drying", *vem̃t* "vomit", *vẽrt* "pierce, string; open,

close", *vẽrtiês* (dial.) "look". They are all pared with *ia*-presents (*beṛu*, *seṛu*, etc.).

6. We will return to the types Sl. **kŭ́ti* and Latv. *sẽrt* below (§§ 8, 10). The type Latv. *kaĨt* / Sl. **kőlti*, the only one attested in both branches, cannot be separated from the broader issue of *o*-grade primary verbs like OCS *bosti* "stab", *kopati* "dig", Lith. *kàsti* "dig", *kar̃šti* "card", *plàkti* "beat", Go. *graban* "dig", *gaggan* "go", *stautan* "push", etc., usually expressing some type of violent or iterated activity. Cognates in other languages present -*o*-, -*e*- or zero grade of the root (e.g. OCS *bosti* ~ Lith. *bèsti* "stick"; Lith. *kar̃šti* ~ OHG *scerran* "scratch"; Go. *graban* ~ Latv. *grebt* "scrape, excavate", etc.). As is well-known, there are two main approaches to the origin of this type:

    a) *o*-grade verbs like OCS *bosti* go back to a reduplicated formation with strong *o*-grade of the root, be it an intensive (*$*g^{wh}\acute{e}n$-$g^{wh}on$-ti / *$*g^{wh}\acute{e}n$-$g^{wh}n$-$n̥ti$*, Ved. *jaṅghanti* "strikes violently") or a reduplicated present (*$*d^h\acute{e}$-d^hoh_1-ti / *$*d^h\acute{e}$-d^hh_1-$n̥ti$* > Ved. *dádhāti* "put", WGmc. **dōn* "make, do"). *e*-grade variants like Lith. *bèsti* would continue the primary verb from which they were originally derived. First proposed by S t a n g (1942, 39ff.), this was the standard approach until very recently (it is the one applied in the LIV).[12]

    b) According to J a s a n o f f (2003, 70ff. and *passim*) verbs like Hitt. *mall(a)-*$^{ḫ ḫi}$, Lith. *málti*, OIr. *melid*, Lat. *molō* go back to a class of root athematic presents ("*molō*-presents") characterized by acrostatic -*ó*-/-*é*- ablaut and perfect-like endings (*$*m\acute{o}lh_2$-$e(i)$* / *$*m\acute{e}lh_2$-$r̥s$* "grind"). *molō*-presents were part of the lexical composition of the Indo-European "h_2e-conjugation", a conjugational type directly preserved in the Anatolian *ḫḫi*-conjugation. In other languages h_2e-conjugation formations are continued as simple thematic presents or *i̯e/o*-presents.

This is not the place to argue at length my acceptance of Jasanoff's h_2e-conjugation theory. It remains notoriously controversial, but it is my impression that at least the existence of a class of "*molō*-presents" is becoming widely accepted.

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[12] See J a s a n o f f 2003, 66ff., K ü m m e l 2004, 143ff. for discussion and more references to the secondary literature.

7. Rasmussen (1985[1999], 189ff.; 1989, 226ff.) links the root accentuation of **kólH-tei-* > Latv. *kaȊt* / Sl. **kőlti* (for expected **kolH-téi-* > Latv. †*kaȊt*, Sl. †*kolti*) to the apparent *aniṭ*-character of Indo-Iranian intensives to *seṭ*-roots like Ved. *carkarmi*, GAv. *carəkərəmahī* "praise" (*seṭ*-root, cf. *s*-aor. *akāriṣam*, abstract *kīrtí-* f. "mention, fame"), Ved. *marmartu* RV 2.23.6 "let him crush" (if from **melh₂-* "grind").[13] According to Rasmussen (*loc. cit.*), laryngeals were not vocalized in reduplicated formations. In a reduplicated intensive (which he reconstructs as 3 sg. $*ml̥-mólh_2-ti$, 3 pl. $*mél-ml̥h_2-n̥ti$, subj. $*mél-ml̥h_2-e-ti$) the outcome would not differ from ordinary laryngeal loss in branches like Indo-Iranian or Greek, but in Balto-Slavic we would still find a contrast between three possible treatments:

a) consonantal laryngeals, which triggered Hirt's law (Latv. *šķiȊt* < **skl̥H--tei-* < **skl̥H-téi-*, *maȊt* < **mólH-tei-* < **molH-téi-* ← $*ml̥-mólh_2-ti$),

b) vocalized laryngeals, which did not trigger Hirt's law (Latv. *šķeȊt* < **skelə-téi-*),

c) real laryngeal loss, which yielded circumflex intonation (Ru. *kólos*, SCr. *klâs* < Sl. **kôlsъ* "ear, spike" < **kól-so-* < **kólh₂-so-* by Saussure's effect).[14]

Accordingly, *kaȊt* / **kőlti*, *bãrt* / **bőrti*, Sl. **kűti*, **trűti* (< Bl.-Sl. **kál-tei*, **bár-tei*, **káu-tei*, **tráu-tei*) are to be derived from reduplicated intensives **kl̥-kólh-ti*, **bʰr̥-bʰórh-ti*, **ku-kóu̯h-ti*, **tru-tróu̯h-ti*, as their root accentuation would otherwise be left without a proper explanation.

The implications of this proposal go well beyond explaining a minor problem of Balto-Slavic accentology. Before presenting a new account of *kaȊt* / **kőlti*, I will briefly comment on its Indo-European background.

7.1. *o*-grade primary verbs ("*molō*-presents"). Rasmussen's account of Latv. *kaȊt*, Sl. **kőlti*, **kűti* would provide an almost conclusive argument for original reduplication in verbs like OCS *bosti* "stab", Lith. *kàsti* "dig" or Go. *graban* "dig" as well, where such an origin is (predictably) not confirmed by independent evidence. Pairs like Latv. *grebt* ~ Go. *graban*

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[13] The etymology of the *hapax marmartu* is disputed, cf. S c h a e f e r 1994, 166f.; P r a u s t 2000, 432[24]; K ü m m e l 2004, 144.

[14] Sl. **kôlsъ* belongs to the Accentual Paradigm *c* and is thus ambiguous as far as the original intonation is concerned. According to R a s m u s s e n 1989, 203, the collective Ru. *kolós'ja* points to a derivational base belonging to Accentual Paradigm *b*.

would thus point to a primary present *$g^h r\acute{e}b^h(-e)-ti$ beside an intensive *$g^h r\acute{e}b^h$-$g^h rob^h$-ti / *$g^h r\acute{e}b^h$-$g^h r\llcorner b^h$-nti (*vel sim.*) or a reduplicated present *$g^h r\acute{e}$-$g^h rob^h$-ti / *$g^h r\acute{e}$-$g^h r\llcorner b^h$-nti (so e.g. LIV, 201).

A general loss of reduplication would not be particularly problematic in Balto-Slavic and Germanic, but *o*-grade primary verbs are also found in languages that do not otherwise show any tendency towards dereduplication, e.g. Latin (e.g. *fodiō, -ere* "dig", *cūnctor, -ārī* "hesitate", *lūdō, -ere* "play") or Greek (e.g. κρούω "strike", κόπτω "chop", οἴχομαι "go, depart", μύλλω "βινέω", σκύλλω "flay, rend"[15]). Nor can this account explain the fact that cognates of these verbs regularly belong to the *ḫḫi*-conjugation in Hittite (a language that does not show any tendency towards dereduplication either).

The issue cannot be pursued further here, except to observe that deriving *o*-grade primary verbs from reduplicated formations creates extraordinary problems outside of the northern Indo-European languages.

7.2. Non-vocalization of the laryngeals. It is generally accepted that the lack of laryngeal vocalization in Ved. *carkarmi, marmartu* can be explained in two possible ways: 1. loss of laryngeal by Saussure's effect, 2. loss of laryngeal in reduplicated formations (cf. S c h a e f e r 1994, 107f.; P r a u s t 2000, 432). Rasmussen's dismissal of the first possibility and his insistence on the fact that *carkarmi, marmartu* reflect a consonantal laryngeal rather than real laryngeal loss is conditioned by his views on Saussure's effect.

According to R a s m u s s e n (1989, 144–222), Saussure's effect was conditioned exclusively by a pre-Indo-European consonantal phoneme */Q/ (> Indo-European *o or zero), e.g. *$h_3 lQ\underset{\sim}{i}g$-$\acute{e}$' > *$lQ\underset{\sim}{i}g$-$\acute{e}$' > *$lo\underset{\sim}{i}g$-$\acute{o}$- > Gk. λοιγός "ruin, death" (vs. *$h_3 lig$-o- > ὀλίγος "small, few"). Conversely, no laryngeal loss would have taken place among Indo-European *o of different origin: 1) "lexical" *-o- (e.g. *$l\acute{o}\underset{\sim}{u}\partial_1$-$tro$- "bathing-place" > Gk. λοετρόν, MBret. *louazr*),[16] 2) suffixal *-o- (e.g. *$t\acute{e}l\partial_2$-$m\bar{o}n$ > Gk. τελαμών "strap"), 3) thematic vowel *-o-/*-e- (e.g. middle participle *-o-$m\partial_1$-no- > Gk. -ο-μενος, with vocalized laryngeal vs. optative *-o-$\underset{\sim}{i}h_1$-t > Gk. -οι, Ved.

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[15] See V i n e 1999, 565f. on the phonology of Gk. μύλλω, σκύλλω < *$mol[h_2]$-$\underset{\sim}{i}e/o$-, *$skol[H]$-$\underset{\sim}{i}e/o$-.

[16] The reconstruction of this root as *$louh_1$- (rather than *$leuh_3$-, e.g. LIV, 418) is seriously compromised by Myc. *re-wo-to-ro-* /*lewotro*-/, with still unmetathesized -*eRo*-.

-*et*, Latv. 2 pl. -*iẽt*, Sl. *-*ěte*, with consonantal laryngeal), 4) acrostatic *-*ó*- (e.g. root noun *$h_3nóg^{wh}$- "nail" > Gk. ὄνυξ), 5) *o in ablaut with zero in the perfect, the intensive, and the reduplicated aorist.

The probative force of most of this material, however, is very low. Laryngeal restitution would be most trivial in cases like Nom. sg. *$télh_2$-*mōn* (after weak stem *$tl̥h_2$-*mén*-), them. mid. ptcp. *-*o*-mh_1-*no*- (after athematic *-mh_1-*no*-), or strong stem *$h_3nóg^{wh}$- (after weak stem *$h_3nég^{wh}$- or *$h_3n̥g^{wh}$-). There is actually some evidence for laryngeal loss in acrostatic paradigms, e.g. Gk. οὖθαρ "udder" < *$h_1ou[H]d^h$- vs. Ved. *údhar* < *h_1uHd^h- (cf. Nussbaum 1997a, 183f.[24], with more examples). The best case for a consonantal realization of the laryngeals is probably the thematic optative, where the lack of vocalization in Greek (*-*o*-ih_1-*t* > *-*o*-*ie*-*t* > †-οε) and the Balto-Slavic acute intonation (but circumflex in Lith. *te-dirbiẽ*!) could indeed be explained by positing *-*o*-ih_1-*t* (not *-*o*-$iə_1$-*t*). Other explanations, however, cannot at present be excluded (e.g. reconstructing a disyllabic *-*o.ih_1*-, as per Jasanoff 2009, 52ff.).

As far as reduplicated formations are concerned, Rasmussen's *$ml̥$-*mólh_2*-*ti* (not *$ml̥$-*mól*-*ti*) is only supported by the accentuation of the Balto-Slavic type *kaĩt* / *kőlti and can thus not avoid the risk of circular argumentation. Some of Rasmussen's reconstructions are in any case questionable (for instance, an Indo-European reduplicated aorist with *o/zero ablaut and causative value),[17] and the non-vocalization of laryngeals in the intensive would be curiously in contradiction with their treatment in a reduplicated present like *$ĝí$-$ĝn̥h_1$-*e/o*- > *$ĝí$-$ĝn$-*e/o*-, where Gk. γίγνεται, Lat. *gignit* apparently demand a real laryngeal loss.

All in all, I believe there is reason to view Rasmussen's account of the

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[17] See Harðarson 1997, 97ff.; Kim 2003, 216ff., both with references, for arguments against the reconstruction of an Indo-European causative athematic reduplicated aorist beside the well established reduplicated thematic type *ue-uk^w-*e/o*- "said" (Ved. *ávocat*, Gk. εἶπε). Ved. *ájīgar* "awoke", in any case, does not assure an ancient *o grade of the root. Root anlauting velars are never palatalized in Vedic reduplicated formations, the model being obviously provided by the perfect. Note, incidentally, that *ajīgar* RV 1.163.7 belongs to *gar*- "awake", not to *gar^i*- "swallow" (cf. Bendahman 1993, 160). There is thus no evidence for laryngeal loss or lack of laryngeal vocalization in the Vedic reduplicated aorist.

type *kaĩt* / *kõlti with skepticism. We can now return to the Baltic and Slavic material presented in § 5.

8. Type Sl. **kū̆ti*. In my view, there is no such thing as a problematic Slavic type **kū̆ti*. In reconstructing a series of Slavic infinitives **kū̆ti*, **rjū̆ti*, **snū̆ti*, **trū̆ti*, **žū̆ti* (pres. *kòvǫ, *kovetь, etc.), Rasmussen is following Dybo's reconstruction of Proto-Slavic doublets **trū̆ti*, *tròvǫ ~ *trovȁti, *trûjǫ; **kū̆ti*, *kòvǫ ~ *kovȁti, *kûjǫ, etc. instead of traditional **trū̆ti*, *tròvǫ and *kovȁti, *kòvǫ (D y b o 1981, 205ff.).

Dybo's reconstruction has been strongly criticized by R e i n h a r t (1992, 296ff.; 2003, 151ff.), who observes that Dybo's new grouping of the present and infinitive stems is not really borne out by the facts (e.g. MCroat. *rváti*, *rvèm*), and, more importantly, that some of the variants in *-uti* are clearly chronologically posterior to the infinitives in *-ovati*, *-ъvati* / *-ьvati*: *kuti* 16th c. (Pol.) vs. *kovati* 11th c., *snuti* 19th c. vs. *snovati* 11th c., *žuti* 1414 (OCz.) vs. *žьvati* 12th c. **kū̆ti*, **snū̆ti*, **žū̆ti* are thus to be deleted from Rasmussen's list. We are left with **r(j)ū̆ti*, *ròvǫ and **trū̆ti*, *tròvǫ, which conform a small group beside *sluti, *slòvǫ "be called, be famous" and *pluti, *plòvǫ "swim, sail" to the *aniṭ*-roots **ḱleu-*, **pleu-* (cf. V a i l l a n t 1966, 196ff.).

8.1. Sl. **r(j)ū̆ti* "roar" (Ru. *revét'*, *revú*, OCz. *řúti*, *řevu*, Slvn. *rjúti*, *rjóvem*) is traditionally connected with Ved. *rav^i-* "roar" (pres. *ruváti*, aor. *árāvīt*, intens. *róravīti*, *róruvant-*), Gk. ὠρῡ́ομαι "howl, roar", Lat. *rūmor* "rumour", for which LIV, 306 sets up a root **h₃reuH-*. In Slavic we have a double paradigm *rjuti*, *reve-* and *ruti*, *rovo-*, traditionally derived through levelling from an original paradigm *rjuti, *rovǫ, **reve-* < *reuti, *revǫ, *revetь. The infinitive **r(j)ū̆ti* thus stems from **h₃reuH-téi-*. *Pace* R a s m u s s e n (1989, 230) I see no necessity to derive *rev-*, *rj-* from an athematic present and *rov-*, *r-* (as well as the acute of the infinitive) from an intensive. It would be certainly preferable to account for both variants within Slavic itself.

8.2. Sl. **trū̆ti* (OCS *na-truti*, *-trovǫ* "feed", ORu. *truti*, *trovu* "consume") is usually related to CS *tryti*, *tryje-*, Bulg. *trija*, Maced. *trie* "rub" and, outside of Slavic, with Gk. τρῡ́ω "wear out". But *tryti* has long been suspected to be a specifically Bulgaro-Macedonian renewal of *trъti*, *tьrǫ* "rub" (cf. V a i l l a n t 1966, 300; K o c h 1990, 695). In Greek the only ancient-looking form of a

possible root *treuH- is the perfect τέτρῡμαι "be worn out" Simon.+. The rare and late present τρῡ́ω (S. *Tr.* 124) is almost certainly an inner-Greek coinage (see N u s s b a u m 1997b for a detailed treatment of this difficult family). A connection between *trŭti and Gk. τέτρῡμαι, although perhaps conceivable, is far from compelling. I thus prefer to follow R e i n h a r t (1992, 311[86]; 2003, 155[38]) in connecting *trŭti with GAv. aor. θraoštā, YAv. perf. *tuθruiiē* "feed", OHG *trouuen* "grow" (root *treh$_1$u- "feed, bring up", LIV, 647). We can thus start from an infinitive *treh$_1$u-téi- > *tr'uti → *truti (with analogical depalatalization of the infinitive after the present, as in *pluti*, *sluti*, *ruti*).

8.3. The question that now arises is whether Hirt's law would have taken place in *h$_3$reuH-téi-, *treh$_1$u-téi-.

For *treh$_1$u-téi- this is certainly the case, as it is by now fairly certain that the sequence *-EHi/u- triggered Hirt's law (thus implying a syllabification *-EHi̯/u̯-), cf. Lith. *díeveris* 1, Sl. *děverь* a "brother-in-law" < *deh$_2$i-u̯ér- (: Gk. δᾱήρ, Ved. *devár*-), Lith. *piemuõ*, acc. sg. *píemenį* 1/3 "shepherd" < *poh$_2$i-mén- (: Gk. ποιμήν), Lith. *káulas* 1/3, Latv. *kaũls* "bone" < *keh$_2$u-ló- (: Gk. καυλός "stem, pole"), perhaps Lith. *síetas* 1/3 (but Latv. *siêts*!), Sl. *sı̋to* a (SCr. *sȉto*, Ru. *síto*) "sieve", if from *seh$_1$i-tó-.

As for *h$_3$reuH-téi-, it is predictably difficult to find absolutely clear-cut evidence bearing on the behavior of *-Ei/uHT-, but Lith. *jáunas* 3, Latv. *jaûns*, Sl. *jūnъ* c "young" < *h$_2$i̯eu-Hn-ó- (: Ved. *yúvan*-, Lat. *iuuenis* < *h$_2$iu-Hon-) seem to indicate that the sequence *-Ei/uHT- did not trigger Hirt's law (i.e., it was treated exactly like *-ERHT-).

Thus, while *treh$_1$u-téi- yielded Sl. *trŭti directly, we expect *h$_3$reuH-téi- to have yielded *r(j)uti. The only suggestion I can offer for *r(j)ŭti is that it is analogical to *trŭti, *slutı̇, *plutı̇ (same present stem formation) and has replaced an older zero-grade *rу̃ti < *HrúH-tei- < *h$_3$ruH-téi-.

9. Type Latv. *kaˆlt*, Sl. *kőlti*. The problems that Rasmussen's account has to face in an Indo-European perspective have already been examined (§ 7). Within Balto-Slavic it is seriously compromised by the presence of the same phenomenon among *e*-grade verbs like Latv. *sẽrt*, *veˆt*, *vẽrt*, Sl. *mélti*, *pélti*. Sl. *mélti* could perhaps be explained by assuming that the primary verb *mēlteı̇ adopted the accentuation of its derivative *máltei

(R a s m u s s e n 1989, 228) or in some other way,[18] but Latv. *sẽrt*, *veȓt* would still be left without an adequate explanation.[19]

Although the conjunct evidence of Baltic and Slavic may seem to make the reconstruction of Balto-Slavic infinitives like **kólH-tei-*, **bórH-tei-* self-evident, apparently unobjectionable equations like these may easily be deceptive and reflect parallel but independent innovations. In what follows I will argue that verbs of this class displayed inner-paradigmatic ablaut in Balto-Slavic: *o* or *e*-grade in the present, zero grade in the infinitive and aorist. The root accentuation of Latv. *kaȋt*, Sl. *kőlti would then pose no serious problem. The accent was regularly retracted in the original infinitive **kḷH-téi-* > **kḷ́H-tei-*, and it simply remained there when the infinitive was remade as **kólH-tei-*.

9.1. Within Balto-Slavic this reconstruction is supported by the presence of different verbs from the same root, one with *o*-grade, the other with zero grade:

9.1.1. Beside Lith. *kálti*, *kãla*, Latv. *kaȋt*, *kaḷu* "forge" (Sl. *kőlti, **koljǫ̇* "stab, sting": OCS *klati*, *koljǫ*, Ru. *kolót'*, *koljú*, Cz. *kláti*, SCr. *kläti*, *köljēm*, Slvn. *kláti*, *kǫ́ljem*) we have a zero grade verb Lith. *kùlti*, *kùlia*, Latv. *kuȋt*, *kuḷu*, "thresh, beat". It is important to observe that (Lith.) *kálti* and *kùlti* do not enter into any type of productive derivational process. Accordingly, it is reasonable to derive both verbs from an original (Baltic?) paradigm *kulti, *kala, *kulā, with secondary specialization of meaning.

Baltic and Slavic very clearly point to a *molō*-present **kólH-* / **kḷH-´* (← **kólH-* / **kélH-*). Potential *comparanda* outside of Balto-Slavic are problematic: Lat. *per-cellō*, *-culī*, *-culsum* "beat" (of unclear morphology), Gk. κλάω, aor. ἔκλασ(σ)α, athem. ptcp. ἀπο-κλᾱ́ς (Anacr.) "break off" (formally difficult and not very close semantically: Balto-Slavic and Latin point to "beat", not to "break"; discussion in S c h r i j v e r 1991, 173ff.).

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[18] R a s m u s s e n (2004, 274), for instance, suggests that Latv. *maȋt*, Sl. *mẽlti represent different dereduplications of the intensive *mḷ-mólh₂-ti, 3 pl. *mél-mḷh₂-ṇti, a possibility a find inherently less attractive.

[19] R a s m u s s e n (1985[1999], 194f., following Birgit Olsen, p. c.) suggests that frequent use with preverbs gave rise to a consonantal laryngeal in verbs like Latv. *bẽrt*, *sẽrt*, *veȓt* or *vẽrt*. There is hardly any necessity to insist on the *ad hoc* nature of this explanation.

9.1.2. Lith. *bárti*, *bãra*, Latv. *bãrt*, *baṛu* "scold", reflex. Lith. *bártis*, Latv. *bãrtiês* "quarrel" (Sl. *bőrti*, *borjǫ̇ (sę)* "fight": OCS *brati*, *borjǫ (sę)*, Ru. *borót'*, *borjú*, Pol. dial. *bróć się*) can be similarly related to Lith. *bùrti*, *bùria*, Latv. *buȓt*, *buṛu* "conjure" (if from a meaning "notch" *vel sim.*).

The *molō*-present of *bʰerH-* is well-known, cf. ON *berja* "smite, beat", reflex. *berjask* "fight" (< *barjan*), Lat. *feriō*, *-īre* "strike".

The well-attested Old Lithuanian athematic present *barmi* poses a problem, as *molō*-presents are otherwise continued as thematic presents or *i̯e/o*-presents. I suggest that OLith. *barmi* continues, in the last instance, the middle of a (pre-)Balto-Slavic *molō*-present.[20] Notice that cognates of this verb show a remarkable tendency to be used with the reflexive in Slavic (*bőrti (sę)* "fight") and Germanic (ON *berjask* "fight" beside *berja* "smite, beat"), as well as in Baltic itself (Lith. *bártis*, Latv. *bãrtiês* "quarrel").

9.1.3. The clearest case is that of Lith. *málti*, *mãla*, Latv. *maȋt*, *maḷu*, Sl. *mẽlti*, *meljǫ̇* "grind" (OCS *mlěti*, *meljǫ*, Ru. *molót'*, *meljú*, Cz. *mlíti*, SCr. *mljèti*, *mèljēm*, Slvn. *mléti*, *méljem*).

A zero grade past pass. ptcp. *mḷh₂-to-* is directly attested in Lith. *mìltai* 1, Latv. *miȋti* "flour". Whether Lith. *su-muldyti* "smash, crush" (Bretkūnas) has any bearing on the original ablaut of the verb "to grind" is less clear to me.

In Slavic V a i l l a n t (1966, 297, 305) mentions as evidence for the presence of zero grade *mъl-* in the original paradigm of Sl. *mẽlti* the imperfective *-milati* (SCr. dial. *mílati*, OCz. *mílati*), implying a derivational base *mъl-*, the past act. ptcp. ORu. *iz-mъlъ* (beside *sъ-molovъ-*), and Pol. *meł-szy*, pret. *mełł*, pass. ptcp. *mełty*.

Vaillant even goes on to suggest (very reasonably, in my opinion) that the *e*-vocalism of Slavic (in contrast with the *o*-grade of Baltic and Germanic) is secondary, remade on the weak grade *mъl-* after the model of the type *stъlati*, *stelje-*.

9.1.4. To my knowledge, no evidence for an original zero grade can be quoted for the following verbs of the type *kaȋt* / *kőlti*:[21]

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[20] See J a s a n o f f 2003, 232[7]; V i l l a n u e v a S v e n s s o n 2008, 189 for more possible cases of a Balto-Slavic verb going back to a pre-Balto-Slavic middle.

[21] I leave out of consideration *pőlti* "blaze" (Slvn. dial. *plati*, Cz. *pláti* 15th c.+), which looks secondary with regards to OCS *-planǫti*, Cz. *planouti*, SCr. *plànuti*, etc. (the regular inchoative to the stative OCS *polěti* "flame"), cf. V a i l l a n t 1966, 234.

Lith. *kárti*, *kãra*, Latv. *kãrt*, *kaṟu* "hang (tr.)". Etymologically isolated.

Sl. *pŏrti, **porjǫ̇* "unstitch" (Ru. *porót'*, *porjú*, OPol. *próć*, *porzę*, Slvn. *práti*, *pórjem*). A connection with Ved. *píparti* "carry across", Gk. πείρω "penetrate, pierce", Go. *faran* "travel" (**per-*, LIV, 472) is seriously compromised by the *seṭ*-character of Sl. *pŏrti.

Sl. *pŏlti, **poljǫ̇* "flap, wave" (Ru. dial. *polót'*, Cz. *pláti*, Slvn. *pláti*, *pójlem*). Perhaps related to Gk. πάλλω "shake, brandish" (aor. ἀμ-πεπαλών), which can be derived either from a nasal present or from a *i̯e/o*-present.

Sl. *pĕlti, *pêlvǫ "weed" (OCS *plěti*, *plevǫ*, Ru. *polót'*, *poljú*, SCr. *pljèti*, *plijèvēm*, Slvn. *pléti*, *plẹ́vem*). Morphologically and etymologically obscure.

9.2. Traces of original ablaut, on the other hand, are also found among inherited *molō*-presents that have generalized *e*-vocalism in Balto-Slavic:

9.2.1. Lith. *skélti*, *skẽlia*, Latv. *šķeĨt*, *šķeḷu* "cleave, split" beside Lith. *skìlti*, *skìlia*, Latv. *šķiĨt*, *šķiḷu* "strike fire".

Clear *molō*-present, cf. Hitt. *iskalla-ḫḫi* "tear off", Arm. aor. *ecʿel* "rend, split" (< impf. **(e)skelHet*, pres. *cʿelowm*), ON *skilja* "divide, separate", Gk. σκύλλω "tear, rend apart" (< **skol[H]-i̯e/o-*), σκάλλω "stir up, hoe" (< **skl̥[H]-i̯e/o-*).

The intonation of Latv. *šķeĨt* curiously contrasts with that of *kaĨt*, *bãrt*. It is probably analogical to that of the majority of *e*-grade verbs (*ceĨt*, *dzeĨt*, *dzeît*, etc.).

9.2.2. Lith. *spìrti*, *spìria* "kick" beside Latv. *speît*, *speṟu* "id.", Sl. *pьrắti, *pĕrǫ "trample" (OCS *-pьrati*, *-perǫ*, Ru. *po-prát'*, *-prú*). The intonation of Latv. *speît* can be explained in the same way as that of *šķeĨt*.

Clear *molō*-present, cf. Hitt. *išparr(a)-ḫḫi* "trample",[22] Ved. *sphuráti*, Av. *sparaiti* "kick", perhaps Gk. (ἀ)σπαίρω "flounder" (nasal present in Lat. *spernō*, *-ere* "push away, despise", Gmc. *spurnan, *spernan "tread, spurn, kick").[23]

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[22] See K l o e k h o r s t 2008, 406ff. for the separation of two Hittite verbs *išparr(a)-ḫḫi* "trample" and *išpằr-ḫḫi* "spread out, strew" (: Gk. σπείρω "spread").

[23] **sperH-* "kick" is traditionally considered to be an aoristic root whose root aorist is continued in Ved. *mā́ ápa spharīs* "do not kick away" RV 6.61.14, Lat. *sprēuī* and OCS *-prětъ sę* (pres. *-pьrǫ sę*, inf. *-prěti sę*). But Lat. *sprēuī* can only be derived from a canonical active root aorist *spérH-t at the cost of very heavy analogical re-

The apparently clear profile of this root is complicated by Sl. *perti,
*pь̀rǫ "lean, push, press", reflex. "lean on" (OCS -prěti, -pьrǫ (sę), Ru.
perét', prú, SCr. zà-prijeti, zä-prēm, Pol. przeć, prę, etc.), which is tradi-
tionally derived from the same root *sperH- "kick". Because of the paral-
lelism with *žerti, *žь̀rǫ ~ *žьrǎ́ti, *žè̃rǫ "swallow, devour" and *derti,
*dь̀rǫ ~ *dьrǎ́ti, *dè̃rǫ "tear" (to the clear aoristic roots *gʷerh₃-, *der-)
and the apparently attractive equation Ved. sphuráti = Sl. *pьre- = Lith.
spìria it is usually believed that Sl. *perti, *pь̀rǫ continues the original para-
digm(Bl.-Sl. pres. *(s)pirH-é-ti, inf. *(s)perH-téi-, aor. *(s)pérH-t).[24] Hitt.
išparr(a)-ʰʰi suffices to cast serious doubts on such an approach (note, in
addition, that the Indo-European pedigree of tudáti-presents is very doubt-
ful). In Baltic Lith. spìrti, Latv. spert̂ present meanings like "lean, press,
support, prop (up)", reflex. "lean on" beside the central meaning "kick
(trample, push)". The possibility can thus not be excluded that Sl. *pьrǎ́ti,
*pè̃rǫ and *perti, *pь̀rǫ continue two different roots (*(s)perH- "kick"
and an otherwise unknown root *(s)perH- "lean") that were kept distinct
in Slavic but merged in a single verb in Baltic (a possible parallel will
be discussed below §10.4). If, on the other hand, the traditional derivation
from a single root is accepted, I see no reason why pьrǎ́ti, *pè̃rǫ could
not continue the original paradigm (it is admittedly unclear how *perti,
*pь̀rǫ should then be explained, but the same holds true if one derives
pьrǎ́ti, *pè̃rǫ from *perti, *pь̀rǫ).

9.2.3. Lith. srẽbti, srēbia, Latv. strèbt, strebju "slurp, gulp" beside Lith.
s(i)ur̃bti, s(i)ur̃bia, Latv. surbt, surbju "suck, soak"; Sl. *sьrbǎ́ti, *serbljǫ̇
"gulp, swallow" (*serb-: ORu. serebati, sereblju, Slvn. srébati, Pol. dial.
strzebać, etc.; *sьrb-: Ru. dial. serbát', Bulg. sắrbam, OSlvn. sŕbati, Pol.
siorbać, etc.).

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modeling. As recognized in LIV, 585, sprēuī could simple be analogical to cernō,
crēuī "decide". As for OCS -prětъ sę, it is one of the major achievements of modern
Slavic accentology to have demonstrated that the formation of the Slavic root aorist is
by and large determined by the accentological properties of the verb, cf. D y b o 1981,
213, 217f. Since -prětъ is synchronically predicted, it need not be projected back into
Indo-European (see below in the text on Sl. *perti, *pь̀rǫ). Whether the isolated Ved.
spharīs (beside better attested pres. sphuráti) suffices to establish an active root aorist
for the parent language is at least open to reasonable doubt. I wonder whether it could
not be an *Augenblicksbildung*.

[24] See K o c h 1990, 445, 703f., followed by LIV, 585f., for a clear presentation
of this view.

Clear *molō*-present, cf. Hitt. *šarap-* / *šarip-ʰʰⁱ* "sip", Arm. aor. *arbi* "drank" (< impf. *$*sr̥b^het$*), Gk. ῥοφέω, Ion. ῥυφέω "sup up, gulp down", Lat. *sorbeō, -ēre* "suck up", Alb. *gjerb* "sip, lap".[25]

9.2.4. Lith. *kriaũšti, kriaũšia* "prick" beside Lith. *krùšti, krùša* "smash, crush" (Sl. iterat. OCS *sъ-krušiti, -krušǫ*, Ru. *krušít'*, SCr. *krúšiti* "break").

Gk. κρούω "strike" (< *$*krousō$*) points to an original *molō*-present.

9.3. The reconstruction of ablauting paradigms $*kolH$- / *$*kl̥H$-, *$*b^horH$- / *$*b^hr̥H$-, *$*skelH$- / *$*skl̥H$-, *$*kreus$- / *$*krus$- for Balto-Slavic raises a number of questions. Before addressing their position in the Balto-Slavic verbal system, it will be convenient to briefly comment on the paradigmatic profile of the Indo-European *molō*-presents.

Indo-European *molō*-presents displayed acrostatic ablaut *$*ó$ / *$*é$ and "h_2e-conjugation" endings 1 sg. *$*-h_2e(i)$, 2 sg. *$*-th_2e(i)$, 3 sg. *$*-e(i)$, 3 pl. *$*-(é)rs$. The details of this reconstruction need not concern us here. Whether the root ablaut *$*ó$ / *$*é$ had in some cases already been replaced by *$*ó$ / zero in the parent language is a question I will leave open. The tendency could in principle be entirely dialectal. With comparatively minor changes, *molō*-presents are preserved intact in Anatolian. The general evolution in the other languages is clear: *molō*-presents are regularly reflected as simple thematic presents or *i̯e/o*-presents, with concomitant generalization of one root vocalism (*$*o$, *$*e$ or zero). In what concerns the position of *molō*-presents in the Indo-European verbal system, two facts are particularly relevant in our present connection:

i)   *molō*-presents are not found beside "normal", "*mi*-conjugation" root athematic presents.[26]

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[25] I prefer deriving Hitt. *šarap-* / *šarip-ʰʰⁱ*, Lith. *srė̃bti*, etc. from a *molō*-present rather than from a "*molō*-aorist" and a Narten present (as proposed by Jasanoff 2003, 81), cf. Villanueva Svensson 2007–08, 228f. with fn. 40.

[26] Hitt. *ḫuiš-ᵐⁱ* "live" beside OIr. *foaid* "overnight", Arm. *goy* "exists" (< *$*h_2uos$-), Go. *wisan* "be", Ved. *vásati* "abide" (< *$*h_2ues$-) is the only serious counterexample I have been able to find (but see Tischler HEG 1, 265f. for doubts on the traditional etymology of Hitt. *ḫuiš-ᵐⁱ*). *Pace* LIV, 357, Lith. *kàsti, kãsa* "dig", OCS *kosnǫti* (*sę*) "touch" are almost certainly unrelated to Hitt. *kis(s)-ᵐⁱ* "comb", OCS *česati, češǫ* "id.". The antiquity of the meaning "comb" is guaranteed by nominal derivatives like Lith. *kasà* "plait", ON *haddr* "hair" or MIr. *cír* "comb". It is arbitrary to modify the meaning of Indo-European *$*kes$- "comb" into a vague "arrange, order" in order to accommodate material like Lith. *kàsti*, OCS *kosnǫti*, Go. *hazjan* "praise" or Gk. κόσμος "order".

ii) *molō*-presents are made from presential roots, not from aoristic roots.[27] There is practically no evidence for an old aorist or perfect in the *averbo* of *molō*-presents, a recurrent pattern for Indo-European root athematic presents.

It is clear that *molō*-presents must be regarded as primary. A root like *$melh_2$-* "grind" made an unmarked present *$mólh_2$-e(i)* / *$mélh_2$-r̥s* in the same way as *h_1es-* "be" made *$h_1és$-ti* / *h_1s-énti*, *$\hat{k}ei$-* "lie" made *$\hat{k}éi̯$-or*, or *$le\hat{g}$-* "collect" made *$lé\hat{g}$-e-ti*. Other types of presents may be found beside the unmarked primary presents (e.g. *u*-present *$melh_2$-u-*, *$s\hat{k}e/o$*-present *h_1s-$s\hat{k}é/ó$-*, desiderative *$\hat{k}éi̯$-$h_1si̯e/o$-*, etc.), but presential roots like these, whatever the way they were inflected, typically lacked an aorist (and a perfect, which is irrelevant for Balto-Slavic).[28]

9.4. Having these considerations in mind, we can now return to the position of *b^horH-* / *$b^h r̥H$-*, *skelH-* / *$sk l̥H$-*, etc. in Balto-Slavic.

In principle it would seem relatively straightforward to derive doublets like Lith. *bárti ~ bùrti*, *skélti ~ skìlti* directly from (post-)Indo-European presents *$b^hórH$-e(i)* / *$b^h r̥H$-ér*, *skélH-e(i)* / *$sk l̥H$-ér*, but I am somewhat suspicious of such an account. Although a putative (pre-)Balto-Slavic *$b^hórH$-e(i)* / *$b^h r̥H$-ér* can be easily derived from Indo-European *$b^hórH$-e(i)* / *$b^hérH$-r̥s*, this is not true in the case of an equally hypothetical *skélH-e(i)* / *$sk l̥H$-ér*. We would have to assume either something like *skólH-* / *skélH-* → *skólH-* / *$sk l̥H$-* → *skélH-* / *$sk l̥H$-* or *skólH-* / *skélH-* → *skélH-* / *skélH-* → *skélH-* / *$sk l̥H$-*, with h_2e-conjugation endings and athematic inflection preserved at every relevant stage (thematic inflection is incompatible with root ablaut).

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[27] All possible examples of *molō*-presents to aoristic roots in K ü m m e l 2004, 151ff. are Tocharian subjunctives of class I or V (e.g. TB *preku*, TA *pärkmār* "will ask" or TB *kewu*, *kutär* "will pour", to *$pre\hat{k}$-*, *$\hat{g}^heu$-*), which present a very different profile. It is irrelevant here whether they are to be derived from "*molō*-aorists" (as per J a s a n o f f 2003, 161ff., 199ff.) or from the classical perfect (e.g. K i m 2007, 188f.). See above footnote 23 on the alleged aoristic character of the root *sperH-*.

[28] This claim cannot be properly substantiated within the limits of this article. Contrary to a widespread assumption, I don't think that the sigmatic aorist was regularly used to derive aorists from presential roots in the parent language. Note specially Narten's important observation: "der sigmatische Aorist findet sich als ältere Bildung nur höchst selten bei Präsenswurzeln" (N a r t e n 1964, 81).

Although the possibility cannot be excluded that Balto-Slavic still preserved the Indo-European h_2e-conjugation intact, I would rather favor a typologically more modern system for this stage. I thus propose that *molō*-presents had already been fully thematized in Balto-Slavic, with almost automatic generalization of the root vowel *o or *e (probably more rarely zero). As we have seen, *molō*-presents typically lacked an aorist in the parent language. Such a defectivity probably caused no problems in earlier, "dialectal Indo-European" stages of the language, when the verbal system had not yet switched from a relatively loose aspectual system to one governed by tense. But at some point the necessity must have been felt to provide every verb with a full paradigm.

What Balto-Slavic did, I submit, was to provide inherited *molō*-presents (now simple thematic presents with different types of root vocalism) with a zero grade aorist and an infinitive stem. The type of aorist originally associated with pres. **b^{h}órH-e-ti*, *skélH-e-ti, inf. **b^{h}r̥H-téi-*, **skl̥H-téi-* cannot be reconstructed with certainty, since both Baltic and Slavic (like Germanic) have implemented a radical restructuring of their preterit system. I would favor "**b^{h}r̥H-ā̃-*", "**skl̥H-ā̃-*" (**b^{h}r̥H-aH-e-t*, **skl̥H-aH-e-t*?), but other possibilities (e.g. **b^{h}r̥H-s-t*, **skl̥H-s-t*) probably cannot be excluded.

9.5. Whatever the pros and cons of this scenario (where much remains to be worked out in detail), there are some essential points to be retained: i) there is enough evidence to assume that verbs like (Lith.) *kálti*, *bárti*, *skélti* or *srė̃bti* originally displayed root ablaut, ii) such a reconstruction has the additional advantage of explaining the accentuation of Latv. *kaȊt*, *bãrt*, Sl. *kőlti, *bőrti, iii) it is hardly credible that Balto-Slavic had preserved ablauting *molō*-presents until the last stages of its common development, iv) on the other hand, it is reasonable to suppose that the vocalism of the present stem stood in opposition to that of the aorist and infinitive stem.[29]

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[29] A potentially damaging problem for this scenario is posited by verbs that show both *o* and *e*-vocalism in Baltic-Slavic. The most important case, that of Lith. *málti* vs. Sl. **mě̃lti* (probably with secondary *e*-vocalism), has already been discussed (§9.1.3). It is a curious fact that all other possible examples present *o/e*-variation either within Baltic or within Slavic: Lith. *bèsti*, *bẽda*, Latv. *best*, *bedu* "stick" vs. OPruss. *em-baddusisi* "stecken" (: OCS *bosti*, *bodǫ* "stab"); Ru. *skrestí*, *skrebú* vs. Pol. *skrobać*, *skrobię* "scrape" (: Latv. *skrabt*, *skrabu* "id."); ORu. *stonati*, *stonju* vs. OCS *stenati*, *stenjǫ* "groan, moan" (: Lith. *stenė́ti*, *stẽna* "id."). It would certainly be too rash to

10. I have tentatively posited a link between the fact that *molō*-presents did not inherit an aorist and the zero grade of the Balto-Slavic aorist and infinitive. It must remain a task for the future to determine whether this principle can be generalized to other types of presents to presential roots.[30] Examples like OCS *bьrati*, *berǫ* "gather, take" (IE *$b^hér$-e-ti*) or OCS *gъnati*, *ženǫ* "chase, persecute", Lith. *giñti*, *gẽna* "drive, chase" (IE *$g^{wh}én$-ti* / *$g^{wh}n$-énti*) immediately come into mind. But counterexamples are not lacking (e.g. OCS *pьsati*, *pišǫ* "write" to the aoristic root *$peik̂$-*, LIV, 465f.) and Baltic and Slavic often do not match each other (e.g. Lith. dial. *mìlžti*, *mélža* vs. RuCS *mlěsti*, *mlъzu* "milk", IE *$h_2mélĝ$-ti* / *$h_2ml̥ĝ$-énti*). Within the limits of this article it is only possible to check whether the principle can be used to explain the unexpected root accentuation of Latvian infinitives like *sẽrt*, *vem̃t*, *vẽrt*.[31]

10.1. A clear case is Latv. *vem̃t*, *vemju*, Lith. *vémti*, *vẽmia* "vomit", from an Indo-European athematic present *$u̯émh_1$-ti* / *$u̯m̥h_1$-énti* (Ved. *vámiti*, Gk. ἐμέω, Lat. *uomō*, *-ere*). No aorist or perfect are attested in oldest Vedic. Gk. aor. ἔμεσ(σ)α, Lat. perf. *uomuī* are clearly innovated. The *Dehnton* of Latv.

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assume that presents with *o/e*-ablaut had been preserved until the last stages of Proto-Baltic and Proto-Slavic. ORu. *stonati* may owe its vocalism to the influence of the sub-stantive *$ston$ъ* "moan, groan" (cf. Va i l l a n t 1966, 320). The consistent *e*-vocalism of Ved. *stanant-*, Gk. στένω, Gmc. *$sten$an*, in any case, indicates that *$sten$-* did not make a *molō*-present in the parent language. The case of the expressive family of Ru. *skrestí*, etc. is particularly uncertain. Va i l l a n t (1966, 159) suggests that forms like Pol. *skrobać*, Latv. *skrabt* owe their vocalism to contamination with the root of Lith. *skõbti*, *skãbia* "hollow, scoop", Go. *scaban* "scrape", Lat. *scabō*, *-ere* "scratch". As for Lith. *bèsti* beside OPruss. *embaddusisi*, OCS *bosti*, I can only suggest that *$b^hód^hh_2$-* / *$b^héd^hh_2$-* (Hitt. *padd(a)-ḫḫi*, Lat. *fodiō*, *-ere* "dig") split into two independent verbs very early in Balto-Slavic.

[30] Verbs that inherited an (active) root athematic aorist, on the contrary, typically surface as verbs with a full grade aorist-infinitive stem in Balto-Slavic (notice the aoristic character of verbs like Latv. *cel̂t* "lift", *dzer̂t* "drink", *sper̂t* "kick", Sl. *$derti$* "tear", *$sterti$* "stretch", *$merti$* "die", etc.).

[31] I leave out of consideration Latv. *bẽrt*, *beṛu* "strew, scatter" (Lith. *bérti*, *bẽria*), whose *Dehnton* is clearly borrowed from the anticausative *bir̃t*, *bir̃st* "pour out (intr.)" (Lith. *bìrti*, *bỹra*, dial. *bìrsta*), cf. the variant Latv. *bèrt*, Lith. *ber̃ti*. A similar case is Latv. *lem̃t* / *lem̂t*, *lemju*, Lith. *lémti*, *lẽmia* "decide, predetermine" beside Latv. *lèmt*, Lith. *lem̃ti* (OPruss. *limtwei* "break (tr.)"), with acute from the anticausative Lith. *lìmti*, *lìmsta* "bend, break (intr.)", Latv. *lìmt²*, *lim̂t²*, *-stu* "slip, collapse".

veĩt can thus be explained from an original Balto-Slavic paradigm pres. **u̯émH-e-ti*, inf. **u̯m̥H-téi-* (> **u̯ḿ̥H-tei-*), aor. "**u̯m̥H-ã̃-*". Mild support for such an assumption may perhaps come from the causative *vìmdyti* "make vomit" (when they do not present *o*-grade of the root, causatives and iteratives in *-(d)yti* normally simply copy the root vowel of the base verb).

10.2. A more difficult case is that of Latv. *ņeĩt*, *ņemu* (*ņemu*) "take" (with variants *ņeم̂t*, *neم̂t*, *ņiم̂t*), which continues an Indo-European thematic present **ném(h₁)-e-ti* (Gk. νέμω "deal out, distribute", Go. *niman* "take"). As unexpected lengthened grade formations like Lith. *núoma* 1 "lease, rent", Gk. νωμάω "handle, wield" or TB *ñemek* "harvest" suggest, the root **nem(h₁)-* probably belonged to the small group of roots that replaced a Narten present with a simple thematic present already within the parent language (like **bʰer-* "bring", **leĝ-* "collect", etc., cf. Jasanoff 1998, 305ff.; 2003, 224; Villanueva Svensson ([forthcoming], § 6.2.). Verbs of this type typically lacked an aorist or a perfect (Gk. aor. ἔνειμα, perf. νενέμηκα, Go. pret. *nam* / *nemum* are easily understood innovations). The original intonation of *ņeĩt* / *ņeم̂t* is unclear. Since the *Brechton* tends to expand over the *Dehnton*, it seems reasonable to assume that *ņeĩt* is older. If Nikolaev (2005, 78f.) is right in reconstructing the root as **nemh₁-* instead of traditional **nem-*, the *Dehnton* of *ņeم̂t* can be explained from a Balto-Slavic paradigm pres. **némh₁-e-ti*, inf. **nm̥h₁-téi-* (> **nḿ̥H-tei-*), aor. "**nm̥h₁-ã̃-*" (Latv. dial. *ņiم̂t* may continue the original infinitive, but can also be analogical to *jiم̂t*). The matter is further complicated by the intonation of its synonym *jeĩt*, *jęmu* "take" (with variants *jeم̂t*, *jiم̂t*), which cannot be inherited (*aniţ*-root **h₁em-*, cf. Lith. *iم̂ti* "take"). Since *nemt* and *jemt* have clearly influenced each other in Latvian (standard *ņemt*!), the intonation of *jeĩt* / *jeم̂t* / *jiم̂t* is almost certainly to be explained as taken from *ņeĩt* / *neم̂t* / *ņiم̂t*.

10.3. The etymology of Latv. *sẽrt*, *seŗu* "arrange corn for drying" and Latv. dial. *vẽrtiês*, *veŗuôs* "look" is unknown. The traditional connection with Gk. εἴρω "fasten together in rows, string", Lat. *serō*, *-ere* "link, string" (**ser-*, LIV, 534f.),[32] and Lat. *uereor*, *-ēri* "revere, fear", OHG

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[32] *Pace* Rasmussen (1989, 198), all diagnostic evidence (Gk. ἕρματα "ear-rings", Lat. *sermō* "speech", *sors* "lot", OIr. *sreth* "row", etc.) points to an *aniţ*-root **ser-*.

waron "observe, look after" (*$*ṷer-$, LIV, 685f.), respectively, is seriously compromised by the Latvian intonation. Although it remains conceivable that *sẽrt*, *vẽrtiês* have replaced earlier zero-grade infinitives (*$*sr̥H-téi-$, *$*ṷr̥H-téi-$), the possibility that *seṛu*, *veṛuôs* go back to root athematic presents cannot be confirmed by independent evidence.

10.4. Latv. *vẽrt*, Lith. *vérti*, Sl. *$*vě̃rti$ seem to be a clear counterexample to the rule we have tentatively posited (Ved. aor. *ávar*!), but these verbs confront us with a rather complex picture.

Latv. *vẽrt*, *veṛu*, Lith. *vérti*, *vẽria* mean "pierce, string, thread" (simplex and most compounds) and "open / close" (in the compounds Lith. *at-/už-vérti*, Latv. *at-/àiz-vẽrt* and sometimes also in the simplex *vérti / vẽrt*, almost certainly through decomposition). The semantics of Sl. *$*(-)vě̃rti$, *$*(-)vьrǫ$ is very similar. We have, on the one hand, *$*ot(ъ)-vě̃rti$ "open" (Cz. *otevříti*, Slvn. *odvrẹ́ti*), *$*za-vě̃rti$ "close, enclose" (OCS *zavrěti*, Ru. dial. *zaverét'*, Cz. *zavříti*, Slvn. *zavrẹ́ti*), and, on the other, *$*pro-vě̃rti$ "stick through" (OCS *provrěti*, Bulg. *provrá*), *$*vъ-vě̃rti$ "stick into" (OCS *vъvrěti*), etc.

In the meaning "open / close" Balto-Slavic has clear cognates in Italic (Lat. *aperiō*, *-īre* "open", *operiō*, *-īre* "close", Os. **veru**, Um. abl. pl. *uerir* "door") and Indo-Iranian (Ved. *var-* 1. "cover", 2. "stop", pres. *vr̥ṇóti / ūrṇóti*, aor. *ávar*, perf. *vavā́ra*), cf. specially *ápa*, *ví var-* "open, uncover". Other frequently quoted material (Go. *warjan* "hinder, forbid", Gk. ἀείρω "lift", Alb. *vjerr* "hang up") is best left aside. For Indo-Iranian L u b o t s k y (2000) has established a root *$*Hṷer-$ with a basic meaning "cover". It is not of prime importance for present purposes whether the meaning "stop" (almost exclusively in unpreverbed middle forms) is to be considered a secondary development of "cover" (as per Lubotsky) or is derived from a different root *$*ṷel-$ (as per LIV, 684f.). The *aniṭ*-character of the "open / close" root is confirmed in Balto-Slavic by the word for "gate" Lith. *vartai* 2, Latv. *vàrti*, OPruss. *warto*, Sl. *$*vorta$ b/c (OCS *vrata*, Ru. *voróta*, *vorotá*, SCr. *vráta*, Cz. *vrata*, *vráta*).

Given the two meanings of Lith. *vérti*, Sl. *$*vě̃rti$ I am inclined to follow D e r k s e n (1996, 82) and assume that two roots have merged in Balto-Slavic: *$*Hṷer-$ "open, close", used exclusively with preverbs, and an otherwise unknown root *$*ṷerH-$ "pierce, put through". The latter has imposed its *seṭ*-character on the former. It is thus perfectly possible that the

accent position of Latv. *vẽrt*, Sl. *vȇrti reflects the original paradigm pres. **u̯érH-e-ti*, inf. **u̯r̥H-téi-* of a presential root **u̯erH-*, but this is of course impossible to prove.

LA. *kaᶅt*, SL. *kőlti BENDRATIES TIPO KIRČIAVIMAS IR *molō*-PREZENSŲ RAIDA BALTŲ-SLAVŲ KALBOSE

Santrauka

Baltų-slavų prokalbėje bendratis buvo pastoviai kirčiuojama galūnėje, kaip rodo latvių ir, iš dalies, slavų faktai. Šaknies ar priesagos kirčiavimas atsirado veikiant Hirto dėsniui. Rasmussenas nustatė keletą šios bendrosios taisyklės išimčių grupių: i) la. *kaᶅt* / sl. *kőlti, la. *maᶅt* / sl. **mě̃lti* ir kt. (prez. sl. **koljǫ̍*, *koljėtь a.p. *b*, lie. *kãla*, la. *kaļu*); ii) sl. *kűti, *rjűti ir kt. (prez. *kővǫ, *kovetь a.p. *c*); la. *veᵐt*, *sērt* ir kt. (prez. *vemju*). Rasmusseno pateiktas šių atvejų aiškinimas (kirtis buvo atitrauktas reduplikacinėse formose **bʰr̥-bʰórh-ti*, **ku-kóu̯h-ti*, kur laringalas nevokalizuojamas) yra daugeliu atžvilgių problemiškas. La. *kaᶅt*, sl. *kőlti kirčiavimą galima paaiškinti postuluojant, kad ide. *molō*-prezensai baltų-slavų prokalbėje buvo įgiję tokią paradigmą: bendr. **bʰr̥H-téi-*, **skl̥H-téi-*, prez. *bʰórH-e-ti, *skélH-e-ti, ? aor. "**bʰr̥H-ā̃-*", "**skl̥H-ā̃-*" (plg. lie. *bárti*, *bãra* šalia *bùrti*, *bùria*, sl. *bőrti, **borjǫ̍*; lie. *skélti*, *skẽlia* šalia *skìlti*, *skìlia*). Bendraties kirtis buvo dėsningai atitrauktas pagal Hirto dėsnį: **kl̥H-téi-* > **kĺ̥H-tei-* → **kólH-tei-*. Jei tokia paradigma buvo būdinga ir kitoms ide. prezenso šaknims, galima panašiai paaiškinti ir la. *veᵐt*, *vemju* ir kt. (**u̯m̥H-téi-* [> **u̯ḿ̥H-tei-* → **u̯émH-tei-*], **u̯émH-e-ti*, "**u̯m̥H-ā̃-*"; plg. lie. kauz. *vìmdyti*).

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