

STRAIPSNIAI

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BALTO-SLAVIC AND INDO-IRANIAN

Abstract. The closest relatives of Balto-Slavic are Albanian and Indo-Iranian. Together with Armenian and Thracian, these are the *satəm* languages, which together with Greek and Phrygian constitute the eastern part of Classic Indo-European.

The obvious common development in this area is the *satəm* palatalization, which did not affect Greek and Phrygian. Indo-Iranian was separated from the other *satəm* languages by the depalatalization of palatovelars before resonants in the latter.

Proto-Indo-European had a threefold distinction between fortis, glottalic lenis, and plain lenis obstruents, all of them voiceless, e.g. **t* [t:], **d* [t̚], **dh* [t]. In the Classic Indo-European languages (after their separation from Anatolian and Tocharian), the lenis obstruents became voiced [ʔd], [d], while the fortis remained voiceless [t]. This system was best preserved in Indo-Iranian, Balto-Slavic and Albanian.

Another development that seems to be dialectal Indo-European is the retraction of **s* to **š* after **i*, **u*, **r*, **k* in Indo-Iranian, Balto-Slavic, Albanian and Armenian. However, this retraction cannot be dated and may have affected any part of the Indo-European dialects. This may also explain the Hittite reflex *š* of PIE **s*.

The large majority of special correspondences between Balto-Slavic and Indo-Iranian are archaisms, not innovations. This is important because it implies that a comparison of Balto-Slavic with Indo-Iranian leads to a reconstruction of an early stage of Indo-European.

Keywords: Balto-Slavic; Indo-Iranian; Indo-European dialects; historical phonology; historical morphology.

The closest relatives of Balto-Slavic are Albanian and Indo-Iranian. Together with Armenian and Thracian, these are the *satəm* languages, which together with Greek and Phrygian constitute the eastern part of Classic Indo-European (cf. Porzig 1974). It is therefore legitimate to look for shared innovations of these languages which set them apart from their neighbors.

The obvious common development in this area is the *satəm* palatalization, which did not affect Greek and Phrygian. The palatalization was everywhere

blocked by a preceding *s and by a following laryngeal or (syllabic or nonsyllabic) *r, and in Balto-Slavic also before *l and *w unless these were followed by a front vowel and before syllabic *l and nonsyllabic nasal resonants (cf. Meillet 1894; Kortlandt 2009, 27–32; 2010, 38). It appears that the same blocking rule applies to Albanian and Armenian, including the position before syllabic nasals in Albanian (cf. Kortlandt 2013b). Thus, Indo-Iranian was separated from the other *satəm* languages by the depalatalization of palatovelars before resonants in the latter. This development has a parallel in Slavic, where we find depalatalization of secondary **k̑* and **g̑* before a resonant in Polish *kwiat* ‘flower’, *gwiazda* ‘star’, Czech *květ*, *hvězda* beside Russian *cvet*, *zvezdá*, Serbian/Croatian *cvijet*, *zvijezda*, also in S/Cr. *knjiga* ‘book’, Russian *kníga* [kń-] (cf. Kortlandt 2011, 152).

Proto-Indo-European had a threefold distinction between fortis, glottalic lenis, and plain lenis obstruents, all of them voiceless, e.g. *t [t:], *d [t̚], *d^h [t̪] (cf. Kortlandt 2010, 53–65; 2012). In the Classic Indo-European languages (after their separation from Anatolian and Tocharian), the lenis obstruents became voiced [ʔd], [d], while the fortis remained voiceless [t]. This system was best preserved in Indo-Iranian, Balto-Slavic and Albanian until the plain voiced stops became breathy voiced in the majority of Indic dialects, e.g. *dh* [d̪] <[d], and glottalization was subsequently lost in the larger part of the area, yielding glottalized vowels in Balto-Slavic as a result of Winter’s law (cf. Kortlandt 2009, 51–76). The glottalized stops were devoiced in Thracian, Armenian and Phrygian, but not in Greek, where the plain voiced stops became devoiced and aspirated, e.g. *θ* [t^h] < [d]. The Greek devoicing was a local development because the closest relatives (Phrygian and the ancient Macedonian dialect) were not affected. The devoicing of the glottalized stops separated Thracian, Armenian and Phrygian from Balto-Slavic, Albanian and Greek. One may wonder if this development can be attributed to the influence of a Proto-Anatolian substratum.

Another development that seems to be dialectal Indo-European is the retraction of *s to *ʂ after *i, *u, *r, *k in Indo-Iranian, Balto-Slavic, Albanian and Armenian. However, the distinction between these variants became phonemic in the separate sub-branches only. Moreover, it cannot be demonstrated that the retraction did not affect Greek and Phrygian because these languages never developed a similar distinction. Thus, we arrive at five dialectal areas within the eastern part of Classic Indo-European:

1. Indo-Iranian;
2. Balto-Slavic and Albanian;
3. Armenian and Thracian;
4. Phrygian;
5. Greek.

In his discussion of the relations between the separate branches, Porzig (1974, 154–181) lists 21 special correspondences between Indo-Iranian and Balto-Slavic, 10 between Balto-Slavic and Albanian, 9 between Albanian and Greek, 12 between Armenian and Greek, also 8 between Balto-Slavic and Greek, 16 between Indo-Iranian and Greek, and 5 between Indo-Iranian, Balto-Slavic and Greek (cf. Kortlandt 2003, 13–19; 68–74 for Albanian and Armenian; Jokl 1963 for Albanian; and de Lamberterie 2013 for Phrygian and its neighbors).

Turning to morphology, I will leave Albanian and Thracian out of consideration because these languages provide little evidence for the reconstruction of their neighbors. The question is if we can establish common developments of Balto-Slavic and Indo-Iranian by a comparison with the system that Armenian, Phrygian and Greek inherited from Proto-Indo-European. The nominal case endings are the following (leaving out the neuter, the vocative, and the dual, cf. Beekes 2011, 185–217; Kortlandt 2014; 2016):

singular	Balto-Slavic	Indo-Iranian	Indo-European
nom.	*-(s)	*-(s)	*-(s)
gen.	*-(e)s, *-ed	*-(a)s	*-(e/o)s
dat.	*-ei	*-ai	*-(e)i
acc.	*-(i)m	*-(a)m	*-m
abl.	= gen.	*-as, *-ad	*-os, *-ed
inst.	*-ŕ, *-mi	*-(a)ŕ	*-(e)ŕ
loc.	*-(i)	*-(i)	*-(i)
plural			
nom.	*-es	*-as	*-es
gen.	*-um	*-aŕam	*-om
dat.	*-mus	= abl.	*-mus
acc.	*-(i)ŕns	*-as/ns	*-ns
abl.	= gen.	*-b ^h yas	*-(i)os
inst.	*-miŕs	*-b ^h is	*-b ^h i
loc.	*-su	*-su	*-su

At an earlier stage, *-(e/o)s* was an original ablative ending which came to be used for the genitive and the ergative while **-d* and **-ʔ* were variants of an original instrumental ending **-t* that has been preserved in Anatolian (cf. Kortlandt 2010, 40).

In the gen.sg. form of the thematic inflection, Indo-Iranian, Armenian and Greek adopted the pronominal ending **-osio*, whereas Balto-Slavic adopted the ablative ending **-ōd*. There was probably no shared innovation here, firstly because we also find the pronominal ending **-oso* in Greek (cf. Chantraine 1967, 38) and Phrygian (cf. Ligorio, Lubockij 2013, 188–190), like **-eso* in Germanic, and secondly because the ending **-osio* is also found in Faliscan. It appears that the original gen.sg. ending of the thematic inflection was easily replaced because it was very different from the other case endings, probably because it did not contain the thematic vowel **-o-*. I suspect that the Classic Indo-European ending was **-iʔ*, which has been preserved in the Italo-Celtic *o-* and *ā-*stems (cf. Kortlandt 2014, 9f.) and in the Armenian *ā-*stems (cf. Kortlandt 2003, 47). If this is correct, the original ending **-iʔ* was replaced by the ablative ending **-ōd* in Balto-Slavic and by pronominal endings in Indo-Iranian, Armenian, Phrygian, Greek and Germanic. The *ā-*stems adopted the regular ending **-(e/o)s*, which was added to **-iʔ* in Armenian, as it was in Celtic. The theory advocated here is supported by the syntactic use of Slavic adjectives in **-bj-* < **-iʔ-*, e.g. *božii* ‘God’s’, which replace the gen. sg. form in the oldest texts (cf. Kortlandt 2009, 122).

The original inst.sg. ending **-t* became **-d* after a vowel, **-ʔ* after a resonant, and zero after an obstruent in Classic Indo-European (cf. Kortlandt 2010, 40). The variant **-d* provided an ablative ending for thematic and pronominal paradigms when the original ablative became a genitive. The instrumental of the pronoun adopted the locative ending **-oi*, which is reflected in Vedic masc. *téna*, fem. *táyā* and Slavic masc. *těmb*, fem. *tojŕ*, all from **-oi-*. The ending **-ois* which was added in the inst.pl. form of the *o-*stems was probably an earlier oblique plural ending that is also found in gen.pl. **toisom*, Slavic *těxb*. In the other oblique cases, the pronominal *o-*stems adopted an extension masc. **-sm-*, fem. **-si-* ‘one’, e.g. Vedic dat. sg. *tásmai*, *tásyai*, abl.sg. *tásmād*, *tásyās*, loc.sg. *tásmín*, *tásyām* ‘that (one)’, Slavic dat.sg. *tomu*, loc.sg. *tomь*, fem. *toj-*, Lith. dat.sg. *tāmui*, *taĩ*, loc.sg. *tamè*, *tojè*. In the Baltic and Slavic forms the **-s-* was lost on the analogy of the dat. pl. ending **-mus* and the inst.sg. form **toi*, which was now extended with the locative endings reflected in Vedic *tásmín*, *tásyām*, yielding Slavic *těmb*, *tojŕ*.

The motivation for this extension was perhaps the disambiguation from the nom.pl. form **toi*, the ending of which was introduced in the *o*-stem nouns in Balto-Slavic, Phrygian, Greek, Latin and Celtic, and in the adjectives also in Armenian and Germanic (cf. Kortlandt 2003, 46f.). This may have been a shared innovation in the adjective that did not reach Indo-Iranian. The instrumental ending was replaced by the adessive particle **b^hi* in Greek *-φι* (cf. Chantraine 1967, 118–120), Armenian *-b*, pl. *-bkʷ* < **-b^his*, Vedic *-bhis*, Avestan *-biš*, in Balto-Slavic with *-m-* replacing **-b^h-*, e.g. Lith. *sūnumi*, Slavic *synъmь*, pl. Lith. *sūnumis*, Slavic *synъmi* < **-miʔs*, with glottalization from the acc.pl. ending (cf. Kortlandt 2016). While the adessive particle **b^hi* is also reflected in the western Indo-European languages, the inst.pl. ending **-b^his* appears to be an innovation of the *satəm* languages. It provided the basis for the Indo-Iranian abl.pl. ending **-b^hyas*, which replaced **(i)os* (cf. Kortlandt 2003, 50) and the ancient dat.pl. ending **-mus* that was preserved in Balto-Slavic and Germanic.

Thus far we have not found any common developments of Balto-Slavic and Indo-Iranian that were not shared by neighboring languages. It appears that the *satəm* languages represent a particularly conservative dialect of Classic Indo-European and are therefore of special importance for a comparison with Tocharian and Anatolian. The same view emerges from an analysis of the personal pronouns (cf. Kortlandt 2013a):

1st singular	Indo-Ir./Balto-Sl.	Armenian	Greek
nom.	<i>*ʔeǵ-</i>	<i>es</i>	<i>ἐγώ</i>
gen.	<i>*mene</i>	<i>im</i>	<i>ἐμοῦ</i>
dat.	<i>*miǵ^hi</i>	<i>inj</i>	<i>ἐμοί</i>
acc.	<i>*mēm</i>	<i>is</i>	<i>ἐμέ</i>
abl.	<i>*med</i>	<i>inēn</i>	= gen.
inst.	= loc.	<i>inew</i>	= dat.
loc.	<i>*moi</i>	= acc.	= dat.
2nd singular			
nom.	<i>*tu-</i>	<i>du</i>	<i>σύ</i>
gen.	<i>*teue</i>	<i>k'o</i>	<i>σοῦ</i>
dat.	<i>*tub^hi</i>	<i>k'ez</i>	<i>σοί</i>
acc.	<i>*tuēm</i>	<i>k'ez</i>	<i>σέ</i>
abl.	<i>*tued</i>	<i>k'ēn</i>	= gen.
inst.	= loc.	<i>k'ew</i>	= dat.
loc.	<i>*tuoi</i>	= acc.	= dat.

The accusative form **mēm* is a shared innovation of Indo-Iranian, Balto-Slavic and Albanian (cf. Porzig 1974, 180), and the same probably holds for **tuēm* (cf. Jokl 1963, 142). The initial vowels of the Armenian and Greek 1st person oblique forms *i-* and *ê-* reflect an Indo-European laryngeal **ʔ-* while the initial consonants of the 2nd person forms *k'-* and *σ-* represent a cluster **tw-*. The older endings are reflected in Latin dat. *mihī, tibī*, abl. *mēd, tēd*, Greek acc. *ἐμέ, σέ*, loc. *ἐμοί, σοί*, while Armenian dat. *inj* and acc. *is* can be identified with Latin *mihī* and Greek *ἐμέγε*, respectively. The genitives **mene* and **teue* have an Indo-Uralic origin (cf. Kortlandt 2010, 369–372).

In the verbal system, Balto-Slavic lost the subjunctive of Indo-Iranian, Armenian, Phrygian and Greek, but preserved the optative, which is reflected as an imperative, permissive and optative in Baltic and Slavic languages. It lost the middle voice and incorporated the perfect in the present system. The Indo-Iranian *sya*-future is an extension of the Indo-European *s*-future (cf. Pedersen 1921) which is found in Balto-Slavic, Phrygian, Greek and Italo-Celtic and developed from an *s*-present that is preserved in Tocharian (cf. Kortlandt 2015). None of these categories points to a shared innovation of Balto-Slavic and Indo-Iranian. It appears that the closest relative of Balto-Slavic was Albanian, which bridged the difference with the Balkan languages (cf. Jokl 1963, 147–154). We may now reconsider the special correspondences between Indo-Iranian and Balto-Slavic listed by Porzig (1974, 164–169, with discussion):

- (1) The 1st sg. genitive **mene* is an archaism whereas the accusative **mēm* is a common innovation shared with Albanian.
- (2) The *sya*-future of Indo-Iranian is an innovation compared with the *s*-future of Balto-Slavic, Phrygian, Greek and Italo-Celtic.
- (3) The retraction of **s* to **š* after **i, *u, *r, *k* is common to the *satəm* languages.
- (4) Suffixation of the pronoun **ios* yields definite adjectives in Baltic and Slavic. This is a further development of the Indo-Iranian use of *ya-* as a linker between an apposition and a noun.
- (5) Lith. *dėšinas* ‘right’, Sl. *desnъ*, Av. *dašina-*, Skt. *dakṣiṇa-* is a *no*-derivative of an old adverb **deksi* that is also reflected in Alb. *djathë* (cf. Kortlandt 2013b, 15).
- (6) Lith. *spainė* ‘foam’, Sl. *pěna*, Skt. *phēna-* can be identified with Latin *spūma*, Old High German *feim*, English *foam*, and may represent an original masculine derivative **spH₁oi-mn, *spiH₁-men-* (cf. Lubotsky 2011, 115).

- (7) Lith. *sūnūs* ‘son’, Sl. *synъ*, Skt. *sūnūs* has a long vowel, as opposed to Gothic *sunus*, English *son*, Greek *υἱός*.
- (8) Lith. *māras* ‘plague’, Sl. *morъ*, Skt. *māra-*, if not related to Greek *μóρος* ‘death’.
- (9) Lith. *šyvas* ‘grey’, Sl. *siвъ*, Av. *syāva-* ‘black’, Skt. *śyāvā-* is an extension of the root **k(H)ei-* attested in Old Norse *hārr*, Slavic *sěrv* ‘grey’ (cf. Lubotsky 2011).
- (10) OPr. *kirsnan* ‘black’, Sl. *črъnъ*, Skt. *kṛṣṇá-*.
- (11) Lith. *tùščias* ‘empty’, Sl. *tvštъ*, Skt. *tucchya-*.
- (12) Latv. *grīva* ‘river mouth’, Sl. *griva* ‘mane’, Ir. *grīvā* ‘neck’.
- (13) Lith. *ātlaikas* ‘remains’, Sl. *otblěkъ*, Skt. *atireka-*.
- (14) Lith. *tekù* ‘flow’, S/Cr. *těčem*, Av. *tačaiti* replaces the root **sreu-* attested in Skt. *srávati*, Greek *ῥέω*.
- (15) Lith. *šveñtas* ‘sacred’, Sl. *svętъ*, Av. *spanta-*, cf. Latv. *svinēt* ‘celebrate’.
- (16) Sl. *kvde* ‘where?’, Av. *kudā*, Skt. *kúha*.
- (17) Sl. *šujb* ‘left’, Av. *haoya-*, Skt. *savyá-*, which was lost in Baltic and replaced by *lěvb* in Slavic.
- (18) Lith. *výras* ‘man’, Ir. *vīra-* has a long vowel, as opposed to Latin *vir*, Old Irish *fer*, Gothic *wair*.
- (19) Lith. *vėjas* ‘wind’, Ir. *vāyu-* beside Lith. *vėtra* ‘storm’, Sl. *větrъ*.
- (20) Lith. *pažastis* ‘armpit’, Av. *zasta-*, Skt. *hásta-* ‘hand’, which replaces **ḡ^hesr-*, Arm. *jejn*, Gr. *χείρ*.
- (21) Lith. *javaĩ* ‘corn’, Ir. *yava-*, but also Gr. *ζειαĩ* ‘spelt’ (cf. Beekes 2010, 497) and Hittite *ewan* (Kloekhorst 2008, 263).

Here we may add Lith. *ožỹs*, ‘he-goat’, Skt. *ajā-*, also Alb. *dhī* ‘she-goat’ < **aḡī* if this is not from **deig^hā*, German *Ziege*. This is a very early loanword in Indo-European, as is clear from its variant in Greek *αἴξ*, Arm. *ayc* < **aiḡt*, and from the ablaut in Slavic **azьno* ‘leather’, Avestan *izaēna-*, Greek *αἴγυιός*. The preservation of the palatovelar in Skt. *śmáśru* ‘beard’, but not in Arm. *mawruk* < **smokru-*, Lith. *smākras* ‘chin’. Alb. *mjekrë*, shows that it represents an ancient derivation of the root **smek-* attested in Old Irish *smech* ‘chin’, Latin *māla* ‘cheeks’ < **smk̑slā*.

I conclude that the large majority of special correspondences between Balto-Slavic and Indo-Iranian are archaisms, not innovations. This is important because it implies that a comparison of Balto-Slavic with Indo-Iranian leads to a reconstruction of an early stage of Indo-European. The *satəm*ization of the palatovelars was evidently preceded by their depalatalization in the dialects of the peoples who one after another migrated westwards from the Russian

steppe into the Balkans and Central Europe. The alternative theory that the palatovelars developed from plain velars in the *satəm* area does not account for their palatalized reflexes in Luwian and Lycian (e.g. Kloekhorst 2008, 17f.), nor for their depalatalization before resonants outside Indo-Iranian. The reconstruction of a palatovelar and a labiovelar but no plain velar series is in agreement with the reconstruction of Proto-Circassian (cf. Chirikba 1996, 111), which probably was the closest neighbor of the Indo-Europeans before they moved into Ukraine. Since Proto-Indo-European had no more than a single fricative *s, this phoneme must have had a wide range of articulation, including [s] and [ʃ], which is to some extent retained in the modern *centum* languages. An average Dutchman has great difficulty distinguishing between Russian *cb* [sʲ], *uy* [ʃʲ:] and *uu* [ʃ], all of which are perceived as *sj* [ʃʲ]. I remember a student from Amsterdam who could hardly believe that there were Dutch people who make a difference between *ziek* [sik] ‘sick’ and *chic* [ʃʲik] ‘chic’ and thought that this was an artificial distinction. The retraction of *s to *ʃ after *i, *u, *r, *k cannot therefore be dated and may have affected any part of the Indo-European dialects. This also explains the Hittite reflex š of PIE *s (cf. also Vijūnas 2010). The lexical correspondences between Balto-Slavic and Indo-Iranian may have lost cognate forms in other branches and therefore do not carry much weight by themselves.

BALTŲ-SLAVŲ IR INDŲ-IRANĖNŲ KALBOS

Santrauka

Artimiausios baltų-slavų kalbų giminaitės yra albanų ir indų-iranėnų kalbos. Kaip ir armėnų bei trakų, jos yra sateminės kalbos, kurios kartu su graikų ir frygų kalbomis sudaro rytinę klasikinių indoeuropiečių kalbų dalį.

Akivaizdus bendras šio arealo pakitimas yra sateminė palatalizacija, nepaveikusi graikų ir frygų kalbų. Indų-iranėnų kalbas nuo kitų sateminių kalbų atskyrė pastarosioms būdinga palatoveliarinių priebalsių depalatalizacija prieš sonantus.

Indoeuropiečių prokalbėje skirti trejopi sprogstamieji priebalsiai: *fortis*, glotaliniai *lenis* ir paprastieji *lenis* – visi duslieji, pvz., *t [t:], *d [tʰ], *dh [t]. Klasikinėse indoeuropiečių kalbose (susiformavusiose atsiskyrus anatolų ir tocharų kalboms) *lenis* priebalsiai tapo skardžiaisiais [ʔd], [d], o *fortis* išliko duslūs [t]. Ši sistema geriausiai išlaikyta indų-iranėnų, baltų-slavų ir albanų kalbose.

Kitas pakitimas, greičiausiai laikytinas indoeuropiečių tarmių ypatybe, yra *s virtimas *š po *i, *u, *r, *k indų-iranėnų, baltų-slavų, albanų ir armėnų kalbose. Deja, šio pakitimo neįmanoma datuoti ir jis gali būti paveikęs bet kurią indoeuropiečių tarmių dalį. Jis galėtų paaiškinti ir ide. *s refleksą š hetitų kalboje.

Didžioji dauguma specifinių baltų-slavų ir indų-iranėnų bendrybių yra ne inovacijos, bet archaizmai. Vadinasi, lyginant baltų-slavų ir indų-iranėnų kalbas galima rekonstruoti palyginti ankstyvą indoeuropiečių kalbų raidos etapą.

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