

# Reflexes of Indo-Iranian laryngeals in loanwords to (Proto-)Uralic?

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# Background

- This talk is mostly based on Holopainen (2019): *Indo-Iranian borrowings in Uralic* (University of Helsinki)
- Some additional research in the scope of *Hungarian historical phonology reexamined* (APART-GSK grant, Austrian Academy of Sciences)

# Research problem and background

- Are reflexes of IE laryngeals visible in loanwords acquired from Indo-Iranian into Uralic?
- Can Uralic loanword research bring additional evidence for the preservation of or the quality of the IE laryngeals in Proto-Indo-Iranian or Proto-Iranian?
  - Early Indo-Iranian loanwords into (Proto-)Uralic/Finno-Ugric (*communis opinio*; Joki 1973, Rédei 1986, Koivulehto 2001, Katz 2003, Parpola 2015: 66–67, Holopainen 2019, Kümmel 2020)
    - Evidence for PIr and PIr phonology: development of palatals,  $*l > *r$ , RUKI etc. (Holopainen 2019: 327–336)
  - Long preservation of laryngeals in Indo-Iranian (Mayrhofer 2005, Kümmel 2018, 2020)
  - Potential examples of laryngeals in Proto-Indo-European and North West Indo-European loanwords into Uralic (Koivulehto 1991, 2001): if these are correct, laryngeal traces in Indo-Iranian loans should be expected, too
    - If loans from IIr lack evidence for laryngeal(s), this has also relevance for the reliability of the PIE etymologies that allegedly show laryngeal reflexes

# Research problem and background

- Koivulehto (1991: 109):

”Die vokalisch anlautenden Wörter sind zwar nicht in absoluter Chronologie jünger als die Wörter mit *k*-, stammen aber aus anderen, östlicheren idg. Mundarten als diese, aus (vorarischen) Mundarten, in denen der anlautende Laryngal entweder total geschwunden war, oder wenigstens bereits so schwach artikuliert wurde, daß er ganz natürlich ohne *fiu*. Substitution blieb.“

# Research problem and background

- Katz 2003: 56 (!) cases where a laryngeal is reflected in loanwords
- However, the system of laryngeals that Katz operates with is closer to PIE than PIIr and includes also a fourth laryngeal
  - Katz's views have widely been criticized (Anttila 2006, Pinault 2007, Rédei 2004, Aikio & Kallio 2005) but many etymologies have not been commented in detail
  - Also PU reconstructions employ a system that is not widely accepted

# Indo-Iranian laryngeal(s)

- The traditional view: the three IE laryngeals merged as *\*H* in Indo-Iranian, lost shortly before the earliest Vedic and Avestan texts (evidence in laryngeal hiatus, (Gippert 1997, Malzahn 2005, Kümmel 2014).
- Laryngeal aspiration caused by at least *\*h<sub>2</sub>* (Lindeman 1997: 148-152).
- Interconsonantal laryngeals, vocalisation.
- *\*RH*: divergent outcomes in Indo-Aryan and Iranian (Cantera 2001, 2017)
- Kümmel (2018, 2020): *\*h<sub>1</sub>* and *\*h<sub>2</sub>* merged, *\*h<sub>3</sub>* was lost earlier; evidence for the retained laryngeal as *h-* in some middle and modern Iranian languages: for example, Middle Persian *xirs* 'bear', New Persian *xišt* 'spear'.
- Parpola (2015: 51) assumes that the laryngeals were lost early and the traces of laryngeals in Vedic and Avestan are due to "archaizing" effect of an IE language of the Late Tripolya culture
  - This idea has not found acceptance and is difficult to substantiate

# Indo-Iranian-Uralic contact episodes

- Earliest loans are from "Pre-Indo-Iranian" (few etymologies only)
  - *\*mekši* 'bee' ← *\*mekš-*, ~ OI *makṣ* 'fly, bee'; *\*repäci* 'fox' ← ? *\*Hrewpōca*, OI *lopāśa-*
  - Since there is evidence for retained PIE vocalism, it is natural to assume evidence for laryngeals too
  - Some Pre-Ir etymologies problematic (Palmér et al. 2021)
  - More loans from Proto-Indo-Iranian (PU *\*ćeta* ← PIr *\*ćatám* 'hundred' etc.; many more later Iranian loans in various Uralic languages)
- Most of the loans borrowed into dialects of Proto-Uralic, very limited evidence for loans into Proto-Uralic proper (few loans in the Samoyed branch)
  - Proto-Finno-Ugric in the traditional sense (disputes in Uralic taxonomy and the position of Samoyed; see esp. Salminen 2002)
- Most loans probably parallel loans post-PU (few words with wide distribution and regular correspondences)

# Early spread of Uralic



Early spread of Uralic according to Grünthal et al, the map by Nora Fabritius.



# PIE-Uralic contacts and laryngeals

- Koivulehto 1991, 2001: *\*k* (anlaut), *\*x* and *\*š* (inlaut) as the substitutions
  - Some additional etymologies suggested by Kallio (1998), Aikio (2002)
  - No difference in regard of  $h_{1,2,3}$  (dubious, as noted by Campbell and Garrett 1993)
- Disputed issue
  - Criticism of the idea in general: Lindeman (1993), Campbell & Garrett (1993), Ritter (2005), Aikio [forthcoming]
  - Some etymologies recently criticized by Simon (2020)
  - Support: Anttila (1993)
  - Hyllested 2014: many etymologies with PU *\*š* ← *\*h* can be explained differently
- Kümmel (2020: 248–252) assumes that some laryngeal loans could be Indo-Iranian
- (The PIE laryngeals are also often compared with Uralic velars in an Indo-Uralic context, eg. Hyllested 2009; Holopainen 2020 finds most of the cases unconvincing)

# Methodological remarks on sound-substitution

- Phonetic "nearness" (Haugen 1950: 15): ambiguously defined
- Heidermanns (2001): sound-law vs. substitution; what level of regularity can be expected?
- Phonotactics of the contact languages
- Cases with  $\emptyset$ -substitution of velar fricatives or other sounds that might have been similar to Ir laryngeal(s):
  - The substitutions of velar fricatives in Germanic loans into Saami (Aikio 2006), Turkic loanwords into Mari (Róna-Tas 1988): the spirant  $*\chi$  is left out due to the lack of a corresponding phoneme in the recipient language
  - Proto-Balto-Slavic "laryngeal" (Kallio 2008: 267): no trace of the glottal stop (?) in loans to Finnic, as this sound could not be reflected by any Uralic consonant

# PU phonology and phonotactics (Sammallahti 1988)

- **Consonants**

p            t                            k  
č                                    (č)  
s    š    ś  
d            d'            x  
m            n            ñ            ŋ  
r  
l  
w                                    j

- **Vowels (initial syllable)**

i    ü    u  
e        e<sub>ɨ</sub>    o  
a            ä

# PU phonology and phonotactics

- Only vocalic stems
  - No opposition voiced – voiceless in consonants
  - No long vowels (Aikio 2012)
  - No word-initial consonant clusters
- 
- Many laryngeal-related phenomena hard to detect due to phonotactics
  - However, the laryngeals could be well presented in most positions

# The etymologies

- Possible examples of a consonantal laryngeal
- PU *\*soŋka* ~ *\*saŋka* 'old' (> Mari *šoŋgo* 'old', Hu *agg* 'old (person)') ← PIIr *\*sanáH-* (?) or *\*sana-ká-*, OI *sana-ká-*, cf. Lat *senex* etc. (Koivulehto 2001b: 254; Holopainen 2019: 236–237)
  - IE laryngeal hardening?
  - Koivulehto assumes a PIIr form corresponding to OI *sana-ká-* is the original; this is a plausible explanation; no compelling evidence for laryngeal
- PU *\*śārki-* ?, > Fi *särke-*, Mansi *śārəγ-* 'to break' ← *\*ćarH-*, > OI *śar<sup>i</sup>-* 'to break', *śrñāsi* < *\*kerh<sub>2</sub>-* (LIV: 327–; ÉWAia II: 617–)
  - Kümmel (2009: 9): Indo-Uralic inheritance
  - Holopainen (2020: 299): a possible example of a laryngeal in an Indo-Iranian loan; however, the etymology suffers from the lack of parallel examples of the substitution *\*rk* ← *\*rH*; also the vowel-substitution *\*ä* from *\*a* is rare in early loans

# The etymologies

- PIE etymologies of Koivulehto (1991) that can perhaps be considered Indo-Iranian
- PU (?) *\*suki-* > Fi *suke-*, *sukeutua* 'to become', *suku* 'family', ← PIIr *\*suH-*, *sūyate* 'is born' (< *\*seuh<sub>2/3-</sub>* 'to fill', Oettinger 1979: 298)
  - Formally unproblematic
- PU (?) *\*suxi-* or *\*suwi-* 'to wish, grant' > Fi *suoda*, Estonian *soovi-* ← *\*suH-*, OI *su-*, *suváti* 'sets in motion' (LIV: 538–539)
  - Pre-Finnic *\*x* or *\*w*?
  - Semantic connection not obvious
  - Note also the alternative Uralic etymology *\*soŋi-* supported by Zhivlov (2014: 141; see UEW: 447)
- PU (?) *\*kixi-* (> Fi *kiittää* 'to thank') ← *\*giH-* (remodeled from < *\*geH-ye-*, > *gāyati*), OI *gī-*, *gīyate* 'to be sung or praised in a song', LIV: 183 (Koivulehto 2001a: 58)
  - Formally could be a very early PIIr loan (*\*giH-*), but the exact donor form remains unclear and the possible derivational process behind Fi *kiittää* is obscure (Junttila & Holopainen: forthcoming)
  - The Uralic (?) reconstruction *\*kixi-* is also not certain, however, as Fi *kii-* can reflect several pre-Finnic forms; the semantic reconstruction is also far from clear.
  - Saarikivi (2020) suggests instead a connection to Slavic *čisti* 'count, read, honour'

# The etymologies

- Uncertain etymologies:
- *\*kaja-* 'dawn; sun?' > Fi *kaja-* 'to dawn', Hungarian *hajnal*, East Khanty *kuńəl*, Tundra Nenets *χājerʔ* 'sun' ← *\*Hayar-/Hayan-* 'dawn', Avestan *aiiar-* (Aikio 2002 footnote 51; Kümmel 2020: 251)
  - Aikio (2002 footnote 51) suggests a PIE loanword, but Kümmel (2020: 252) assumes a PIr source; the *\*a*-vocalism would formally fit both.
  - Although recently doubted by (Simon 2020), the loan-etymology does not include any major problems, but it is unclear which Uralic cognates actually belong to this stem and which to PU *\*kōji-* 'dawn' (Aikio: forthcoming)
  - No convincing parallels to *\*H* (< *\*h*<sub>2</sub>) reflected by Uralic *\*k-* in word-initial position; this casts doubt on the idea that the loan should be from Indo-Iranian in particular.
  - The meaning of the Uralic word might have been 'sun'

# The etymologies

- PU ? *\*näxi* 'woman' > ? Fi (der.) *nainen*, Khanty *niŋ*, Hu *né* (: *neje-*), Nenets *ne* etc. ← ? Iir *\*gnaH-* (Koivulehto 1991: 52–55: ← PIE *\*g<sup>w</sup>neh<sub>2</sub>-*)
  - Helinski (2005: 34) mentions several possible pre-forms for the word for 'woman', including the form *\*niŋä* that is reconstructed by the UEW (probably based on Khanty *niŋ* etc. and Saami *niŋŋēlis* 'female animal'); this shows that the reconstruction is complicated; Sammallahti (1988: 539) lists all the relevant forms under PU *\*näxi-*, but considers the Saami, Finnic and the Ob-Ugric forms uncertain; recently the PU etymology has been criticized by Aikio (2014).
  - In the light of this, the evidence for a laryngeal loan is uncertain; the PIE etymology is also criticized by Simon (2020: 248)



# The etymologies

- Clearly problematic etymologies
- North Saami *guovssu* 'dawn' ? < *\*kawša* ← *\*Hawšās* 'dawn', cf. Ir *\*aušah-* > Waxi *yišīy̆*; Vedic *uṣás-* (Koivulehto 2001b: ← PIE *\*h<sub>2</sub>ewsōs-*; Kümmel 2020: 252)
  - The Saami cluster vs can reflect various Pre-Saami clusters, vs being only one possibility. Saami -u is problematic, as it does not appear in inherited words and here it is not any transparent derivational element.
  - Even if the loan is correct, it does not have to be from Indo-Iranian (full-grade *\*aw?*); Ir *\*aušah-*
- PU ? *\*śolki* (? > Fi *solki*, Mordvin *śulgamo*, Mari *šolkama* 'fibula') ← *\*ćalHāka-* or *\*ćalHā-*, OI *śalā-* 'rod, stick' (Koivulehto 2001b: 243)
  - The Uralic etymology completely irregular (Holopainen 2019: 252–253)
  - The IE etymology of the Indic word uncertain
  - If the etymology is correct, *\*k* can also reflect the *-ka-* suffix, but is unlikely the Uralic words turn out to be Indo-Iranian loans
- *\*saxi-* 'to get' (> Fi *saa-*, Kildin Saami *soagke-*, Mordvin *sa-*, Komi *su-*) ← *\*saH-*; OI *san<sup>i</sup>-*, *sanóti* 'to win, get' (Parpola 2010: 313; Holopainen 2019: 210–211)
  - Problems with the donor form: the zero-grade form *saH-* is found in forms like (*vāja-sā-*, 'Siegpreis gewinnend') is not attested in any finite forms, making the etymology dubious (Junttila & Holopainen, forthcoming)

# The etymologies

- \*RH
- Impossible to distinguish from the substitutions of later reflexes like Iranian *ar* or that of simple \*r̥
- Komi *vurun* 'wool' < \**warna* ← \**Hwr̥Hna-* (< PIE ) ~ *turun* 'grass' < \**tarna* ← \**tr̥na-*
- Ugric *serańa* 'gold' (> Hu *arany* etc.) ← Ir \**zaranya-* or \**zəranya-* or \**zr̥Hanya-*?

# The etymologies

- Katz 2003: 56 (!) cases where a laryngeal is reflected in loanwords
- Among the etymologies of Katz, many can be rejected as clearly not Indo-Iranian
- Katz notes that since  $h_1$  was  $h$ , it is expected it was not substituted as there was no  $*h$  in PU
- Since the most plausible evidence from loans following the "mainstream" reconstructions comes for substitutions with  $*k$ , only some possible possible cases showing  $*k \leftarrow *H$  will be discussed here
  - Other alleged substitutions include  $j$ ,  $*š$ ,  $*w$

# The etymologies

- Some possible etymologies of Katz (2003)
- ? *\*karšV* > Fi *karhu* 'bear' ← *\*Hṛtša-* 'bear' (Lipp 2009; Katz: *\*h<sub>2</sub>rkšom*) (see also Delamarre 1992)
  - Very difficult to prove that the etymology is right, as no parallels for the substitution of a cluster *\*rtš* (why not *\*rč* in Uralic?); the more traditional PIr *\*kš* would fit the Finnic form better
  - Possible derivative from the adjective *karhea* 'coarse' (SSA s.v. *karhu*)
- North Khanty *xūs* 'desire' < ? *\*kaśa-* (Katz: *\*kāśə*) ← ? *\*Haji-* (Katz: *\*h<sub>2</sub>ajim*), Av *āzi-* (Katz 2003: 148)
  - Formally possible but problematic, as no such early loans are known in Khanty alone
  - EWAia I: 160, 273, problems with Av *āzi-* 'Gier, Begierde'; rather related to OI *āji-* 'Wettkampf', from *aj-* 'to drive'; this is semantically already farther from the Khanty word
  - Katz (2003: 148) also assumes Khanty *xutəm-* 'to have sexual intercourse' (< ? *\*kasV*) is a later loan from the same source, but this etymology includes similar problems

# The etymologies

- Examples of problematic etymologies suggested by Katz (2003)
- PU ? *\*karjV* (Katz: *\*kərjá*) > North Khanty *xər* ‘gastfreundlich’ ← *\*Hārya-* (Katz: *\*h<sub>2</sub>ari<sub>2</sub>m*) (Katz 2003: 167)
  - Only attested in Khanty the etymology can be correct only if the ethnonym *ārya-* indeed originally had the meaning ‘gastfreundlich’ (see EWAia I: 111–112). However, the Khanty form could reflect various Pre-Khanty forms, and the reconstruction of *\*rj* is based on the Indo-Iranian etymology only.
- PU *\*kajša* ‘longing (?)’, > Fi *kaiho*, Md *kažo* ‘accident’, Tundra Nenets *χædo* ‘epidemic’ ← *\*Hayša-* (Katz: *\*h<sub>2</sub>aiš<sub>2</sub>m*) (Katz 2003: 148)
  - Aikio (2015) reconstructs the original meaning of the PU word as ‘sickness’. This is already quite far from the meaning of Indic *eṣā-* ‘wish’ (< *\*Hayša-*).
- PU (?) *\*karV-* ‘to plough’, > Mordvin *kara-* ← *\*HarH-* (*\*h<sub>2</sub>arh<sub>3-</sub>*) (Katz 2003: 219–220)
  - Probably an Indo-Iranian loan but from a different verb *karH-* ‘to spread out, scatter (esp. seed), sow; to make furrows, plough’ > Av *kāraiiēiti* (Rédei 1986; Holopainen 2019: 112–113; see Cheung 2007: 239–240)

# The etymologies

- Examples of Uralic words with vocalic anlaut (no trace of laryngeals):
- Words with no certain Indo-Iranian etymology > no compelling evidence for laryngeals
- PU (?) *\*ačnas* > Fi *ahnas* ‚greedy, voracious‘ ← *\*(H)áčna-*, OI *ásna-* ‚hungry‘
- PU (?) *\*asma* ~ *\*ačma* > Fi *ahma* ‚wolverine‘, *ahmia* ‚to gulp‘, North Saami *vuossmis* ‚the morbid attitude shown by some pregnant women towards food‘ ← *\*(H)áčman-* ‚eater‘, OI *ásman-* ‚eater‘
  - Uncertain whether the root *\*(H)ač-* ‚to eat‘ is of IE origin (EWAia I: 136)

# The etymologies

- Convincing early loans that lack a laryngeal reflex:
- PU *\*orja* 'slave' (> Fi *orja*, Mordvin *ur̥e*, Udmurt *war*) ← PIIr *\*(H)ārya-* ,Aryan'
  - No certain IE etymology (EWAia I: 111–112, 176–175; Kümmel 2020: 239), no certain evidence for a laryngeal
- PU *\*ora* (> Fi *ora*, Hu *ár*) ,awl' ← PIIr *(H)ārā* ,awl', OI *árā-* 'Treibstachel'
  - IE etymology? < PIE *\*h<sub>1</sub>e/oh<sub>1</sub>/-eh<sub>2</sub>-*, cf. Old Norse *alr* 'awl'
- PU ? *\*oćtVrV* 'whip' (> Hu *ostor*, Ms *aćtar*) ← PIIr *\*(H)aćtra-* ,whip'
  - Looks early because of *\*ć*, but probably parallel loans into Pre-Mansi and Pre-Hungarian (irregular vocalism)

# The etymologies

- Examples of loans that can be relatively late (no laryngeal reflex expected)
- Fi *arvo*, Hu *ár* 'price' < ? PU *\*arwa* ← Ir *\*arya-* < PIIr *\*arghá-*
  - Rather parallel loans due to the substitution of *\*rgh*, cf. Ossetic *ary-* (Aikio 2020)
- PU ? *ajša?* 'shaft?' > Mordvin *ažija*, Komi *vož* ← PIIr/PIr *\*Hayša-*, Av *aēša-*
  - Uncertain etymology, contrary to Holopainen (2019); in any case the cognates are irregular and there is no reason to assume an early loan
  - (For Finnic *aisa* 'shaft', see Junttila (2016))
- PU *\*asora* (?) 'lord' > Mordvin *azor*, Udmurt *uzir* 'rich', North Mansi *ōtər* ← PIIr/PIr *(H)ásura-*
  - Irregular sound-correspondences between Mansi, Permian and Mordvin point to a later loan (has to be before *\*s* > *\*h*, though)



# The etymologies

- Early IE or IIr loans that lack laryngeals
- PU *\*orpa* 'orphan' (> Fi *orpo*, Hu *árva*) ← ? *\*(H)árbha-* < PIE *\*h<sub>3</sub>órbho-*
  - Semantically other IE source is more probable (in IIr no meaning 'orphan' is found, cf. OI *arbha-* 'small')
- PU ? *\*ertä* 'side' (> North Saami *earti*, Komi *ord*, Udmurt *urd*) ← ? *\*(H)érdho-* > OI *árdha-* 'side'
  - Looks early because of *\*e*, but no real evidence of IE e-grade (Kümmel 2020: 250); can thus be later loan, although the reason for *\*e* ← *\*a* remains unclear
  - Possible parallel loans (Saami *rt* points to a geminate cluster *\*rtt*, Komi and Udmurt to *\*rt*)

# Conclusions

- The majority of the potential "laryngeal loan" etymologies is unconvincing or dubious; often the evidence is too speculative (problems in either IIr or Uralic side).
- No single etymology unambiguously points to the Indo-Iranian laryngeal being reflected by some Uralic consonant.
  - Very limited evidence for possible substitutions by Uralic *\*k* or *\*x* in word-internal position (almost all cases can also be explained otherwise; no clear substitution patterns).
    - On the other hand, these words can well be earlier IE loans.
- The evidence is so scanty that it is dubious whether anything about the quality of the laryngeals can be said based on it.
- However, if the IIr laryngeal indeed was *\*h*, it makes sense that the Uralic loans lack any reflex of it.

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