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## I.-E. palatovelars before resonants in Balto-Slavic

1. Two recent publications once again draw the comparativist's attention to the classical problem of the velar series in Proto-Indo-European. Steensland shows in his monograph on the subject (1973) that the so-called 'pure velars' are largely in complementary distribution with the other series. Čekman lists 70 instances of "Gutturalwechsel" in Baltic and Slavic, not counting the onomatopoeic cases (1974). Both investigations support the conclusion that there were no more than two velar series in Proto-Indo-European.

2. What were the phonetic characteristics of these two series? The immediate comparative evidence points to a palatovelar and a labiovelar series. Steensland's rash rejection of such a reconstruction as "von Kuryłowicz ... ein für allemal als typologisch undenkbar abgestempelt" (1973: 120) is not in conformity with the author's serious analytical work elsewhere in the book. The simultaneous presence of palatovelars and labiovelars and absence of 'pure velars' is well attested in the languages of the world, e.g. in the Caucasus (Circassian, Ubykh) and on the Canadian Pacific coast (Kwakiutl, Heiltsuk).<sup>\*</sup> A wider acquaintance with less privileged languages would save Indo-European linguists a lot of unwarranted generalizations.

3. Čekman attributes the large number of doublets in Baltic and Slavic to the previous existence of a Proto-Balto-Slavic *centum* dialect (1974: 133). Unfortunately, such an assumption can be neither proved nor disproved because it cannot be co-ordinated with any other linguistically relevant fact. In particular, the *centum* words in the Balto-Slavic area do not in any way deviate semantically from the regular inherited lexicon. Čekman's assumption must be considered an *ultimum refugium* and should only be resorted to if every other line of investigation fails to explain the facts.

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\* The presence of uvular series in these languages is not relevant in this connection.

4. For the time being I think that we must look for a phonetic explanation. Re-examining the existing literature, I find no substantial progress in this part of Indo-European linguistics since Meillet's 1894 article on the subject. As far as I can see, his conclusions remain valid and unsurpassed. In the following I shall continue this line of thought and indicate how a further specification of the conditions only corroborates Meillet's results and demonstrates the fruitfulness of his approach.

5. I find two positions of neutralization between palatovelars and labiovelars for the Indo-European proto-language, viz. after *\*u* and after initial *\*s*. The neutralization after *\*u* was established by Brugmann (1881:307n.) and de Saussure (1889:161f.), e.g., Gk. *leukós*, *zugón*, *boukólos*, *thugatēr*, Arm. *loys*, *dustr*. The neutralization after initial *\*s* is discussed by Meillet (1894:294ff.) and Steensland (1973:30ff.) and can hardly be doubted. It accounts for such correspondences as OCS *skopiti*, Lith. *kapóti*, Gk. *kóptō*; Lith. *skirti*, *kiřsti*, OCS (*s*)*kora*, Gk. *keirō*; Lith. (*s*)*keřdzius*, OCS *črěda*, Goth. *hairda*; Lith. (*s*)*keřsas*, OCS *črěšъ*, Gk. *egkársios*; Skt. *kaviḥ*, Gk. *koēō*, *thuos-kóos*; Lith. *skélti*, *kálti*, OCS *klati*, Gr. *klāō*, and possibly for a number of cases where an initial *\*s* has been lost in the historically attested material, as may have been the case with OCS *kosa*, Skt. *sásti*; OCS *kotora*, Skt. *sātáyati*; Russ. *cévka*, Lith. *šeivà*; Russ. *kopyto*, Skt. *sápháh* (cf. Martynov 1968:149ff.).

6. In the Western languages (Italic, Celtic, Germanic) the labial feature of the labiovelars was lost before rounded vowels and before obstruents (cf. Meillet 1894:279ff.), e.g., Goth. *haidus*, Skt. *ketuḥ*; Goth. *hails*, OCS *čělъ*; Lat. *cottidiē*, *incola*, *stercus*, *secus*; OIr. *guidiu*, Gk. *pothéō*; OIr. *gorn*, Skt. *gharmáh*. This rule accounts for the correspondence between OCS *gostъ* and Lat. *hostis*, Goth. *gasts*.

7. The palatal feature of the palatovelars was lost before a following *\*r* in Indo-Iranian. This development was established by Weise (1881:115f.), e.g., Skt. *kraviḥ*, Gk. *kréas*; Skt. *krátuḥ*, Gk. *krátos*; Av. *xrū-*, Gk. *krúos*; Skt. *grásate*, Gk. *grāō*. It also accounts for the correspondence between Skt. *gráhā* and Gk. *khórtos*, Lith. *žárdas*. The palatal feature was restored whenever there was a model for its restoration, e.g., Skt. *śvasrāḥ* (*śvásuraḥ*), *śmāsru* (*hári-śmāsāru-*), *ásru* (Lith. *ašarà*), *ájraḥ* (*ájati*).

8. The same development can be established for Balto-Slavic (cf. Meillet 1894:297), e.g. OCS *kryti*, Gk. *krúptō*; Lith. *krōkti*, Gk. *krōzō*; Lith. *krūřti*, OCS *krъxa*, Gk. *krouō*; OCS *grъměti*, *gromъ*, Gk. *khremizō*, *khrómos*; Lith.

*griēti*, Gk. *khriō*; OCS *grędŕ*, OIr. *adgreñnim*. Other examples: OCS *krovъ*, Welsh *craw*; Lith. *krākė*, Gk. *krōssai*; Lith. *kraūjas*, Skt. *kravyám*, Welsh *crau*; Lith. *kirnis*, Gk. *kránon*; OCS *črъnъ*, Skt. *kr̥śnáh*; OCS *svekry*, Skt. *śvaśrūh*; Lith. *smākras*, Skt. *śmāsru*; OCS *žrъdъ*, Lith. *žárdas*.

9. Here too, the palatal feature was restored in a number of cases, e.g. OCS *zъno*, Lith. *žirnis*, Goth. *kaurn*, cf. OHG *kerno*, OCS *zъręti*, Skt. *járatī*; OCS *srъdъce*, Lith. *širdis*, Gk. *kardia*, cf. OPr. *seyr*, Arm. *sirt*, Gk. *kēr*, OCS *sręda*, Lith. *šerdis*; ORuss. *sъrstъ*, OHG *hursti*, cf. ORuss. *serexъkъ*, Lith. *šerỹs*; ORuss. *sъrna*, OPr. *sirwis*, cf. Lat. *cervus*, Gk. *keráoś*. If OCS *pъstrъ*, *ostrъ* are identical with Gr. *pikrós*, *ákros*, which is not necessarily the case, the palatal feature has been restored on the basis of other derivatives of the same root, cf. Lith. *paĩsas*, *ašęrys*, Skt. *pésah*, *asánih*.

10. The similarity between the Indo-Iranian and Balto-Slavic developments suggests that they arose from a common innovation. This is not necessarily the case. Since most examples from Indo-Iranian involve a word-initial palatovelar, the development was possibly limited to this position. It had a much wider range in Balto-Slavic, where the palatal feature was also lost before other resonants under certain conditions. There is positive evidence against the development having occurred in Armenian, cf. *srunk*<sup>c</sup>, Lat. *crūs*, and *merj*, Gr. *mékhrī*. The palatal feature cannot have been restored in these cases because there was no model for such a restoration. The metathesis in the latter word was posterior to the Armenian palatalization (cf. Kortlandt 1975, section 5), which was in turn posterior to the assibilation of the palatovelars in this language (cf. Kortlandt 1976, section 3).

11. In contradistinction to Indo-Iranian, the depalatalized velar often spread to related forms in Balto-Slavic, e.g., Lith. *gaĩdas*, Russ. *górod* next to *žerd'*, cf. *zoród*, Lith. *žárdas*, *žarĩdis*; Russ. *čerėmuxa*, *čeremšá*, Lith. *kermũšė*, cf. *šermũkšnis*, Gk. *króm(m)uon*, Welsh *craf*; Lith. *kárvė*, Russ. *koróva* next to Polish dial. *karw*, OPr. *curwis*, cf. Gk. *keráoś*, Welsh *carw*; OCS *žeravъ*, Lith. *gėrvė*, *garnỹs*, cf. Gk. *géranos*, Lat. *grūs*, Welsh *garan*. If the Armenian word *křunk* is related to the latter family, it must be a borrowing, not only because the initial *k* cannot represent a palatovelar and because the initial cluster has not undergone metathesis, but especially because *-r-* would require PIE *\*-sr-* or *\*-rs-* according to the sound laws of this language. Words like OPr. *kėrdan*, *kėrmens* do not belong in this paragraph because the initial velar must be attributed to the presence of a mobile *\*s*, not to the influence of the following *r*.

12. Burrow has suggested that the distinction between velars and labiovelars before *r* was preserved in Sanskrit if the resonant was syllabic and long (1957:143), e.g. *kīrtiḥ*, *guriḥ*, Gk. *kēruks*, *baris*. I think that a similar rule can be formulated for Balto-Slavic. Unfortunately, the original distribution is blurred by subsequent developments. As was pointed out by Trautmann (1923:3), the choice between the reflexes *-ir-* and *-ur-* of the syllabic resonant is largely dependent on apophonic relationships in Baltic and Slavic. Thus, the original qualitative alternation which is still extant in OCS *gъnati*, *ženq* has disappeared both in Lith. *gīnti*, *genū* and in OPr. *guntwei*, *gunnimai*, cf. Hitt. *kuenzi*, *kunanzi*. Similarly, we find the original reflex in ORuss. *gъrlo*, Lith. *gurklỹs*, OPr. *gurcle*, cf. Gk. *bārathron*, not in Lith. *girtas*, OChSl. *žьrьq*, where the vowel quality is based on Lith. *gėrti*, OChSl. *žrěti*. There is a secondary back vowel in the noun Russ. *korm*, which is undoubtedly related to the verb Lith. *šėrti*. I am unable to explain the front vowel in Lith. *kirmis*, OCS *čръвѣ*, Skt. *kīrmīḥ*, where Welsh *pryf* points to an original labiovelar.

13. The loss of the palatal feature was not limited to the position before a following *\*r* in Balto-Slavic. Meillet suggested that the development of the palatovelars before *\*l* was determined by the following vowel (1894:298), e.g., OCS *slovo*, Gk. *kléos*, but Lith. *klausyti*, Arm. *luay*. Other examples: Lith. *šliėti*, *šlīnti*, *šlitis*, Gk. *klīnō*, *klisis*, Lat. *clīnō*; Lith. *žlėjà*, OIr. *glé*; OCS *poklopъ*, Gr. *kléptō*; OCS *glěňъ*, Russ. *glev*, Gk. *gloiós*; OCS *glogъ*, Gk. *glōkhīs*; Lith. *miglá*, OCS *mьgla*, Gk. *omíkhlē*. The correspondence between OCS *klěťъ* and Lith. *šlitė* is perfect, except for the existence of Lith. *klėtis*: the latter must be an older borrowing from Slavic.

14. Analogical levellings led to the introduction of the depalatalized velar before *\*l* plus front vowel, e.g. OCS *glina*, Lith. *glitūs*, Gr. *gloiós*; OCS *zaklepe*, OPr. *auklipts*, Gk. *kléptō*. They also re-introduced the palatal feature before *\*l* plus back vowel, e.g. Lith. *šlúoti*, Lat. *cluō*; Lith. *šlaunis*, Skt. *śróṇīḥ*; Lith. *šlainūs*, OIr. *clóin*; OCS *sluti*, Lat. *clueō*. The coexistence of forms with and without the palatal feature gave rise to a large number of doublets, e.g. OCS *kloniti*, *sloniti*, Lith. *klānas*, *šliėti*; Lith. *klausyti*, OCS *slušati*; Lith. *kleivas*, *šleivas*; Lith. *glibti*, *žlibti*, *kliaukti*, *šliaukti*, *glėgžnas*, *žlėgžnas*. This type of alternation became productive in Lithuanian at a certain stage (cf. Čekman 1974:128).

15. The palatal feature was also lost before a syllabic *\*l*, e.g. Russ. *žěltyj* next to *zóloto*, *zelėnyj*, Lith. *gėltas* (with secondary vocalism), *žėlti*, *žálias*, Skt. *háriḥ*, Gk. *kholē*. The feature was restored in Lith. *šiltas*, cf. *šáltas*, Welsh *clyd*, Lat. *calidus*. Words like Lith. *kálti*, *kėlmas* do not belong here

because the initial velar is due to the influence of a preceding mobile \*s, not to the following resonant.

16. I think that the same rule which Meillet established for the development of the Proto-Indo-European palatovelars before \*l in Balto-Slavic can be formulated for their development before \*w: the palatal feature was retained if the resonant was followed by a front vowel and lost if the following vowel was back, e.g. Polish *zwierz*, Lith. *žvėris*, Gk. *thēr*, Lat. *ferus*; Polish *święty*, Lith. *šveñtas*, Latv. *svinēt*, Av. *spənta*; Polish *świtać*, Lith. *švitėti*, *švitras*, Skt. *śvitrah̥*; Polish *gwiazda*, Czech *hvězda*, Gk. *phoĩbos*; Polish *kwiat*, Czech *květ*, Skt. *śvetáh̥*. The development before a syllabic \*u was the same as before other vowels, not as before other syllabic resonants, e.g. Polish *język*, OPr. *insuwis* from PIE \*-uH-.

17. The palatal feature was largely restored analogically, e.g., Polish *dzwon*, Arm. *jayn*, next to Polish *dźwięk*, Russ. *zvenět'*; Polish *świat*, *świeca*, Lith. *švaityti*, Skt. *śvetáh̥*, next to Polish *świt*, Lith. *švisti*, *šviėsti*, *šviesùs*; Lith. *zvaigždė*, *žvaĩnas*, Latv. *zvaĩgzne*, *zvaidrīt* next to Lith. *žvygulỹs*, Latv. *zvidzēt*; Lith. *žvalgỹti* next to *žvelgti*, Gk. *thélgō*; Lith. *žvangėti* next to *žvėngti*, Arm. *jayn*; Lith. *ašvā* next to *ašvienis*, OPr. *aswinan*, Skt. *ásvah̥*. The depalatalized velar was extended in a few cases only, e.g. Polish *gwizdać*, cf. Lith. *žviėgti*; Polish *kwitnąć*, Latv. *kvitēt*, cf. Polish *kwiat*, Lith. *švitėti*. The velar in Lith. *pėkus*, OPr. *pecku* stems from the oblique cases because Skt. *paśúh̥* belongs to the hysterodynamic paradigm, as the gen.sg. *paśváh̥* shows (cf. Kuiper 1942: 51f.). Latv. *kuna* has nothing to do with Lith. *šuõ*, etc. (cf. Būga 1922:196).

18. The palatal feature was also lost before nasal resonants in Balto-Slavic, e.g., Lith. *akmuõ*, Skt. *ásmā*; OCS *gniti*, OHG. *gnītan*; OPr. *balgnan* next to *balsinis*. The feature was restored in Lith. *ašmuõ*, cf. *aštris*, and in the family of Latv. *znuõts*, Russ. *znat'*, *známja*, Gk. *gnōtós*, *gnōsis*, *gnōma*, cf. Lith. *ženklas*, Goth. *kannjan*. The palatal in Lith. *iėšmas* is regular because it goes back to a cluster containing \*s, as is clear from the aspirate in Gk. *aikhmē* (cf. de Saussure 1892:90f.).

19. There are a few indications that the palatal feature was lost before a syllabic \*n, e.g., OPr. *cucan* (i.e., \**kunkan*), Gk. *knēkos*, and Lith. *gentis* (with secondary vocalism) next to *žėntas*, OCS *zėťs*, Skt. *jñātih̥*. This might also provide an explanation for the coexistence of Lith. *žqsis* and Russ. *gus'* if we assume an earlier alternation in the root of this old consonant stem. The vocalism of Gk. *khēn* and Lat. *ānser* can hardly go back to the Indo-European proto-language. I think that it is an old European word which was differently

adapted to existing patterns in various languages. Alternatively, the velar in the Slavic word must be attributed to Germanic influence.

20. Indications that the palatal feature was lost before a syllabic \**m* are very scarce, e.g., Lith. *kuñpis* next to *šuñpis*. This pair of words is probably not old. Some counter-examples cannot easily be explained in terms of analogical levelling. Though the palatal feature might have been restored in Lith. *dėšimt*, *dešim̃tas* on the basis of forms comparable to Skt. *daśamáḥ*, Lat. *decimus*, such an explanation is hardly possible in the case of Lith. *šim̃tas*, Skt. *śatám*. It seems more probable that the syllabic \**m* received a svarabhakti vowel at an earlier stage than the other syllabic resonants in Balto-Slavic so that the depalatalization rule did not apply.

21. As far as I can see, the Albanian material agrees with the rules put forward for Balto-Slavic, e.g., *ka*, *gardh*, *vjéhërrë*, *mjégullë*, Russ. *koróva*, *górod*, *svekróv'*, *mglá*. Other examples: *quhem*, *qanj*, *grua*, *gju* (from \**glun-* from \**gnun-*), Gk. *klutós*, *klaĩō*, *gráũs*, *gónu* (cf. Hamp 1956:128 and 1960:275f.). Elsewhere I have suggested that the initial velar in Alb. *gjënj* is the regular reflex of a palatovelar before a syllabic \**n*, cf. Gk. *ékhadon* (1976, section 2). The Albanian development before \**w* cannot be compared with that in Balto-Slavic because in the former language the resonant turned into a feature of the preceding obstruent at an early stage (cf. Kortlandt 1976, section 3).

22. The following conclusions about the chronology can be drawn. The loss of the palatal feature before \**r* may have been a common Indo-Baltic development, which Armenian did not share. Indo-Iranian did not share the Balto-Slavic depalatalization before other resonants, whereas Albanian did. The restoration of the palatal feature took place independently in Indo-Iranian and Balto-Slavic, in the latter dialect group partly after the split into a Baltic and a Slavic branch. The material shows that the loss of the palatal feature was anterior to the rise of an epenthetic vowel before syllabic \**r*, \**l*, \**n*, but probably posterior to the same development before syllabic \**m*. The agreement with Albanian suggests that this language was still a transitional dialect between Balto-Slavic and Armenian at the time under consideration.

## References

Brugman[n], K.

1881 "Griechische Etymologien", *KZ* 25: 298–307.

Būga, K.

1922 *Kalba ir senovė* (Kaunas: Švietimo Ministerijos Leidynis).

- Burrow, T.  
1957 "Sanskrit *gṛ-/gur-* 'to welcome'", *BSOAS* 20: 133–144.
- Čekman, V. N.  
1974 "O refleksax indoeuropejskix \**k̄*, \**ǵ* v balto-slavjanskom jazykovom areale", in: *Balto-slavjanskije issledovanija* (Moskva: Nauka), pp. 116–135.
- Hamp, E. P.  
1956 "OPruss. *soye* 'rain'", *KZ* 74: 127–128.  
1960 "Palatal before resonant in Albanian", *KZ* 76: 275–280.
- Kortlandt, F. H. H.  
1975 "Notes on Armenian historical phonology I", *Studia Caucasica* 3: 91–100.  
1976 "Albanian and Armenian", *KZ* [forthcoming].
- Kuiper, F. B. J.  
1942 *Notes on Vedic noun-inflection* (Amsterdam: North-Holland).
- Martynov, V. V.  
1968 *Slavjanskaja i indoeuropejskaja akkomodacija* (Minsk: Nauka i Texnika).
- Meillet, A.  
1894 "De quelques difficultés de la théorie des gutturales indo-européennes", *Mémoires de la Société de Linguistique de Paris* 8: 277–304.
- Saussure, F. de  
1889 "[Gr.] Boukólos", *Mémoires de la Société de Linguistique de Paris* 6: 161–162. [= *Recueil*, pp. 417–418.]  
1892 "[Gr.] *kh, ph* pour *ks, ps*", *Mémoires de la Société de Linguistique de Paris* 7: 90–91. [= *Recueil*, p. 459.]
- Steenland, L.  
1973 *Die Distribution der urindogermanischen sogenannten Gutturale* (Uppsala: Universitetsforlaget).
- Trautmann, R.  
1923 "Ein Kapitel aus der Lautlehre der baltisch-slavischen Sprachen", *Slavia* 2: 1–4.
- Weise, O.  
1881 "Ist anlautendes [gr.] *g* vor [gr.] *l* abgefallen?", *Beiträge zur Kunde der indogermanischen Sprachen* 6: 105–118.