Initial *x- in Slavic revisited

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Abstract

In this article, I aim to show how Slavic x- could have developed from PIE or later *sk- without the need to invoke the operation of the *ruki* rule. First, the whole process of *ruki* in Slavic must be divided into three separate and causally unrelated changes, each being motivated by a different set of factors (i.e. optimisation of perceptory contrasts) within the synchronic phonological systems. Next, the change of *sk to *š is explained both in phonetic terms and by analogy with comparable changes in Germanic languages. This change predates the following shift of *š to *ş and finally to *x. As to the reasons of Sl. *sk being often the reflex of non-Sl. IE g- or k-, the process of s-mobile is given some consideration. In the second part of the article, a few dozen of the x-initial lexemes in PSl. are examined in the light of this theses, adding a couple of new explanations to old conundrums.

The *ruki* rule

It is a long-standing view of Indo-European linguistics that the voiceless velar fricative x <ch> in inherited Slavic vocabulary results from the retraction of PIE *s after *i, *u, *r, *K and *Kʷ. The process was first brought to the attention of the comparative linguistics by the Danish linguist Holger Pedersen (1895) and in the Indo-European studies is commonly referred to as Pedersen's Law, or simply the *ruki* rule, after the main factors of the change. I have shown elsewhere[1] that this process, intricate though it appears on the surface, can be explained with some confidence if the rule is properly divided into discrete phases, of which only the first phase, the *ruki*-rule proper, results from automatic retraction of the PIE apical *s after all non-anterior closed (to include high vowel) oral phonemes in post-PIE[2]. It follows

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1 Bičovský, Jan (2007) 'K pravidlu ruki a indoevropskému *s" In: Chatreššar 2006. But since the original is hardly available to the public, I dare include a short recapitulation of the argument.

2 Since I believe laryngeals to be a glottal, velar and postvelar/uvular (possibly rounded) fricative, and therefore also closed non-anterior phonemes, the ruki rule must have applied only after these were merged and possibly debucalised to ɦ/h in syllabic coda, or assimilated as a glide gesture to the preceding vowel.

that PIE *r was, at least in syllabic coda, retroflex or retracted and velarised. The subsequent changes to historical š or x are not causally related.

The feature of apicality of the PIE *s is crucial for understanding the retraction (or posteriorisation) on the phonetic and articulatory basis. The fact that PIE had an apical *s (as in Castillian Spanish) rather than a coronal/laminal *s (as in German, French, Italian and most Slavic languages) has already been pointed out by several scholars, first probably by André Martinet in 1955. There are persuasive arguments from many IE (proto-) languages for assuming that the original articulation was apical. The appearance of rhotacism (*s > r) in some positions in Latin (*honos ~ honoris*), (Northwest) Germanic (OE *cēosan* 'choose" ~ (*ge*)*coren* 'chosen") and Indic (such as sandhi –*r* for -*ṣ* before voiced consonants, e.g. *agnis+dahati* > *agnirdahati* '(the) fire is burning") points to a type of articulation involving the apex of the tongue. The resulting rhotics are as a rule apical vibrants or approximants. Likewise, synchronic evidence from languages such as Spanish shows the process in real life. In certain areas (Extremadura), final apical -*s* is pronounced as -*r* before voiced consonants, e.g. *es dulce* 's/he is sweet" [erdulθe]. Next there is an argument from orthography: the spelling of Hittite /s/ with the set of Babylonian syllabograms for šV rather than sV is strongly reminiscent of the situation in the Arabic realms of medieval Spain, where Spanish apical /s/ was likewise transcribed with an <š> in the Arabic script, showing that the sound was closer in perception to the Arabic /š/ than to its laminal /s/. And, last but not least, linguistic typology shows that in most languages employing a single sibilant in their phonological system, this sibilant is, as a rule, apical (take e.g. Finnish).

The *ruki* rule has often been invoked as further evidence for the reality of the satem dialect area, since both Balto-Slavic and Indo-Iranian displayed results of this process, while in Albanian and Armenian, the two notoriously difficult languages from the point of historical phonology, a few disputable examples could be adduced. Be that as it may, it appears that only the first phase of the *ruki* rule, *s > š can be observed in most satem languages, the other two phases, which eventually lead to *x in Slavic, and also to /kʰ/ = [x]? in some Prakrits, such as Mādhyaniṇa (Cardona 2003: 109), are parts of very different processes. *Ruki* proper, that is the retraction of PIE *s to (originally purely allophonic) *š, was not motivated by the satem change of *ḱ to *ç (which would confirm the validity of the satem isogloss), nor did satemisation secure the phonological status of these allophones - it

merely provoked a further retraction of *š to *ş, still a positional variant of *s, and that only in some dialects, while in others some or all these sibilants merged.

The retraction from *š to *ş result from typologically well-documented and phonetically well-understood strategies for enhancing perceptory distinction between palatal and apical sibilants (e.g. Marzena Żygis 2006)[3] and have no causal relation to the said retraction. Though typological parallels for such a change are far from abundant - at least Modern Swedish and Old Spanish show the change ş > x, the latter was in fact adduced to already by Pedersen himself. Assuming PIE *s was apical, it follows that at some point all satem languages must have arrived at a sibilant system with both palatal and apical phonemes. From this it would also follow that the intermediate realisation between *š and *x was not a palatal *ç (which would have with all probability merged with the original *ç < PIE *k̂) but an alveo-velar fricative [ɧ] (contemporary Swedish provoked the inclusion of this special IPA sign). The fact that the *ruki* rule is best attested in Slavic and Indo-Iranian, and that its effects were more regular in these two languages, is probably also due to the fact that apart from satemisation itself, these two underwent further palatalisation of velars, resulting in even more sibilant series than in the case of Baltic, and of course, Albanian and Armenian.

Thus it can be shown that neither the retraction to *ş nor to *x were motivated by the phonemes directly involved in he first phase of *ruki*. The crucial point for the reconstruction of PSl. *x- is precisely that the second phase, *š > *ş, does not depend on the factors (r, u, k, i) of the first one, nor does the third phase depend on those of the second one. And, most importantly, neither of the latter two phases must rely for their input only on the results of the *ruki* rule proper, but would naturally apply to any segment that meets the criteria for the shift regardless of its origin. The *ruki* rule, by definition, is a progressive assimilation. This would seem to imply that for any Slavic reflex of this rule, for any original *x, there must have existed a segment to its 'left" that triggered the change. There is however a group of words in Slavic, well attested and mostly agreed to be of at least Balto-Slavic antiquity, which cannot meet the criteria – words with initial x-, such as *xoldъ 'cold', *xorbrъ 'brave, valiant', *xudъ 'poor, weak', *xormъ 'house, temple, sacred precinct' and a few dozen more.

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3   It is, of course, possible that other phenonema played their parts in this develop-
ment, but the one described by Żygis seems to be able to explain the process by itself.

The difficulty in reconstructing the original structure of these words is obvious. Apart from the verb *xoditi 'to walk', whose *x- may be (an may not but usually is) explained away as the result of sandhi assimilation with the numerous preverbs ending in *ruki* factors, such as *proti, *per, *h₂eu, etc., there is no good explanation for an original *s as the input for *ruki* changing to *x in this position, and I believe there are good reasons to refute this hypothesis for *sod > *xod as well (see bellow). Also, this may presuppose for the PBSl. language to have undergone univerbisation of these preverbs with verbs already at a very early stage in its development when *ruki* retraction was still applicable, and that is dubious.[4] Marko Snoj 2003: 210 proposes the same explanation for *xorna 'fodder, care" and *xorniti, connecting this word to the PIE root *serh₂ 'take care'.

Initial x- in Slavic

The question why the factors of initial *ruki*, once they affected *s, would disappear[5] in initial position while elsewhere they were preserved and developed in the manner expected, is still a mystery. Initial clusters *is, *us, *rs (likely *Hrs in PIE) would have yielded Slavic *jьx *vъx *rъx, and therefore no initial *x- at all[6]. There only remains one possible explanation of the initial *ruki* *x, in PIE groups *Ks and *Kʷs, possibly surfacing universally as *ks regardless of the articulation of the velar (and its laryngeal features such as voicing and aspiration). This would have changed to *kš and later either to *kx or more likely to *šš, then becoming *x, depending on the relative chronology of the changes in PSl. syllabic structure. Indeed, for a small group of words, etymologies with initial PIE *ks could be found, especially

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4   In Baltic, reflexive pronouns are appended between the preverb and verb root, which is clearly a phenomenon comparable to e.g. Old Irish and which shows that some independence of the preverb is to be expected for earlier stages. However, no traces of this can be found in Slavic, so the era of univerbisation is not likely to predate the split of Baltic and Slavic, while the first phase of ruki only operated much earlier than that.

5   Of course, in a strictly mechanistic manner, one could propose a *HsV, with a 'disappearing laryngeal" to save the day, and include laryngeals in the ruki set for Slavic, with a possible dissimilatory change of *[xs] to *[ks] and [kʃ]. The few instances of possible PIE *HV > PSl. *kV, such as *koza 'goat" and *kostь 'bone" for *h₃Vǵeh₂ and *h₃ostis are themselves still a matter of debate. Such an explanation could not be ruled out on purely historical-phonological grounds, but would require the reconstruction of a number of PIE roots unattested elsewhere in IE languages, and thus throw the IE status of these roots, along with the laryngeal, overboard.

6   Terence R. Carlton clearly did not perceive this problem - 'However, the number of Indo-European roots with structures of the type k or r + s + vowel is much too meagre to explain all the instances of initial x in Slavic." (Carlton 1991:96)

in Indo-Iranian and Greek, and there is nothing to disqualify the existence of such initial clusters in PIE, rare though they must have been, nor the possibility that they survived in Slavic.

It would be a mistake of course to revert this logic completely and deny that any initial *x- could have been caused by the *ruki*-rule. It is tempting, for example, to link Skr. *kṣudá* 'hungry' to Slavic *xudъ 'poor', although I believe that there is at least one other possibility, and there are a couple more words that could find an explanation here, but by and large, most instances of Slavic x- do not find any such parallel, no matter how hard one twists and stretches their semantics and morphology.

Several possibilities for the origin of Slavic *x- have been proposed. Some relied on processes other than regular phonological change, such as affective change of whichever original segment appeared to match etymological correspondences best – a strategy followed by e.g. Machek: 1971, but the older the etymon seems, the more difficult it is to envisage a good argument from semantics for affective change. Moreover, providing affective change as an explanation where no other linguistic explanation can be found is always an easy target for criticism and it would have seemed more prudent to admit failure and leave the question unanswered for the time being. There have even been serious attempts to understand *x- as a result of a prefix or a morpheme of its own, the zero-grade *ks- of a root *kes- 'to cut' and the like, but needless to say – neither were they found very persuasive.

Recently, a difficult quasi-PIE affricate *ks has been proposed by Bańkowski 2000 to account for some instances of initial *x- (even some of the best etymologies we seem to have, such as *xorbrъ = PGerm. *skarpaz), while doing away with others by assuming an irregular change of initial *us- to *ъx- (rather than the expected *vъx- with v-prothesis) and then aphaeresis to *x-. The prefix *us, otherwise unattested in Slavic (there is only the s-less variant *vy- from *ūd-) goes back to PIE *uds, and I am in doubts as to whether the outcome of a PIE group [ts] would qualify for *ruki* retraction at all, since it is more likely that it would have been simplified to coronal s long after *ruki* ceased operating.

Many scholars attempted to find a non-*ruki* source for Slavic *x in any consonant cluster that would impose the vague impression that it could have somehow developed into a velar fricative, such as *k̂H-, *sgʰ- etc. These developments often contradict the overall tendencies in the development

of PBSl. or PSl. consonantism, either requiring that laryngeals survived well into the PSl. period or denying any unity of development for Baltic and Slavic. This strategy, though yielding no persuasive results, at least acknowledges the fact that the *ruki*-rule by itself cannot account for every *x- found in the Proto-Slavic lexicon.

And of course, a combination of all these strategies would have been expected to arise sooner or later, picking and choosing affective change for this word and one of the phonological changes listed for another one and so on – Shevelov 1964: 136 gathered an early selection of these. 'Thus the sources of the initial x- in Sl are:

1. IE kᶜ-   affective

2. IE ks-   not necessarily affective

3. IE s- in roots that may have   not necessarily affective, often with

prefixes ending in r, u, k, i   differentiation

4. IE s- in prefixless words   affective

5. IE k-   affective

6. IE sk-   affective

7. x, h in loan-words   not necessarily affective'

There have also been attempts to explain initial x- in Slavic as a result of an Iranian adstratum and borrowing. Attempts have been made to explain even the very phonetic process of the *ruki*-rule as being of Iranian origin (Sussex 2006: 24 among others). Since it is universal in Indo-Iranian, the *ruki* rule must have been at least of Proto-Indo-Iranian antiquity (the unity of these dialects is variously dated between 2000 and 2500 BCE), and failed to apply at some stage to the newly developed Iranian *s < *k̂, in the same manner as it did not apply to PSL *s < PIE *k̂. At such a deep time level, rule borrowing among closely related languages is possible, but so is an independent (and similar) development of a common heritage. Also, since Iranian š does not became x, one should look for etymological relatives with š- as well as x- to examine all the possible sources. Initial x- in the few Iranian languages known from the 1st millennium BCE results from older *sV- *su̯-, *sj-, which pertain to a much younger stage of development.

Etymological correspondences

Ever since etymological correspondences were first taken into account, it appeared that Slavic *x- mostly seems to reflect *sk-*, *k-* or *g-* in other IE languages, with a greater number of cognates in Baltic and Germanic – something to be expected given the large percentage of shared vocabulary among these three branches. There are a number of almost certain correspondences, some pointing to a single velar, such as *xoldъ – Eng. *cold* – Lat. *gelidus* etc., others to *sK-, such as *xorbrъ – MnE. *sharp* etc. The *sk-* reflexes are especially abundant and many examples can be found for a *sk-* and *K-* variation of the same root, possibly due to the so called *s*-mobile (see below), effective long after the split of PIE, and possibly well into the PSl. era.

The sk- group has already been employed as a *ruki*-like explanation of x-. It is, albeit superficially, plausible that these initial consonant groups were either as a rule, or probably only occasionally or in some dialect, metathesised to *ks very early, and this metathesis fed the *ruki* rule while still operating. However, such metatheses are rare cross-linguistically and suspect in a language that generally tended to simplify and regularise consonant clusters along the sonority principle.

The assumption that the *ruki* rule in Slavic has three phases has some rather promising implications for the reconstruction of initial *x-. In fact, what we are looking for is not necessarily the source of Proto-Slavic *x – and if plausible explanation has been found during the last 120 years, it may also be due to there being none. What we are looking for is simply any phoneme that would finally turn up as x- in Slavic – and that is not a *ruki* *š, but simply any *š there was to undergo the following shift to *ş and eventually, to *x.

The fact that Sl. x- does not regularly correspond to a single reflex in Baltic, Germanic, or anywhere else, is still a grave problem, even if we have to solve the comparatively easier question of a non-*ruki* š. If we remain faithful that there is a good and regular explanation (and intuition warns us that there may be none), it is necessary to assume that although the extra-Slavic reflexes are not uniform, Proto-Slavic had only one original sound or sound-cluster and that the reflexes in other languages somehow developed that sound in either one way or the other in each and every case. It is fairly obvious that finding an explanation for such changes would be as difficult,

or probably even more difficult, than finding them in Slavic alone. The five most common reflexes of *x- outside Slavic are *sk- *k/*k̂ *g/*ĝ and it would seem that to account for Slavic *š- we would need to postulate at least five rules to deal with these piecemeal. Also, we would be immediately faced with the obvious problem – we know quite well what the outcomes of these phonemes are in Slavic. Or do we?

Yes – we do know for certain that initial *k̂ and *ĝ yielded late PSl. *s and *z respectively, at least they did if no resonants followed. The situation is slightly more complex with *k̂r, *k̂l and *k̂u̯ whose outcomes are not uniform, sometimes we even get two reflexes of the same PIE root, such as *k̂u̯eit 'to shine' giving both *svět- and *květ- in Slavic, or *kloniti and *sloniti, both ultimately from PIE *k̂el, enlarged to *k̂len, also found in e.g. Eng. lean, Gr. κλίνω etc. Especially in Baltic, such examples abound (Kortlandt 1978). In both cases we probably deal with reflexes of two dialect areas, the distribution of which had long been lost – they might have, for all we know, merged, or one might have disappeared leaving only slight lexical traces – the existence of both original *kR and *kʷR ensured that the shift of *k̂R to *kR did not result in a combination unnatural to the language. [7]We also know for certain that until the first Slavic palatalisation, the neutral PBSl. velars remained unchanged. So it is possible to rule out *k̂- or *ĝ- as direct sources for Slavic *x-. It is likely that the ancestors of Balts and Slavs lived in the same region, and since their languages display such strong affinities, they must have been in constant contact since IE times. Therefore, they originally formed a dialect continuum, in which there must have been intermediate dialect stages between the core of the Slavic homeland and the core of the Baltic region. Forms of one language could have been borrowed freely and frequently into the other, quite often no phonological adjustment would have been necessary, since even after the split their phonologies were very close, and so were their grammar and lexicon. Later, population movement would have occurred from time to time resulting in temporary bilinguism and later in amalgamation of the two dialects (compare the

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7   It should be noted that in the course of its development from PIE to Late-Proto-Slavic, the language traversed several millenia and it seems debatable that for all this long time it remained a single language with little dialectal differentiation. As is the case with any other language, several stages of dialectal disintegration and later congruence would have taken place, leaving traces both in the grammar and the lexicon. We should not shirk from acknowledging that some of the variation is rather due to dialectal congruence then to anything else – variation should be expected in any language and it is uniformity which should raise suspicion.

results of Norse-Anglo-Saxon contacts in medieval English community). The existence of Slavic doublets (or even triplets) of initial x- K- and sk- is to be expected under such circumstances.[8]

But there still remains one fact that we do not know for certain: what are indeed the regular reflexes of PIE *sk- groups in Early-Proto-Slavic? The data is not very impressive - examples are surprisingly scarce in comparison with, on the one hand, Slavic *sp-* and *st-* and, on the other, with *sk-* in Baltic and Germanic, the two closest IE branches. Mike Southern interpreted the overall scarcity[9] of *sC- reflexes of s-mobile in Slavic as resulting from the loss of s-, i.e. to a reversal of the *s*-mobile process (though for him it is still part of the process, working both ways on the initial consonant (groups)). In fact, there are very few good examples of Sl. sk- or šč- that would unequivocally point to an original PIE *sk-, s-mobile or not, thus attested in some other IE branch. It is true that the material is not easy to interpret in the first place: many such groups in PSl. resulted from earlier combinations of the preverb *sъ (< PIE *(k)sun) + *k- and were quite often written with –ъ- even in CSL, so that e.g. *skokъ 'leap' appears either as *skokъ* or *sъkokъ* in OCS. The fact that this almost never happens with original st- or sp- is suspect. A likely explanation would be that the lexical integrity of these roots never allowed multiple analyses, whereas *sk- roots were, for some reason, more ambiguous in this respect. Both the relative scarcity of sk- and their greater ambiguity support the conclusion that most original *sk- groups were at some point lost in that dialect of PSl which later became dominant. There is nothing to disqualify the possibility that several *sk- groups were either reintroduced from some minor dialect, or formed anew. A perfect analogy for such a development is found in (Old) English. Numerous etymological doublets such as *shirt-skirt* display such a phenomenon – the *sh-* variants are (Southern) English, the *sk-* variants northern and/or Old Norse by origin.

Also, most *sk-* examples in Slavic do point to s-mobile variation, many even to such variation within Slavic, and often the s-less variant seems to be an original verbal root in Slavic. To list but a few – *skora 'hide (n.)' < *(s)k̂er 'cut' (cf. *kora* 'bark, rind' and Cz. *choroš* 'polyporus, a growth on the bark of

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8   As Jost Gippert reminded me, the same phenomenon exists in Germanic, e.g., Germ. schmelzen and Engl. melt, which, as he adds, 'should be regarded as part of the s-mobile problem, which need not be explained on the basis of interdialectal borrowing or the like but which could yield doublets off-hand even within one given language."

9   Slavic s-mobile is not as scarce as Southern claims: there are many examples of both s+ variants in Slavic and variation within this group, though mostly not *sk-/*K- variants.

a tree'); *skopьcь 'eunuch, ram' < *(s)kep 'cut' (cf. *kopati 'dig'); *skala 'rock' < *(s)kel 'cut' (cf. *klati 'hit, hew'). Most such forms result from morphological derivation that could have taken place almost at any point in time during the development of PSl. I therefore assume that:

(1) PSl. *sk- became *šš- universaly in one dialect.

(2) Where PSl. *x- corresponds to e.g. Germanic k- or h-, initial *s was either lost in Germanic, or appended earlier in Slavic.

Here (1) requires a solid argument for such a development, and it seems that it can be provided both from phonetics and from linguistic typology. It is (2) which is more difficult to account for. Let me first address the Slavic part of the problem. It is an established fact that in PIE, only initial clusters of s+unvoiced consonant were admissible. Since variants in roots with Media-/sTenuis- are sometimes found, there seems to be an agreement that the sibilant in this position caused devoicing (and possibly deaspiration) of the following media. It has also been argued by many that in the vicinity of *s PIE palatovelars were retracted, so that the group resulted in *sk . In *k̂s groups the assimilation apparently worked either way, possibly according to rules of syllabification or other phenomena. Therefore, whatever the initial velar in any other IE language is, Slavic would most probably have a *sk-.

Accepting now tentatively that the scarcity of sk- in Slavic is not a coincidence but a trace of some phonetic change, the argument follows naturally: the anlaut consonant cluster *sk-[10], in reality an apical plus a dorsal, was mostly assimilated to *šš (via *šx). It is certainly easier to envisage such a change than any change that would lead to *x- directly. How would such a change proceed? Here we are fortunate enough to have a perfect example of such a development in a well documented IE language, whose dialects and historical stages are well studied and we can be quite confident that our knowledge is very accurate, viz. German. That Old (High) German *s was an apical is shown by numerous loan words in Slavic languages – such as Cz. *škola*, *růže* 'school" 'rose' = Germ. *Schule*, *Rose* etc. The reflexes of earlier sC and s were really very close to (Slavic) šC and š/ž, and after the original *s in most environments merged with the new s < *ts < *t and became a laminal, residual sC clusters were further retracted to šC, compare Eng. *swim* Germ. *Schwimmen* etc.[11] But šk- continued to assimilate – and the

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10   For an exhaustive treatment of the s+k̂- problem see Lubotsky (2001).
11   Almost the same process can be seen in the evolution of Portuguese (Camara 1972).

intermediate stages are still to be observed in the pronunciation of Dutch – [sx]; in Dutch, apical [ʂ] is still the default pronunciation of the sibilant. It is worth noting that no such change occurred in *sp- and *st- groups. Before the regular development to German š <sch>, a geminate šš seems to be the most plausible outcome of further assimilation (compare the development of šč in Russian, or the *sci-/sce-* groups in Italian etc. for the initial geminate or long sibilant).

In English, examples such as *shower, shore, shorn, shrink* from OE *scūr scora, scoren, scrincan* show that palatalisation here was not the main factor in the change of *sk-* through *šš-* (note that in contrast to original *VsV* groups, in *VšV* groups no lengthening of vowels in medial 'open' syllables takes place – the sequence was still a geminate) to *š-* and it was rather a progressive assimilation in the consonant cluster as was the case in German.

Although tempting, I believe that a comparison of Slavic *sk > *x to late Prakrit *sk- > kh-* is not fruitful (see details in Cardona 2003: 109). In the latter case, the development proceeded along these lines: first *s-* lost its oral stricture and became a mere voiceless glottal spirant (reminiscent of contemporary Latin American Spanish *VsC > VhC*), next, this spirant was reanalysed as a preaspiration of the following stop, and finally, it was shifted to post-aspiration, which is a more natural ordering of the two articulatory gestures. For one reason, this could not have happened in Slavic. In Prakrits, all the initial SC clusters, regardless of the articulatory position of the stop, underwent the same development, which resulted in *ph* and *th*. Nothing comparable happened in PSl if we are to judge from its latest stages. Of course, if *x was already in the system, while *tʰ *pʰ were not, this putative *kʰ could have merged with *x, while aspiration of the other two groups was simply lost. But if, as is more likely, it was still *š at that time, no such merger is imaginable.

Following degemination, which would only be the logical next step in such an initial cluster (compare such developments in e.g. Italian, German, English), in Slavic, this later *š merged with the *ruki* *š, which probably also resulted in a phonologisation of the latter, since prior to this merger, the situation resembled that of Vedic, where, loanwords exluded, the retroflex ṣ was still only an allophone of *s*.

The second problem, namely what happened to the *k-* and *g-* reflexes in other PIE languages, is probably the harder. Although in general, historical linguists do not have difficulties in linking roots with and without initial *s-* together, the problem of this so called *s-*mobile is still an enigma. In my opinion, this *s-* is indeed, as Edgerton 1958 proposed, the result of a sandhi metanalysis in PIE and likewise in later languages. Edgerton further speculates about the possibility of e.g. nom.sg. *o-*stem –s being ambiguous as to whether it, in sandhi position before a consonant, represented a single or a double s, the second s being part of the next word. His argumentation uses the example of PIE *$h_1$es-si 'thou art" > *$h_1$esi as a proof of degemination of *–ss- in PIE. Needless to say, this example stands alone and moreover, comes from a word that would surely score among the most frequently used in the language, so such a degemination is rather due to frequency than anything else. And, last but not least, in the case of *s-*mobile we speak of external sandhi. Mayrhofer goes on to argue that any possible group of *–s s- would have been treated as –s- anyway, so the speaker would not have been able to decide whether any *–s- in sandhi position represents */–s-/ or */–ss-/ and would often select the latter. I find it difficult to believe that such a metanalysis would have taken place very often. By far the most common type of metanalysis on such a large scale are combinations of phrases such as article+pronoun/noun (cf. English *apron*, *adder* etc., parallels can be found in Italian, French and other languages), preposition+pronoun (cf. Slavic, where the final segment of prepositions ending in *–n (*sъn 'with", *vъn 'in"etc.) whose final segment shifted to the onset of the pronoun *j-, thus creating a secondary subset of 3prs. pronouns) or preverb+verb (cf. Cz. *bahnit se* 'to concieve (of a ewe)", original from *ob jagnitъ sę*, in the same way also Cz. *bořiti* 'demolish' (< *ob-oriti*). A sequence of PIE Subject+Verb hardly compares to these examples: all such structures are parts of the same syntactic phrase, even of the same prosodic sequence. Thus, if indeed *s-*mobile results from some such process of metanalysis some other source must be found. Since neither PIE nor its daughter languages in the earlier phases did have articles and since most roots with s-mobile are clearly verbal anyway, the candidates for such a source are to be found only among the primary adverbs/particles. Incidentally (or maybe not), many PIE adverbs do exhibit an *–s alternating with -Ø, notably *eĝʰ-s, *sub-s, *$h_2$ed-s, *ud-s etc. This *–s, apparently not a part of the root but some kind of desinence, might have played a distinct role in the PIE language, most likely signalling

a free-standing adverb as opposed to a (future) preposition or preverb.[12] In later stages, this role was mostly lost and the two forms merged, with either of the two becoming the default representation. If at some stage there existed both univerbisation such as *eĝʰ-bʰereti 'brings out > pronounces etc.', cf. OIr. *epert* 's/he said' and juxtaposed *eĝʰs (...) bʰereti with probably the same meaning 'brings out', it is only a matter of time before loose particles cease to function as such (as it happened in Classical Greek, Latin, Classical Old Irish, Slavic and Baltic and most later Indo-Iranian languages) and common juxtapositions with *eĝʰs bereti would be treated as by-forms or equivalents of univerbised forms, with no clear role of the *–s- element. Metanalysis, both phonological (leading to .sC rather than s.C, thus naturally favouring open syllables) and semantic (the s+form would become the 'marked form' in the pair of, say, *sker and *ker, leading to a reinterpretation of their semantic relation 'cut" and 'cut abruptly, cut badly etc." was to be expected.

Even up to recent times, in English as in other Germanic languages, *s*-mobile survives as a quasi-grammatical element (this was the way Mark Southern treated the phenomenon in Germanic), yielding English *squeeze* from obs. *quise* < OE *cwysan*, *splotch* from *plotch* or *blotch*, *squab* from obs. *quab*, *swirl* from *whirl*, *scratch* from *cratch* etc.[13] For Slavic, I would assume that the input for *š- (future *x-) was either PIE *sk-, or a later (but still very early in the PBSl. period) *sk from *s*-mobile enlarged roots. If *s*-mobile is to blame for at least some sC roots, *s*-less forms of the same roots would be expected to exist in the language – and it seems that indeed they do.

Since of all the IE language branches, it is Germanic and Baltic where most examples of *s*-mobile are found, in Germanic even post-Grimm Law examples, and since these two branches were the closest to Slavic in most respects, it should not be surprising that in the same way as there are differences between Baltic and Germanic, with sometimes the sigmatic variant in Germanic, sometimes in Baltic, there could have been sigmatic variants in Slavic, where none survived in Germanic and Baltic.

The corpus

Taking *sk- as the default source for PSl. *x-, I shall now examine some of the more certain etyma, assuming that this theory brings further argument for accepting or renouncing any etymology. Words commonly held as Slavic

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12   In this way having the same role as the –s of PIE nominative sg. and pl.

13   Examples from OED.

(excluding possible onomatopoeia and loans) are the following: *xorbrъ 'brave, valiant' *xoldъ 'cold' *xlǫdъ 'rod' *xabъ 'weak' *xalǫga 'jetsom, osiers' *xipъ 'arrow, stick' *xirъ 'wide' *xmura 'cloud' *xoditi 'walk, go' *xajati 'care' *xotěti 'want' *xlębъ 'waterfall' *xomǫtъ 'hames' *xorna 'food' xorniti 'to protect, to feed' *xromъ 'lame' *xudъ 'poor' *xvojь 'twig' *xujь 'penis' *xvostъ 'broom, tail' *xvorstъ 'brushwood' *xrošťь 'dry twigs' *xovati 'look after' xvorъ 'sick' xribъ 'mountain range' *xormъ 'temple' * xvatiti *xytiti 'catch' *xytrъ 'quick, clever' *xvala 'praise' *xala 'rugs??' *xybati 'go amiss' *xolpъ 'man' *xoliti 'shear' *xъrtъ 'greyhound' *xyliti 'to lean' *xestъ 'six' *xibati 'move to and fro' *xapati 'grasp' *xerъ 'dark, grey' *xvějati 'sway' *xrędnǫti 'to be sick' *xumъ 'rustle', *xelmъ 'scum', *šedъ 'grey", all in all, twenty four examples. In these reconstructions, forms with initial *sk- correspond to Proto-Balto-Slavic, those with *š- to Early-Proto-Slavic, and those with *x- to Late-Proto-Slavic.

     *xorbrъ < *skorb-r-os

Formally an *o*-stem adjective with an *r*-enlargement; this formation is well attested in Slavic – cf. *dob-rъ 'good' *mok-rъ 'wet'. *xorb- seems to have very close relatives in both Germanic *skarpaz 'sharp' and Lith. *skarbs* 'sharp, cruel', and Latv. *škerbs* – since *xorbrъ primarily desribes the good qualities of a warrior, a concept such as 'a worrior as sharp as a...' seems natural. MIr. *cerb* 'sharp' shows the asigmatic variant of the root. Incidentally, if the root goes back to PIE (which need not be assumed), it would be one of the rare examples of PIE *b.

     *xoldъ < *skoldos < *s-ĝold^h-os

The exact semantic parallel in both Germanic *kaldaz and Lith. *šaltas* for Sl. *xoldъ 'cold' leaves little room for doubt that these words are indeed related. One would also add Lat. *gelidus* with the same meaning. It is therefore very annoying that it seems impossible to reconstruct a single PIE root to oblige all three terms. Judging by Lat. –*idus*, it would seem that the root is *KelH-d^h, to allow for the –i–, resulting no doubt from the reduction of a medial syllable. Both Slavic and Germanic agree on *d^h, whatever we may think about the onset of the root. Latin and Germanic also agree on initial *g-/*ĝ-, so the one odd form left to be explained (apart from Slavic) is the overall unvoiced Lith. *šaltas*. Here I believe we can still count on earlier *žaldas – at least many instances of similar devoicing have been studied in the development of Baltic, see especially Machek 1934: 7-36 – the semantic

and structural parallel is too strong to exclude relatedness, however, this word (and the ones studied by Machek) may also be the result of borrowing from some so-far unidentifiable IE language. In Slavic, with the *s- added, both devoicing and depalatalising took place, resulting in *skoldos and later *šoldos.

*xlǫdъ < *sklond-os

In the sense of 'rod' or 'stick', Lith. *sklanda* 'stick' is an exact parallel, the expected Slavic form would then be *šlondos. It is difficult to posit a PIE root, though. Most likely, this BSl. root is based on PIE *kel 'cut', but the origin of the *–ond- enlargement is obscure.

*xabъ < *skobʰ-os

This word, although agreed to be of PSl. ancestry, is by no means easily explained. The basic meaning is probably 'weak' or even more likely 'slack', and meanings of words derived from it range from Cz. *ochabnout* 'slacken, weaken', Sln. *habéti* 'weaken' to LSorb. *chamny* 'poor' (from *chabny by assimilation) and Pol. *chabanina* 'rotten meat'. Since few extra-Slavic parallels can be found, Jiří Rejzek 2001 attempts to relate these words to Czech *chobot* 'trunk', OCS *xobotъ* 'tail' and *skoba* 'hooked nail, rivet', and outside of Slavic, to the Lith. verb *kabéti* 'to hang'. The original meaning of the root would thus be something like 'to hang loose'. Little evidence for other explanations can be adduced: there is Lith. *skabeti* 'cut', ON *skamma* 'hurt', which seem to fit formally, but the semantic relation is probably too remote to allow any useful comparison.

*xalǫga < *skalonga < *(s)kʷāl-

The original meaning of Sl. *xalǫga is difficult. OCS *xalǫga* has the meaning 'hedge' or 'osier fence', while Sln. *halóga* 'kelp' and SCr. *hàluga* 'flotsam osiers' both seem to imply some kind of organic material. Czech *chaluha* 'kelp' is a late loan from Sln. and provides no clue. Lat. *squālidus* 'dirty, unkempt' and *squālus* 'dirt' both come near semantically, but probably not near enough. On the other hand, if 'oisers' come as secondary, 'flotsam', the kind of organic material accumulated in flowing water outside the main current, would work very well for both Slavic and Latin. Slavic *kalъ 'sediment in water' might be connected as well. The ending *–ǫg- is rather scarce in Slavic, but if *ostrǫga 'spur', *bělǫga 'sturgeon', *pьstrǫgъ 'trout" all derived from primary adjectives ('sharp", 'white", 'pied"), are examples of the same derivative suffix, then perhaps *xalǫga does come from *kalъ 'dirt,

sediments in water' as 'a place with sediments'. I propose then a PIE root *(s)kʷeh₂l or *skʷāl 'sediment?", to which Gr. πηλός 'mud' would be related. There is also the large group of cognates for PSl. *kalǫga or *kalǫža 'a (dirty) puddle', which exhibits both the root *kal and at least partly also the suffix –ǫg-. Alternatively, the two words might even be dialectal forms of the same etymon.

  *xipъ < *skeip-os

Most often, the three Skr. words, *kṣípati* 'to throw' *kṣip* 'finger', and *kṣiprá* 'quick' are cited as cognates, although it is difficult to see how all of them could be related. Initial *ks- would of course solve the problem at once assuming the *ruki* rule. The Skr. words themselves are not very clear, and at least for one of them it is not even sure whether it reflects original *ks- rather than *sk- (*chipra* vs. *kṣipra*). There is, however, a large group of words with almost the same meaning ('stick', 'rod') in a number of IE languages – Lat. *scipio* 'rod', Gr. σκίπων 'rod' and possibly σκοῖπος 'beam', Lith. *skiẽpas* 'rod' - that seem to be a more likely match. In Slavic, there are two forms of the underlying root, *skeip, the first one in *xipъ > *šipъ and the second in *cepъ from *koipos. I assume that the verb *štěpiti, if related at all, is secondary to *cěpiti, with sъ- 'down, away from' – that would also explain the semantic difference between *cěpiti 'to strike' and *štěpiti 'to cut away, cleave'.

  *xirъ < *skeir-os

I suppose the best explanation to star from is the root which underlies *čirъ 'clean', probably a by-form going back to *skeiros 'clear".

  *xmura < *smura

A difficult word by all means. Presumably, there are forms of the same word which show initial sm- or šm- in Russian and Czech, there is also a form reflecting earlier *mur- in Czech *mourovatý* 'striped (of a cat) ' and a whole group of words with the sense 'soot' or 'coal' derived from PSl. *murъ. These latter seem to have a cognate in Germanic *smar- 'to annoint' = Eng. *smear*. But it would prove difficult to reconcile the two structurally, even though the semantics seem close enough.

  *xoditi < *skodʰ < s-gʰodʰ

I have already expressed my doubts that this is a case of sandhi change. Apart from the chronology, there is one more difficulty in equating the root

with e.g. Gk. ὅδος 'way'. According to Winter's Law- now well established and seemingly as universally applicable a law as any PIE sound law usually is - the sequence *od should have given PBSl. **xōd > **xād, as it does in, e.g. *ed 'eat' > *ēd. Only a root such as **sodʰ would satisfy the rules of historical phonology, but alas, we do not have such a root attested elsewhere. However, it does display ablaut alternations (*xoditi, alongside the frequentative *xōdjeti, the *l*-participle *xьdlъ, past act. participle *šedъ), so apparently the root is quite old in Slavic. Also, it should be noted that we do not seem to have other such roots with sandhi *x- among the large group of PIE verbal roots with *sV- as likely to have been prefixed as is *sod, such as *sek 'cut'. PIE *gʰedʰ seems to fit phonologically. The meaning 'unite, come together, fit together', appears in Skr. *gadhitaḥ* 'connecting, held together' and seems to have the same meaning in Germ. – cf. OE *tō-gœdere* 'together'. From the same root comes Germ. *gōd-* 'fitting, good' and of course Sl. *god-* whose derivatives range from '(right) time', 'year', 'hour', 'happen' 'feast' to 'fitting, opportune'. If the basic form of the whole paradigm is originally a noun *sgʰodʰos > *skodʰos 'comming together' or 'assembly', the other verbal forms are referring to 'getting together' with a broadening of the sense to 'going'.

   *xajati < *skoi̯-

This root is mostly attested only in the negative compound *ne xajati 'to let be, to allow' – while the original meaning can still be found in some Slavic languages, as 'care about/for'. Greek ἀσκεω 'to strive, to attempt' comes near, if the original meaning was something like 'to care for' or 'to look after'. The semantic parallel in words such as OIr. *scíth* 'weary' or Toch. B. *skai* 'work', both of which have been compared to the Slavic word, is less satisfactory.

   *xotěti < *skotetei

There is only one possible parallel with at least partly matching semantics, viz. Lith. *ketéti* 'to make ready', but phonetically this is not persuasive. Without etymology thus far.

   *xlębъ < *sklembos

This word is mainly attested in East and South Slavic, by R. *xljab*, SCr. *hljeb* and OCS *xlěb*. The only related form is found in the Lith. verb *sklenĩbti* 'to slide off", but the semantic fit is almost perfect, and therefore *sklembos is warranted at least for BSl.

*xomǫtъ < *skomontos

Since this word, 'hame'', refers to an item connected to one of the trademarks of IE culture – horsemanship, there is a natural bias towards reconstructing it as a PIE root. However, only in Germanic and Baltic do we find closely related words - Lith. *kãmanos* 'leather bridles' and Dutch *haam* > Eng. *hame*. Only the initial part of these words seems to match – all could possibly come from the PIE root *ḱem 'to cover'' – with different derivations – Germ. *χamaz, Balt. *kamanā and EPSl. *skomontos. The change in Balt. of PIE *ḱ to *k might very well be the result of original *s*-mobile, which we would expect in Sl. as well. Although in Balt. *ḱ often undergoes depalatalisation, this is mainly true in the vicinity of liquids, *s and *u̯ – none of which would apply here. I therefore propose BSl. *skomont- as the original form. Since the BSl. and Germ. forms seem to be very close, I believe that a borrowing from an unidentified Turkic language is not possible – unless it happened before the operation of the Grimm's Law – and as far as I know there were no Turkic peoples in the proximity of Balto-Slavs at that time (500 BC is commonly taken as the time when the Germanic Consonant Shift commenced).

*xorna < *skorna

First of all, the often invoked Avestan *xᵛarəna* (last probably Derksen 2008: 205), although formaly almost a perfect match to PSl. *xorna, suffers from one weakness – its cognate in Scythian, the most likely donor of this word, was farna, and it is difficult to understand why an initial f, absent from PSl. phonemic repertoir, would be rendered as *x- rather than *p- or *u̯-. Moreover Scyth. *farna* means 'plenty' rather than 'food' or 'fodder' and comes from the PII. *parHnas 'rule'', cognate to Skr. *parṇa* of the same meaning and PIE *pelh₁ 'fill''. CSl. *krъmja* 'fodder', itself without cognates, could be connected via a PSl. root *ker, the former *na*-derivative *skorna (comp. *streti 'spread' > *storna 'side, extension, country'), the latter from *kr-mi̯a. The semantic shift proceeded from 'care, custody' to 'feeding'.

*xromъ < *skromos < *ḱer

Sl. *xromъ 'lame, crippled', well attested in all major Slavic languages, seems to have a tempting parallel in Skr. śramáḥ of the same meaning. This formation, however, probably reflects a participle in *–omos, productive both in Indo-Iranian and Slavic, to the root *ḱer 'cut' – probably with the meaning 'injured'. For Slavic, we would expect **sromъ > **stromъ

(comp. *ob-srov- 'island, lit. flow-around" > *ostrovъ), and there seems no other conclusion but to project into PSl. a by-form *skromos, possibly with a somewhat stronger and more affective meaning. It is possible that Pol. *poskromić* 'tame – to cut out' and PGerm. *skrama 'wound' both reflect the original *sk- by-form. Perhaps the term applied to animals and people somehow mutilated so as not to be able to walk or breed properly. Germ. *χarm- (Eng. *harm*) comes very close in its consonantism and meaning, but the ra – ar change seems to disqualify it.

*xudъ < *ksoudos

I have not been able to find any *sk- cognates elsewhere. Skr. kṣudra 'hungry', with the expected zero-grade in an r-derivative, seems to offer the best explanation by far and *xudъ would therefore be one of the rare instances of *ruki*-rule initiated initial *x- in Slavic. But there is a minor objection, namely the non-application of Winter's law, which would have yielded a long vowel and therefore an acute. Derksen op.cit. 206 proposes Meillet's law to overcome this obstacle. But there is also Skr. *kṣudhā-* 'hunger', with paralels in other Indo-Iranian languages (NAv. *šuδō* 'hunger', MPer. *šwd*, Khot. *kṣū*) with original *–dʰ- or *–dh$_2$. This may be as good an explanation as the connection to kṣudra, but also allows us to circumvent Winter's law.

*xvojъ < *sku̯ojis

Lith. skuja 'pine needle', OIr. scé 'pine', and W. ysbyddad 'pine' all point to a pre-form *sku̯ojā possibly from a root *skeu̯ 'to cover". *xuj 'penis' is likely to be related to this etymon as well, in the metaphorical sense of 'twig, stick'.

*xvostъ < *sgu̯ostos

This word has been often compared to PSl. *gvozdъ 'branch, bush", on account of its almost perfect phonological and semantic match. In phonology, the main obstacle, leaving *xv- aside, is the voiceless *–st- for voiced *–zd-, a situation reminiscent of other words on this list – see above for Lith. *šaltas* 'cold" instead of an expected **žaldas. By operation of the s-mobile, *sku̯ozdos would have been the desired outcome of *s-gu̯ozdos, possibly a derivative of *gu̯es or *geu̯s of uncertain meaning. PSl. *gvozdъ seems to have cognates at least in Germanic, e.g. OHG *questa* 'twig". A possible desigmatised form is (*sku̯ost- > *ku̯ost-) in Cz. *koště* 'broom", OCz. *koščišče*, alongside *chvoščišče*.

*x(v)orstъ < *sk(u̯)orstos

This well attested Slavic word has a good parallel in PGerm. *χurstiz < *ku̯r̥stis, from which come OE *hyrst* 'copse', MLG *horst* 'bush', and PCelt. *ku̯riston later to become W. *prys*. The origin of Sl. –v- is obscure.

*xovati - *skou̯atei

Both sigmatic and asigmatic paralleles can be found outside Slavic. PGerm. *χauwian and *skauwian of the same meaning 'look, watch' display the Germanic *s*-mobile variation – OE *scēawian* (> MnE. *show*) and *hēawian* 'look'. An asigmatic form can be found in Lat. *caveo* 'look after, care', Gr. κοέω 'look'.

*xvorъ < *sku̯oros < *s-gu̯oros

PSl. *xvorъ has often been compared to PGerm. *swaras, whence MnE. *sore*, G. *schwären* 'to get inflamed' and therefore with PIE *su̯er 'ache, be inflamed', which can also by found in Av. *x^vara* 'wound' (note that Scythian equivalent would have been *fara!). Although in the light of the present theory I tend towards a parallel with Lith. *iš-gvèrsti* 'to get weak' and Toch. kwär 'to get old/sick', because deriving Sl. *xv- from PIE *su̯- would require an ad hoc shift from *su̯ to *šu̯, I do agree that *su̯er remains a very persuasive explanation.

*xribъ < *skrībos

Psl. *xribъ denotes either a 'hump' or a 'hill' and the two meanings are not difficult to reconcile. There are few cognates in Slavic and none, as far as I know, outside this group. PSl. *xrьbъtъ 'back' displays the same consonant sequence *xrb and the vowel *i, but the vocalism is puzzling. Either the root was *skrib, from which a lengthened zero grade *šrīb- yields *xribъ, or *skreibʰ, definitely an *s*-mobile root, whence zero grade *šrib- > *xrьb-. The other Slavic cognate is the well attested *grьbъtъ 'back', identical but for the anlaut with *xrьbъtъ, and its cognate (probably derived from) *grъbъ 'hump'. Rejzek 2001: 216 notes that by-forms with initial k- and even sk- can be found in Slavic languages. If the word is of PIE origin, the original root could only have been *(s)grebʰ and the ī in *šrīb- must be an innovation.

*xormъ < *skormos

There are two ways to approach the semantics of this word and both ultimately point to the PIE root *(s)k̂er- 'cut'. In most Slavic languages,

descendants of *xormъ denote various kinds of buildings, from Czech *chrám* 'church, cathedral' to OR. *xorómъ* 'hut'. Among others, Snoj (: 210) argues that the original meaning was 'a piece of hide cut out' presumably to provide cover or shelter. Comparisons have been made to PGerm. *skirma* or *skerma* 'shield' as shields were commonly made of animal hides or of wood strengthened with hides, and the transition of meaning from 'shield' to 'shelter' (note that MnE. shelter comes from shield) seems natural enough, and from 'shelter' both 'house' and 'temple' could be derived easily.

On the other hand, the 'shield' stage may not be necessary if 'temple' was the original meaning. Before larger constructions were erected above sanctuaries, any piece of land would do – provided it was somehow (even only symbolically) separated from its surroundings – 'cut out". This kind of marking out of a sacred place is widely attested all over the Indo-European area, but it is not an exclusive feature of this culture. Lat. *templum* comes from a root *temH 'to cut' and means originally 'something cut out', from the same root comes Gr. τέμενος 'precinct'. So does castellum, from which Slavic kostelь 'temple/castle' comes. It is tempting to conclude that PSl. *xormъ shares this origin, which likewise matches well with the Indo-European origin of Slavs. The original meaning would then be '(sacred) precinct', an m-derivation of *sker.

$\quad$*xvat- *xyt- < *šu̯āt- *šūt- < *sku̯eh$_2$t- *skuh$_2$t-

The large group of words derived from the root *xut or *xvot includes *x(v) otěti or *xъtěti 'to want, wish', *xvatati and *xytiti 'to grab', *xvatati 'to move quickly', *xytrъ 'nimble, quick, clever'. All semantic derivations point towards an original meaning of 'grab quickly, snatch'. The interchange of *xvat- and *xyt- is reminiscent of alternations such as *kysati - *kvasъ 'ferment", *kypěti - *kvapiti 'swell" and *xvat-is probably analogical.

$\quad$*xvala < *šu̯ala < *s-k̂u̯eh$_2$l

Germ. *χōlanan 'to praise' (ON *hól* 'praise' OE *hōl* 'slander, columny') is semantically a perfect match. As in a number of other instances of Sl. xw-, the *w is difficult to account for. Both *kʷōl and *ku̯ōl would have given **χʷōlanan in Germ. ON *skvala* 'to call' displays the s-mobile variant and comes even nearer to the expected PSl. *skala. With a different ablaut grade, *xula 'slander' seems very near to *xvala, which, if indeed related, points to a root *k̂u̯el.

Conclusion

Reconstructing *sk as the main source of Slavic *x, proceding from *šk through *šš > *š > ʃ to *x, makes it possible to explain most of the etymons in question and relate them to K-/sk reflexes in other languages, especially to Baltic and Germanic. The phonetic proceses involved in this change should be studied in sequence and in relation to the relevant parts of the phonological system in each stage. They are not causally related to the *ruki*-rule nor are they necessarily results of affective change. The development of PSl *sk-groups is, in my view, a more probable and natural explanation than any of the earlier reconstructions, which on the whole did not take into account the phonetic detail and typological parallels. Two concepts – affective change and multiple sources of Slavic *x- - were misleading in that they allowed for ad hoc speculations where possibilities for more regular explanations were not fully exhausted. The assumption of PSl *sk- at the source of Sl x-makes it possible to search for new etymological relations – this is the case of PSl *xod- 'walk, go', *xorna 'food, protection', *xormъ 'temple, house' as well as various others. It is necessary, however, to admit the occurrence of s-mobile in PSl, for which there are both internal arguments in the lexicon and external in Baltic and Germanic, as well as multiple dialects of Proto-Slavic at any point in time and their (periodical) convergence.

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