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ON IE *s AFTER *i, u* IN BALTIC

The important article by S. Karaliūnas, Baltistica I (2) 113−26, 1966, has shed new light on and brought rigorous method to a vexed problem of the history of Lithuanian phonology that is usually passed over all too lightly and hastily. The author has shown clearly that the regular and undisturbed phonetic outcome of IE *s after *i* and *u*, when no synchronic morphological boundary intervened, is Lith. *š*. Because of the distinctive reflexes in Lithuanian (as against Latvian) in formations which are shared with certainty with Latvian, and seemingly Old Prussian *(moasis, -reisis, iuse, per-rēist, -isk-, pette-gislo : gýsla, teisi teisīngi : teisùs, wēi-sin, klausīton, sausai, tusnan)*, this development may be credited to Proto-Baltic at the latest.

The present paper has two aims: (1) to review the quality of certain of the correspondences assembled in such welcome detail by Karaliūnas; (2) to draw a further conclusion of historical Lithuanian morphophonology on the basis of the point established by Karaliūnas.

(1) As one might expect, some of the equations supporting the development of *s* or *š* are stronger than others. For *š*, *maĩšas, ríešas, glùšas, jū́šė, kr(i)áušė* (perhaps; though flora loans are always undependable), *rīšti, aũšti, aušrà, krùšti kraušýti, traũšti, triùšti, áiškus éiškus ýškus, kermùšė̃, vétušas, -iškas* all have strong evidence outside Baltic and are of clear morphological formation without likely ambiguities. In short, they provide firm evidence for the posited development. This explanation is, for example, vastly superior to the artificial attempt by Otrębski LP IV (1953) 39−54 to derive *šk* from *skj*.

For *s* as an outcome which is not susceptible of other complicating explanations, the following are persuasive: *-yst-, -ūst-, gausà gausùs, plūsúoti, būsena, eislùs, gýsla, krūsnis, pūsras, glaĩstas, raĩstas, pláustas: áu(k)sas, blusà, lýsė, usnìs, víesulas, teĩsti teisùs ~ tiesùs tiesà, daũsos, saũsas, tausýtis.* All these except *víesulas* fit in synchronically with known suffixes in *-s-*.

Of course, the new formations dealt with in §3. 1 offer no problem, and likewise paradigmatic forms such as the iterative, future, case endings (§ 3. 7. 1), and root-noun finals (§ 3. 7. 2). In connexion with the locative plural ending, it is worth

noting that the replacement of * -*oisu* by -*uose* has made -*š*- even less expectable than it otherwise might have been; -*yse* in the *n*- and *r*- stems only confirms this. The final in the root of *niaũsti* may be new, since it is not demanded by Lat. *nuere.* *klausýti* and its congeners need not trouble us, since it has been shown to be a new Baltic formation; v. W. P. Schmid IF LXVII 1 – 15, LXVIII 47 – 50.

vīsas offers further problems, in any case, not the least of which is the change of stem class. The West Slavic cognates also complicate the picture. Fraenkel LEW 1264 fails to mention these complexities. *plauskà* may reflect attraction to a suffix -*sk*-. Surely, *bliẽksti* is simply the usual metathesis in such clusters of the -*sk*- in the base as borrowed from Russian. Whatever the individual explanation (and it must be that, since no general conditioning feature is present) of the remaining forms of §§ 2. 1 and 2. 2, the class of forms mentioned in § 2. 3 must represent dialectal divergence.

druskà does not permit of judgment (and is perhaps a new Letto-Lithuanian formation anyhow) because it is not certain how we are to segment the suffix; likewise, *láiškas* is not entirely clear in its suffix relations. *réikšti* involves a suffix which is too complex for sure analysis. *ẽpušẽ* cannot be the original shape in any case, and must have undergone suffix substitution. The conventional comparison for *ieškóti* is Skt. *icchÁti*, but in view of the cluster attested and what is assumed below for original -*sk*- I am unable to see at present what the background of the Baltic and Slavic forms is in this case. If *kūšỹs* really is related to Persian *kus*, which is doubtful at best, the background of the consonant is ambiguous. It is possible that -*š*- in *vištà* goes back not to -*s*- but to -*k̂*- if my explanation of Albanian *zog* „bird", which I discuss elsewhere, is correct.

Certain cases of *s* in the present-day language go back to complex consonantisms; the most obvious of these is where the first member was a dental. Various of these are discussed by Karaliūnas in § 3. 3. However, the forms credited by him in that section to -*st*- could equally well be explained as coming from a simple -*t*- after the final dental in the root; this would place them under § 3. 5. Thus *maĩstas* is related to *maità* 'Aas, carrion', *mitýba* 'Fütterung', *mīsti mitaũ; skraĩstė* to *skriẽsti skriedaũ* 'encircle'; *sviestas* to *sviesti sviedžiau* (dial.) 'schmieren'. The Indo-Iranian development of such clusters is not pertinent to Baltic, in the fashion mentioned in § 3. 5, since—[tst] must in any event be assumed as the immediate precursor of the Indic and Iranian forms. It is true that, just as for *iesmẽ*, an initial dental in such clusters must be assumed for the underlying form in Proto-Baltic; but for that very reason a judgment is not possible on the exact chronology of the change in the surface phonetic forms.

Other forms may also go back to underlying clusters with initial dental: *baisà* and *baisùs*, because of the matching Slavic form *běsъ*, may contain the extended

base seen in *bai-d-ýti;* so, perhaps, also for *knaisýti : knie-t-ěti, kuĩstis : kuĩ-t-ėsi* (p. 119), and *kniaũstis : kniaũ-t-ėsi* (p. 124). *tr(i)ũsti* matches a dental similarly in Slavic *trudrъ*.

On the other hand, perhaps in *tiesà* and *daũsos,* and related forms, we may posit an original geminate **s-s,* which developed along with dental clusters to *s.*

There remain a few cases which may have rather unexpected explanations. I think a better explanation can be offered for *pìsti pisù pisaũ* than has been current in the literature. It would seem natural to derive this from *pyzdà, pìzė,* Old Prussian *peisda,* with subsequent levelling of the stem. I do not agree with Fraenkel's dismissal, LEW 600, of the word as a purely affective word; I discuss the noun in its setting with other forms elsewhere. At any rate, **piz(d)-ti* would account for the observed form of the verb.

The superlative ending *-iaus-* is in any case of recent origin, at least in that function. The claimed Slavic cognates *-uchъ-* and *-uš* are of quite unclear, and certainly not close, connexion. Unless the *-s-* here has its origin in **-ts-* or **-ss-* it may well be that there was a morphological seam earlier that points to a complex of suffixes *-iau-s-*. This would be entirely likely since a similar background is to be assumed for the comparative *-esnis;* see Endzelins BKGirF p. 138. It is conceivable that *-iau-* is related to superlative *-m-* in other IE languages as *prъvъ* is related to *pìrmas.*

On the other hand, it is clear that an adequate explanation of the immediate past of the preterite active participle ending *-us-* cannot divide this into a complex. Old Prussian *-uns* (see BKGirF p. 204) suggests the solution here; obviously the Baltic alternants of this suffix morpheme have long undergone considerable levelling, and switching of underlying form. At first the old full grade **-vēs* would have protected the *-s-;* later and underlying *-ns-,* which is necessary for the refashioned *-ęs* blocked the development of *-š-.* Thus at no time has this sequence *-us-* been open to isolated phonetic development.

The only other cases mentioned by Karaliūnas for which a reasonable explanation cannot be given, or a possible alternative etymology cannot be suggested, are those whose background is in any case at present unknown.

(2) On this basis, we may now profitably consider the present verbal suffix, so productive for inchoatives, *-st-* (BKGirF pp. 172−4), which occurs where we might expect *-sḱ-.*

It is possible that some stem finals in *-š-* actually continue **-sḱ-,* as Karaliūnas (p. 117) implies for *triùša* and *aũšta.* But the important thing is that the function and morphophonemic shape has been taken over by *-st-.*

First, I must take issue with one aspect of Karaliūnas's conclusions (pp. 125−6). I see no need in general, a priori, to link the retraction of *-s-* chronologically with

the assibilation of the IE palatal stops, in Baltic or in the other IE branches for that matter. In fact, as I think we shall see, we may understand the genesis of -*st*- in a simple way only by assuming that the development of *š* from *s* was a separate matter from that of *š* from *k̑*, and that they fell together only at a later time than the point at which we must take up their history.

The essential point to be explained is twofold: (a) How did a dental *t* develop from a palatal *k̑*? While it is true that dentals before *l* have shifted regularly to velars *(arklȳs, gùrklis)*, dramatic changes in articulation have not been characteristic of Lithuanian consonantism. Put another way, do we have here a phonetic development, or is this a more complex replacement, and if the latter how many steps are involved in the change? (b) If the usual development of *k̑* is Baltic *š*, how is the plosive feature of the *t* to be explained?

We must begin by answering the second consideration first. Obviously the simplest solution is to assume that the plosive feature has been preserved from the beginning to the present. On the other hand, since *k̑* ultimately merged with *š*, just before the merger it should have shared a maximum number of features with *š*. The most reasonable assumption is a segment which we may write *č*.

At this stage, the underlying from of the suffix was *-sč-*, and that would have been the phonetic shape actually heard in many environments, e. g. -*asč-*, *-msč-*, etc. But, consequent on Karaliūnas's findings, in position after *k, r, i,* and *u* the phonetic shape would have been -*šč-*. At this point the alternation would have been perfectly automatic and scarcely noticeable to the speakers.

We must now frame a hypothesis for the phonetic features that characterized consonantal segments at that period. We do not consider all the features that co--occurred, for only some are relevant; nor did all segments which we discuss occur as distinctive in the basic matrix in which the underlying forms were expressed. It is sufficient for our purposes to characterize the main obstruent types:

	*[p	k	t	č	s	š]
continuant	−	−	−	−	+	+
grave	+	+	−	−	−	−
strident			−	+	−	+
flat	+	−				

The rule for the retraction of *s* now becomes

$$\text{(A)} \quad [-\text{strid}] \rightarrow [+\text{strid}] \Bigg/ \left. \begin{array}{c} \begin{bmatrix} +\text{grv} \\ -\text{flt} \end{bmatrix} \\ \begin{bmatrix} -\text{obstr} \\ -\text{contin} \end{bmatrix} \\ [\, +\text{diffuse} \end{array} \right\} \begin{bmatrix} +\text{contin} \\ \underline{\qquad} \end{bmatrix}$$

In cases where -*šč*- occurred as a result of the application of this rule, new learners of the language, e. g. children, reinterpreted this rule as reading

$$(A') \quad [-\text{strid}] \rightarrow [+\text{strid}] \quad \bigg/ \quad \left\{ \begin{array}{l} \begin{bmatrix} +\text{grv} \\ -\text{flt} \end{bmatrix} \\ \begin{bmatrix} -\text{obstr} \\ +\text{contin} \end{bmatrix} \\ [+\text{diffuse}] \end{array} \right\} \begin{bmatrix} +\text{contin} \\ \underline{\qquad} \end{bmatrix} \begin{bmatrix} -\text{contin} \\ \underline{\qquad} \end{bmatrix}$$

That is to say, both segments were treated as having undergone „retraction". Thus, by this simple step the underlying form became -*st*-. At the same time, we have a deeper understanding of the suffixes -*yst*-, -*ūst*-; for their ultimate fate would otherwise have been simple -*š*-, and not -*št*-.

Later, as has just been implied, *č* merged with *š*, the geminate presumably simplified, and the alternation dropped out in favor of the underlying form. That is, A' was simplified to A, which also became increasingly restricted in scope.

We may now answer the remaining part of our question: The change was a very simple phonetic development involving the context of a rule, and its subsequent abandonment after other well known phonetic developments.

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