



## LARYNGEALS FROM VELARS IN HITTITE: TRIPLE-HEADED ARGUMENT.<sup>1</sup>

This paper addresses the controversial correspondence of Hittite “laryngeal” phonemes with IE velars in initial position. I reject old claims that this correspondence is phonetically regular, as well as modern “voluntarist” ways of replacing the “unpleasant” etymologies with their inferior, but phonetically straightforward alternatives. I maintain that this development originated in expressive words, while some other lexemes were later attracted to this category by extension. Thus Hitt. *harsar* ‘head’ owes its initial laryngeal to analogy with its colloquial synonyms *hala-* and *hupallas-*.

§1 contains the outline of the Hittite system of velars and laryngeals as well as a historical introduction. §2 is dedicated to 7 reliable etymologies that illustrate the development of IE velars into Hittite laryngeals. The pertinent typological parallels from various IE languages are discussed in §3. The Anatolian languages themselves happen to be of little help for us here, but we can observe some cases of “expressive χ” in Iranian, Slavic and Late IE. §4 deals with the Hittite etymologies that display the correspondence in question in non-expressive words. Some of them have other faults and may be refuted by the further progress of scholarship. In §5 I dwell on the criteria for evaluating etymologies that ought to provide ground for the verification or falsification of my hypothesis.

1.1. According to the *communis opinio*, Hittite, being a *centum* language, reflects velars and palato-velars as /k/, /g/ and labio-velars as /k<sup>v</sup>/, /g<sup>v</sup>/. The distribution of voiced and voiceless (or *fortes* and *lenes*) stops in Hittite is a more challenging problem; many scholars believe, however, that this opposition was neutralized in word-initial position (Melchert 1994: 13-21). It is clear that the graphemes *KA* and *GA* etc. are used quite interchangeably in Hittite. Between vowels the contrast by voice (or intensity) is expressed by simple writing (*A-KA* or *A-GA*) for the reflexes of IE \*/g/; gh/ vs. double writing (*AK-KA* or *AG-GA*) for the reflexes of IE \*/k/ (the same, *mutatis mutandis*, is true of other stops, too). The distribution of intervocalic voiced vs. voiceless consonants in Hittite does not directly reflect the IE situation, yet it is not the purpose of this paper to discuss Anatolian voicing (or lenition), the details of which are frequently unclear.

It has been proven that *k<sup>v</sup>* and *g<sup>v</sup>* represent monophonemic combinations, although some scholars admit that they could have been decomposed under certain

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conditions in late Hittite (see the argumentation in Melchert 1994: 92). The Hittite orthography, however, does not allow to distinguish between /k<sup>v</sup>/ and /k<sub>u</sub>/ in most cases; sometimes it can be done based solely on etymological considerations and sometimes it cannot be done at all.

Some well-known examples, illustrating the origin of Hittite velar stops are: Lat. *cis* ‘on this side’; vs. Hitt. *ka-(a)-as* /kas/ ‘this’; Lat. *genu* ‘knee’ vs. Hitt. *gi-e-nu-/kēnu/-* ‘id.’; Lat. *quis* ‘who’, *quid* ‘what’ vs. Hitt. *ku-is* /k<sup>v</sup>is/ ‘who’, *ku-it* /k<sup>v</sup>id/ ‘what’; Skt. *hanti*, *ghnanti* ‘to strike (3Sg. prs, 3Pl. prs.)’ vs. Hitt. *ku-en-zi* /k<sup>v</sup>enzi/, *ku-na-an-zi* /k<sup>v</sup>nanzi/>/kunanzi/ ‘to kill (3Sg. prs, 3Pl. prs.)’; Gk. *χθών* ‘earth’ vs. Hitt. *te-e-kan* /tēgan/ ‘id.’; Lat. *ēbrius* ‘drunk’ vs. Hitt. *e-ku-zi* or *e-uk-zi* /eg<sup>v</sup>zi/ ‘he drinks’.

Below I will use K as a symbol for an unspecified velar.

1.2. It is a matter of general consensus that the Hittite “laryngeal” phonemes *h* and *hh* (phonetically possibly [h] and [χ]/[x]) go back to postvelar phonemes in early Indo-European also.<sup>2</sup> When laryngeals disappear in late Indo-European, some of them, in the opinion of many scholars, leave traces in the lengthening of preceding vowels and syllabic resonants, in the aspiration of neighbouring stops and, more arguably, in vowel coloring. This statement can be illustrated with the following examples:

1) Hitt. *pahs-* ‘to protect’: Lat. *pasco*, *pāvi*, *pastum* ‘to feed; nourish’; OCS. *pastī* ‘to graze; pasture’ < late IE \**pās-*.

2) Hitt. *tarh-* ‘to overcome’: Skt. *tīr-ṛá-* ‘passed’ (participle; pres. stem *tirāti*); *tīr-thá-* ‘ford’ < late IE \**tṛ̥-* < \**tṛH-*.

3) Hitt. *palhi-* ‘broad’ : Skt. *pṛ̥thu-* ‘id.’ < \* *pṛ̥H-* *tu=* (S. Starostin, p.c.; this etymology is not shared by many scholars in the West).

4) Hitt. *henk-/haink-* ‘to bow’ : Gk. *αγκ-* ‘to bend’ attested in derivatives like *ἀγκύλη* ‘crook’ *ἄγκών* ‘elbow’ *ἄγκυρα* ‘anchor etc.’ (see Frisk 1960-1972 : 10 ff. for further forms).

<sup>2</sup> A probable exception is represented by *ehu* ‘go!’, *pēhute-* ‘to carry’ and some other cases (cf. Puhvel 1991, 252; Lehman 1985, p.170) where *-h-* has been secondarily introduced as hiatus breaker (for a different opinion see Melchert 1994).

The number and functions of early Indo-European laryngeals remains one of the most debated points of IE linguistics, and there are scholars who object to some or all of the above-mentioned effects (Lehrman 1998 represents one of the latest examples of a work that questions the foundations of the laryngeal theory). It is not the purpose of this paper to participate in this argument and henceforth I will use H as a cover symbol for all IE laryngeal phonemes.

1.3. Contrary to the opinion of most modern scholars, I posit the existence of a labialised laryngeal  $h^v$  (phonetically probably  $\chi^v$ ) in Hittite, as well as in Early IE (Similarly Lehrman 1998, p.259). The evidence for its existence derives itself from statistical and etymological considerations. Statistically speaking, the number of dictionary entries in Friedrich 1952 with the initial *hu-e(C)-* ; *hu-i(C)-* ; (*hu-a(C)-*) (~10 roots) is comparable with the number of entries with the initial *ku-e(C)-* ; *ku-i(C)-* ; *ku-a(C)* (~7 roots), while all other initial consonants occur very rarely in such combinations (3 examples at most). The monophonemic character of the initial  $[k^v]$  being well established, there are even more reasons to posit the same thing for  $[\chi^v]$ .

The following etymologies illustrate the existence of  $[\chi^v]$ :

1) Hitt. *ishunawar* (1x *ishūnawar*) ‘sinew’: Skt. *snā́van-*, Av. *snāuuarə*, Toch B *ṣñaura*, Arm. *neard*, Gk. *νευρά*, Lat. *nervus* ‘id.’ (Puhvel 1984- with a different reconstruction). The IE reconstruction is *\*sH<sup>v</sup>nā-war*. The fall of laryngeal after /s/ before consonant in most IE languages is can be further illustrated by Skt. *ásṛk/asnās* ‘blood’ vs. Hitt. *eshar/ishanas* ‘id.’ (Late Hitt. *ishar/isnas* ‘id’ !). The hypothesis involving the contamination with Hitt. *ishāi-/ishiya-* ‘to bind’ (Puhvel 1984: II, 404), valid for Engl. *sinew*, is not applicable in this case since it does not explain the vowel -u- (-u- in *ish-uzzi-* ‘band’ is a suffix vowel). Phonetically, this word was probably  $[s\chi unavar]$  in Late Hittite,  $[\chi^v]$  having been decomposed under unknown conditions.

2) Hitt. *ishuwa(e)-* ‘to shed, throw, scatter, pour’: Hitt. *suhha(e)-* ‘id.’. These two verbs form separate paradigms in Hittite, although they can be used interchangeably in different copies of the same text (Puhvel 1984- : II-408). I subscribe to the view of Oettinger 1979 who claimed, among others, that we are dealing here with two forms of one and the same root. I reconstruct the verbal stem as *sH<sup>v</sup>a-(ye)-* and presume that at some point in the history of Hittite  $[\chi^v]$  has undergone

decomposition in two different ways. As it frequently happens with verbs of such general meaning, the IE etymology remains unclear.

3) Hitt. *tarhu-*; *taruh-* ‘to overcome’: Skt. *turāti*, *tarute* (1x) ‘to pass’; *tūrvati* ‘to overcome’ Av. *tauruuaēti*, *tauruuaieiti* etc. ‘to overcome’. I reconstruct this root as *\*tarH<sup>v</sup>*- ‘to overcome’. The relationship between this root and *\*tarH-* ‘to cross, pass?’ (Hitt. *tarh-* ‘to overcome’, Skt. *tirāti* ‘to pass’, Lat. *trāns* ‘across’ etc.) is not clear in detail. Mayrhofer 1986- justly connects both families but his protoform *tarH-v-* ‘hindurchkommen, überwinden’ for the first root is hardly the best solution. If we follow his approach, the origin of the -v- determinative remains unexplained and Old Hitt. *ta-ru-uh-zi* ‘he overcomes’, attested earlier than *tar-hu-uz-zi* ‘id.’, is to be regarded as a result of laryngeal metathesis. It would be more reasonable to believe that /tarH<sup>v</sup>-zi/ could be written differently in the cuneiform orthography, whereas *tar-ah-zi* etc. /tarH-zi/ reflects the phonetic simplification of a heavy consonant cluster (As Indo-Iranian doublet forms show, the latter change could occur in Early Indo-European, not in only in Anatolian).<sup>3</sup>

1.4. The development of IE velars into Hittite laryngeals (K>H) lurked in Hittitological literature since the pioneering years of Anatolian Studies. The scholars faced the difficult task of trying to find the distribution of this development, as opposed to that of velars into velars (K>K) and laryngeals into laryngeals (H>H). Thus Pedersen 1938 maintained the regular outcome of IE. /k̂/ in Hittite was h, while Kronasser 1956 pp. 67 ff. advocated the view that Hittite hu- is a dominant reflex of IE. *\*/k<sup>v</sup>/*. Finally, the followers of the Italian school of Neolinguistica maintained that the development K>H occurred in one of the dialects of Hittite (see e.g. Devoto 1950). This matched their theoretical conviction that every literary language is essentially a dialect mixture.<sup>4</sup>

Most American scholars today are more or less skeptical about the attempts to justify the K>H development. This skepticism finds its radical expression in Melchert 1994, 164: "The desperate attempt to derive *hars+* ‘head’ from *\*k̂erhs-* and relate it to Skt. *śīṛṣan-* etc. at all costs **must** be abandoned !" (I preserve the original bold script - I.Y.). Accordingly, alternative etymologies have been offered for most words

<sup>3</sup> Cf. Late Hitt. *tar-ra-at-ta* ‘*er vermag*’ with further simplification.

<sup>4</sup> The opposite development of IE laryngeals into velars (H>K) was postulated many times for various IE languages (see Lindeman 1997 pp. 94-98 for details). Hitt. *hasek-* ~ *hassik* ‘to satiate oneself’ is reconstructed as *HseH-* apud Puhvel 1984- (q.v.).

that are suspect of displaying the phonetic development K>H. In many cases these suggestions happened to be a real improvement: it must be recognized that Hittite etymology before the sixties was a playground for the wildest kinds of experimentation. I will not quote those faulted K>H etymologies that are deeply buried in the history of Anatolian studies and represent by now only an archival value; for the sake of a general *caveat*, however, it might be useful to mention two of them that are still being occasionally exhumed.

1) Hitt. *hann-* ‘to sue, judge’ (3 Sg. *hannari*, *hannai*), *hannessar* ‘judgement’; possibly Lyc. *qa-* ‘punish’ (compared in Puhvel 1984-; the comparison is not endorsed by Melchert 1993a) : Pedersen 1938 and, following him, other representatives of the “Danish school”, compare this root with IE. *ǵnō-* ‘know’ that is attested in Hitt. *kane-* ‘to recognize’ (their arguments were based on German *erkenntnis* ‘verdict, sentence’ etc.). This implies that one and the same root gives two kinds of reflexes in Hittite, with and without K>H. As for semantics, it is generally risky to use the comparison of two abstract words with diverging meaning to back up a phonological theory. This general statement is practically corroborated by the fact that the original meaning of the Hittite verb, as analysed by J. Puhvel, is ‘to call to account’ not ‘to judge’. Thus the whole semantic argumentation of the Danish school can be simply ruled out.

2) *hars-*, *harsiya-* ‘to till (the soil)’: Pedersen 1938 connected this word with Skt.  $\sqrt{kars}$  ‘to plough’, which can be linked instead to Hitt. *guls-*, Luvid *gulz-* ‘to carve, inscribe’ (thus Mayrhofer 1986-), without causing any phonetic or semantic difficulties (the original meaning being ‘to scratch’). As for the Hittite word, it is a good match to Lat. *arāre* ‘plough’ or it can be deemed a borrowing from West Semitic  $\sqrt{hrt}$  ‘plough, carve’ (thus Puhvel 1984-).

2. Below I will argue that there is still a considerable number of Hittite lexemes with the initial *h-* or *hu-* that do not succumb to laryngealist etymologies, but can be better explained assuming a change from velar to laryngeal.

The following discussion is largely based on Puhvel 1984- , but some new lexical material is added and the final choice of etymology is my own.<sup>5</sup>

2.1. <sup>UZU</sup>*hala-*; *halanta-* (1x) ‘head, skull’ : Possible cognates with the initial *g-* include Lith. *galvą* ‘head’ ; OCS. *glava* ‘head’, OHG. *kalo* ‘bald’ or , without *-v-*, Russ. *golyj* ‘naked < \*bald’. Arm. *ghux* ‘head’ may be also related here, the suffix, however, is unclear. Possible cognates with the initial *k-* include Lat. *calvus* ‘bald’, Av. *kaurva-* ‘bald’. A variant without *-v-* is reflected in Pers. *kalla* ‘head (mainly of animals)’ , Parachi *kal* ‘head’, Shughni *kīl* ‘head’ (Morgenstierne 1974), Lat. *calix* ‘cup<\*skull’. This comparison, outlined first by Hrozný, implies a variation *k-/g-/x-* in an expressive root (forms with *g-* could be influenced by  $\sqrt{\text{gel}}$  ‘round’, Pokorny 1959, 357). Arm. *xalam* ‘animal's skull’ is probably borrowed from Hittite.

All alternative etymologies are inferior semantically (e.g. Lat. *altus* ‘high’ or *collum* ‘neck’). Puhvel 1984- draws most relevant material, but gives no etymological solution.

2.2. *halīna-* ‘clay’ (or the like): Russ. *glina* ‘clay’, Gk. γλίνη (rare) ‘gum, gluten’, γλοιός ‘id.’; Lat. *glūten* ‘glue’ ; OE. *clæg* ‘clay’ etc. (Otten-Souček 1969). Lydian *kliḍa* ‘earth’, if the meaning is correctly established, may represent an archaism in Anatolian. It is important to notice that the Hittite, Slavic and rare Greek forms are coherent not only segmentally, but also accentually (\**glīnā*). This word may have been expressive if its original meaning was ‘mud, dirt’.

The only alternative is represented by the root connection of with a rare (1x) Gk. ἀλίνω ‘smear’ (see Puhvel 1991, III-32), IE.  $\sqrt{\text{Hli-}}$  (Lat. *linere* ‘id’). It is worth mentioning that ἀλίνειν is glossed as ἀλείφειν ‘smear’ by Hesychios. The latter must be reconstructed as \**sm̥-leip(h)-* and not \**Hleip(h)-* (cf. λίπος fat, lard, ‘animal tallow’, similarly Frisk 1960, 67). Thus the reconstruction with the prefix *sm̥-* is also available in the case of ἀλίνειν.

2.3. *harsar/harsan-* ‘head’: Skt. *śīras* / *śīrṣṇ-* ‘head’; Gk. *κάρᾱ* / *κράτος* ‘id.’, Lat. *cerebrum* ‘brain’ *crānum* ‘skull’ etc. (Hrozný+). Notice that we have the

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<sup>5</sup> Here and below I usually do not give explicit references to the authors of various etymologies. Those who are interested in the history of these discoveries are referred to Puhvel 1984- and especially

initial *h-* in two other words for ‘head’: *hala-* and *hupala-*, which are expressive. The semantic analogy could ultimately influence the shift K>H in *harsar*.<sup>6</sup>

An alternative comparison with Gk. ὄρος < \**or(s)vos* ‘mountain’, Skt. *ṛṣvā-* ‘high’ (Götze +) has three disadvantages. First of all, this is a root connection and the suffix *-vo-* is not very productive in IE. Second, the semantic shift in this case is much bigger. Third, Hitt. *aru-* ‘high’, even though scarcely attested, and then *arae-* ‘rise’ etc. must be regarded as a better match for the cognates suggested by Götze (Puhvel 1984-, I-178). Cf. also C. Luv. \**ariyatt(i)-* ‘elevation, mountain’ (in toponyms; Starke apud Melchert 1993b). The attempt to derive *harsar* from \**karHsar* with the assimilation of the initial velar (Puhvel 1991, III-190) explains obscurity through obscurity, because the existence of the internal laryngeal in this word cannot be strictly proven. In addition, such assimilation is very rare cross-linguistically.

2.4. <sup>UZU</sup>*hu(wa)hhurti-* ‘throat’, Luv. <sup>UZU</sup>*huhurt(i)-* (1x) ‘id.’: Arm. *kokord* ‘throat’. Both words are probably connected with IE. *√g<sup>v</sup>er* ‘to devour’; cf. Gk. βράθρον; Lith. *gerklẽ* ‘throat’ etc. (Pokorny 1959, 474). The reduplicated forms are very likely to be expressive. Cf. typologically Span. *garganta* ‘throat’.

Jahukean 1987, citing the Anatolian connection for the Armenian word, suggests at the same time several areal alternatives, which can be valid also for the Hittite word in question. Strictly speaking, we deal with an onomatopoeic word and herefore must not be amazed at such coincidences as Hebrew *gargərōt* ‘neck’, Syriac *gagarəṯō* ‘id.’ in Semitic or Chechen *kʷurd* ‘sip,gulp’, Batsbi *kʷankʷrat* ‘throat’ in North Caucasian. It is important, however, that all these languages use velar stops, not “laryngeals”.

2.5. <sup>UZU</sup>*hupallas-* ‘skull/scalp’, C.Luv. *hupalla/i-* ‘id.’: Gk. κεφαλή ‘head’; Goth. *gibla* ‘summit’. Probably the older form was \**haballa*, cf. *hapallasae-* ‘to wound (in the head)’ and such alternations as <sup>D</sup>*hapaliya-* vs. <sup>1</sup>*hupaliya-*, <sup>1</sup>*ashapala* vs. <sup>1</sup>*ashūpala* etc. (Puhvel 1984-, III-115ff.). Hitt. <sup>GIS</sup>*huhupal* ‘cymbal? drum?’, areally connected with Gk. κύμβαλον (!) ‘cymbal’ is, with all probability, the reduplicated form of the same root. Cf. also <sup>DUG</sup>*kukupalla-* ‘a kind of vessel’, which could, however

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Tischler 1977- for further details.

<sup>6</sup> If C.Luv. *harmaha/i-* ‘head’ is cognate with this word we can safely analyze it as *har-sar*. The Luvian suffix, however, requires an explanation.



be borrowed from Akk. *kukubu-* ‘jar’. The range of meanings above makes me think that we deal with an expressive root denoting different kinds of round objects.

The attempt to connect Hitt. <sup>UZU</sup>*hupalla-* with Skt. *kapāla-* ‘skull’, M.Pers. *kabārag* ‘container, vessel’ etc. presumes the irregular lenition *\*-p- > b* in Hittite. Even more hopeless would be a try to connect it with Hitt. *hūppar-* ‘bowl, pot, keg’ (q.v.). No sensible laryngealist etymologies have been offered so far.

2.6. *huelpi-* ‘newborn animal’ (occasionally also written *hu-u-el-pi-*, phonetically constant) : Several groups of potential cognates are available: a) ON. *hvelpr* ‘young, animal, whelp’ OHG. *welf* ‘id.’; b) Skt. *gārbha-* ‘embryo’, Gk. βρέφος ‘foetus’, OCS. *žrěbę* ‘foal’, probably Arm. *korwn* ‘young animal’; c) OHG. *kalbo* ‘heifer’, *kilbur* ‘ewe’ ON. *kalfir* ‘calf’, Lat>Gaulish *galba* ‘paunch, belly’ Gk. δελφύς ‘womb’. It is extremely unlikely that these three groups are unrelated; probably they are three avatars of one IE expressive formation. In Hittite the irregular change *\*g<sup>v</sup> > χ<sup>v</sup>* took place.

Puhvel 1984-, citing all of the above *comparanda*, adduces further Skt. *úlba*, *úlva* ‘Eihaut’, Lat. *vulva*, *volva*, *volba* ‘womb, husk, shell’. Even if he is right here, we deal probably with independent changes in Hittite and Latin/Sanskrit; the common semantics ‘womb’ allows to treat the latter group only as secondary cognates.

2.7. <sup>(DUG)</sup>*huppar-* ‘bowl’ (occasionally written *hu-u-up-pa°*; the thematic Nom.Sg. *hupparas* is probably a later formation)<sup>7</sup> : Skt. *kumbhá-* ‘pot’; Av. *xumba-* (!) ‘id.’, Gk. κύμβος ‘cup.’ etc. (Pokorny 1959, 592). This etymology implies an assimilation *mb > bb*: for which see Melchert 1994, p.162 (one example is Hitt. *kappi-* ‘small, little’ vs. Av. *√kamb* ‘id.’). The suffix *-ar*, typical for IE body parts, may imply that originally it was one more expressive word for ‘head, skull’ (the functional metaphor ‘skull’ > ‘cup, bowl’ is very frequent: cf. under *hala-* and *hupalla-*), or for ‘tumor, hump’ (Engl. *hump* is related to the root under consideration).

Kronasser 1966 justly remarks that the suffix *-ar* in the non-heteroclitc formations is rare and concludes that it can indicate a borrowed word. Unfortunately, the only sensible source of borrowing is Akk. (Old Babylonian) *huppu-* ‘large basket’ < Sum.; here the non-productive suffix *-ar* would be, indeed, not à propos!

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<sup>7</sup> The meaning of C.Luv. *hūppa-* (3x) is utterly unclear. Yet the peculiar spelling *hu-u-up-pa°*, with the vocalic plene and the double writing of the following stop, makes the connection with Hitt. *hūppar-* not unlikely.



The alternative IE etymology is based on the isolated OE. *ofnet* ‘small vessel’ , adds ON. *ovn*; OHD. *ovan* ‘oven, furnace’ as a *tertium comparationis* (see e.g. Watkins 1982) and implies IE *\*h(o)up+r/n*. If one accept this, then Goth. *auhns*; ON. *ogn* ‘furnace’; Lat. *aulla*, *auxilla* ‘pot’ etc. belong to a different root (Hitt. *huppar*- apparently did not contain any labiovelar), which is improbable. Note that Gk. *ἰπνός* ‘oven’ is not related to this family anyway (Vine 1999).

3. All the lexemes discussed in the previous paragraph, with the exception of *harsar* ‘head’ (q.v.) are suspect of being a part of the expressive vocabulary. Thus the hypothesis about the expressive origin of K>H in Hittite is natural. It is noteworthy that we most probably have /k<sup>v</sup>/ > /χ<sup>v</sup>/ alongside /k/ > /χ/ (2.6 and maybe 2.7); thus the change does not depend either on a particular phonetic environment, or on a particular velar segment.

Below I would like to present the evidence that the irregular change K>H is not a peculiarity of Hittite, but is also attested in other IE languages, frequently having an expressive flavour.

3.1. Those XIX and early XX century scholars that advocated the existence of voiceless aspirates in IE usually extrapolated Indo-Iranian data on other language groups. In the case of *†ph* and *†th* the usual correspondence was: *ph* or *th* in Indo-Iranian vs. *p* or *t* (or its reflexes) in other IE languages. In the case of *\*kh*, however, we indeed have several cases where kh-like sound is irregularly present in the same word in two or more IE groups. The following examples are borrowed from Hirt 1927, pp. 245-246.

1) Gk. *κόγχη* ‘see-shell’ : Skt. *śāṅkhā*- ‘id.’

2) Russ. *socha* ‘wooden plough’ : Skt. *śākhā*- ‘bough’

In both cases the original combination voiceless stop+laryngeal is not precluded, yet we have to reconstruct the voiceless aspirate for the Late Indo-European, not only for Indo-Iranian.

3) Arm. *mxel* ‘*hineinstecken*’: Gk. *μυχός* ‘innermost part, nook, corner’ : cf. MHG *smiegen* ‘*schmiegen, in etwas eng umschliessenenes drücken*’ etc.

4) Gk. *κάρχαρος* ‘jagged’, *καρχαλέος* ‘rough’: Skt. *khāra*- ‘rough’.

5) Lat. *cachinare* ; Gk. *καγχάζω*; CS. *chochotati* : Skt. *kakhati* ‘laugh’.

Lexemes (3)-(5) are obviously expressive.

3.2. The origin of the initial *ch-* (Cyrillic *х*, IPA [x]) in Slavic is still a matter of dispute. While many cases can be explained away either as borrowings from Iranian or Germanic, or as regular reflexes of the initial *\*ks-*, a certain group, however, remains, for which the irregular development from *\*k-* (IE. *k-*, *kʷ-*) is the best possible explanation. The etymologies below are extracted from Vasmer 1986, where more examples can be found. Machek 1957 suggests even more cases of K>H in Slavic, some of which are, however, very doubtful.

1) Old Russ. *chapatī* ‘grab, snatch (expressive)’ : Lat. *capere* ‘take’, Germ. *happig* ‘greedy’ etc. (Pokorny 1959, 527). The absence of the cognate verb with the same semantics in Germanic makes the hypothesis of Germanic borrowing very unlikely.

2) Old Russ. *chvostŭ* ‘tail’ etc., Russ. *kist* ‘brush’ (Old Russ. *\*kysŭ*): Germ. *Quaste* ‘brush’; *Quast* ‘broad brush’ (see Klüge 1975 for further cognates). It is possible that Slavic word for ‘brush’ represents a Germanic borrowing, but *\*k>ch* is Slavic only.

3) Old Russ. *chobotŭ* ‘tail’, Russ. *chobot* ‘trunk’ etc: Lith. *kabėti* ‘hang’ (see Pokorny 1959, 918 for further cognates). The mutual phonetic influence of (2) and (3) cannot be excluded.

4) Russ. *chochol* ‘top-knot’, Czech *chochol* ‘id.’ etc. : Latv. *čēkulis* ‘forelock, top-knot’, cf. also Slovak *kochol* ‘forelock’.

The expressive shift K>H in Slavic is the most natural response to the above data. It is noteworthy that the phoneme /x/ was considered somewhat “indecent” in XIX Russian and conscientiously avoided by certain ladies. The conventional explanation of this phenomenon, which is based on a very colloquial Russian word for ‘*membrum virile*’ that begins with /x/, can hardly be trusted : Russian has a fair number of tabooed words for sexual parts and acts and they begin with different sounds. A whole phoneme could not be penalized because of a single word for ‘penis’.

3.3. The situation in Iranian is different from those described above, since here we observe a spontaneous change of all (voiced & voiceless) stops to voiceless fricatives in all positions (See Edelman 1986, pp. 23-26 for a more detailed and accurate formulation). It is presumed that this change was especially frequent in

expressive words (ibid. p. 25), yet our selection of examples shows that it goes far beyond this category. The trivial etymologies below illustrate the irregular change *\*k->x-* in Common Iranian or in various Iranian languages.

1) Skt. *kapha-* ‘phlegm’, Av. *kafa-* ‘saliva’, Pers. *käf* ‘id.’ : Oss. *xäf* ‘pus’, Khot. *khävä-* ‘foam, slime’, Yaghnobi *xofa* ‘saliva’ etc.

2)  $\sqrt{kan-}$  ‘dig’ (e.g. Av. *us-kənti* ‘digs out’; O.Pers. *ka<sup>n</sup>taniy* ‘to dig’, Pers. *kandan* ‘id.’) alternates with  $\sqrt{xan}$ , e.g. Arab. borr. *ḫandaq* ‘ditch’, M.Pers. *ḫān* ‘house’ (originally ‘earth-house’) etc. Cf. Skt.  $\sqrt{khan}$  ‘dig’.

3)  $\sqrt{karš-}$  ‘plough, drag’ (e.g. Av. *akaršta-* ‘unploughed’, Pers. *kašīdan* ‘drag’) alternates with  $\sqrt{xarš}$ , e.g. Sogd. *xrš-*, Khwar. *xš-* ‘drag’.

4) Skt. *kumbhā-* ‘pot’: Av. *xumba-*, M.Pers. *ḫumb* ‘id.’. See 2.7. above for the parallel development in the same root in Hittite.

3.4. The discussion of *K>H* in Anatolian languages, other than Hittite, is subject to all kinds of uncertainties. Thus, Pal. *ahuantī* definitely corresponds to Hitt. *aku(w)anzi* ‘they drink’, but we cannot be sure whether it is a sound law or a spontaneous change, since the Palaic data are very scarcely preserved. Cun. Luv. *sahuidara* is translated as ‘regular?’ and compared with Hitt. *sakuwassara-* ‘id.’ in Laroche 1959, yet Melchert 1993b doubts both the translation and the etymology. Hier. Luv. ideogram REL (relative pronoun/adverb) is probably used also as a phonetic sign with the value *-hu-* (hù of the traditional inventory); thus the word REL-i-s(a) is probably to be read as *huis* (cf. Hitt. *kuis* etc.). Yet the phonetic value hù is far from being completely assured (see Laroche 1960 p. 173 for the discussion).

It is easy to notice in all these cases we deal with either *k<sup>v</sup>>ḫ<sup>v</sup>* or *k>ḫ* in the position before *-w-*. If one must consider them together, it is possible to postulate that the transition *K>H* in Anatolian was more likely in a labial environment<sup>8</sup>. Yet, the data being scarce as they are, I am inclined to consider these three cases separately.

A case for the synchronic alternation *-k-/-h-* in Hittite in the position after *-s-* is made in Melchert 1994, p. 170. Apparently it works both ways: the words with the etymological *-k-* as well as those with the etymological *-h-* participate in this alternation. It does not have anything to do with the change *K>H* in expressive words, which is the primary topic of this paper.

Finally, I must mention a difficult case of Hitt. *ishahru-* ‘tear(s)’: Skt. *áśru*, Gk. *δάκρυ*, Lat. *lacruma* ‘tear’ etc. There seems to be a general agreement about this connection, while details remain unclear (see Puhvel 1984-, I-392). If one takes a distant assimilation from *\*/isχakru-/* for granted, then two accounts for the beginning of the Hittite form are the most promising. One can operate either with the s-mobile before the etymological laryngeal (*\*hahru* = *áśru*, thus e.g. Oettinger 1979), or with Sturtevant’s suggestions about the contamination between *\*akru* ‘tear’ and *\*eshar* ‘blood’, which could indeed occur in a certain pragmatic context (remember Lord Churchill’s “blood, toil, tears and sweat”). Distant assimilations being notoriously irregular, we must draw no further conclusions from this unparalleled case of *inlaut* K>H in Hittite.

4. Although Anatolian languages were of little help for us, we have seen that the spontaneous fricativisation of velars in Hittite can be paralleled by the data of some other IE languages. We could also observe that at least in Iranian this process goes beyond the subset of lexicon that is usually labelled as expressive. Not being a sociolinguist, I do not venture to explain the origin of this phenomenon, yet what is attested in Iranian cannot be precluded also in the case of Anatolian. The etymologies below are similar to those discussed in §2, yet the words discussed here are stylistically neutral. I am not convinced that all of these examples are equally reliable and some of them will be probably provided with a better explanation, when we obtain more data from Anatolian. I maintain, however, that at the present time the etymologies presuming K>H in the words below are at least not worse and in some cases definitely better than their laryngealist counterparts.

4.1. *haliya-* ‘genuflect’, *halihlai-* ‘id.’ (full reduplication) : Skt. *śráyati* ‘cause to lean’, *śráyate* ‘lean, recline’; Gk. *κλίω* ‘cause to lean’; OCS. *kloniti se* ‘to bow, recline’ etc. (Hammerich 1948). The intensive form indicates the phonological /hliya-/ for *haliya-*. For the sporadically attested plene form *ha-a-li-ya-*, which shows that *-a-* was pronounced see Kasjan-Yakubovich 1999.

The direct comparison with Lith. *kėlis* ‘knee’, OCS. *kolěno* ‘id.’ (Pedersen 1938) is unlikely. There is some merit, however, in the attempt to match the Hittite word with IE. *\*ol-(ei)no-* (or the like) ‘elbow’ (see Pokorny 1959, 307-308 for its

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<sup>8</sup> One may wish to take into consideration the free variation /χ<sup>v</sup>/ ~ /w/ (or /χ/ > Ø before w) attested in Luvian e.g. *lahun(a)i-* and *laun(a)i-* ‘wash’, *malhu-* and *malu-* ‘crush’ etc.

various outcomes). Words with such meaning are often deverbatives in IE languages: cf. Engl. *el-bow* or Gk. ἄγκων ‘elbow’ (see 1.2.4 above). The problems with this etymology are mainly morphological: it requires a reconstruction of an unusual apophonic pattern *\*Hol(e)i-/Hlei-*. Unless more examples for this pattern are found, I prefer the first etymology.

4.2. Hitt. *halki-* ‘grain, (specifically) barley’, <sup>D</sup>*halkis* = Sum. <sup>D</sup>NISABA ‘grain deity’ : Peterson 1938 and, following him, other representatives of the Danish school compare OCS. *zлакŭ* ‘green shoot (?)’ (Russ. *zлак* ‘grain’), Phrygian (Hesychios) ζέλκτα ‘vegetables’ and further IE. *ǵhelə-* ‘green, yellow’ (Pokorny 1959, p.429). The difficulty of this approach is that the suffix *-k-* in Slavic is *grosso modo* an innovation; Slavic lexemes with this extension usually have only root connections in IE. Yet, in the absence of any etymological alternatives, this suggestion can be provisionally accepted.

Unlike Hitt. *hahhal-* ‘greenery’, *hahli-* ‘green, yellow’ etc. that, according to S. Starostin (p.c.), have North Caucasian connections, *halki-* is not likely to be either a Hattic or a Hurrian borrowing. The first hypothesis is precluded due to the attestation of the Hattic <sup>D</sup>*kait* = <sup>D</sup>*halkis*, the second by the attestation of *halki-* in Old Hittite and probably even in the Old Assyrian tablets of Kül-tepe.

4.3. *hans-/has-* ‘to give birth’, *hassa-* ‘progeny’: Skt. *jānati* ‘to procreate’, *jāyate* ‘to be born’; Gk. γίγνομαι compared with Gk. γινώσκω ‘id.’ etc. (Pokorny 1959, ‘to come into being’, Lat. *gignere* ‘to beget’ etc. (Pokorny 1959, 373 ff.). The verbal suffix *-s-* is common in Hittite, cf. Hitt. *dames(s)-* ‘to oppress’, *k(a)nēs-* ‘to recognize’, *tekkuss(iya)-* ‘to show’ etc.

Alternatively, Puhvel 1991, 217 reconstructs *\*hams-* and wants Hitt. *hammasa-* ‘grandchild’ to be a Luvoid form corresponding to Hitt. *hassa-* ‘progeny’. Melchert 1994, 164 raises an objection to this etymology, arguing that *\*-ms>-ns-*, while *\*-ns- > -ss-* in Hittite. The examples are scarce on both sides, but it seems on balance that Melchert’s arguments are more convincing. Only the further progress of Luvian Studies will allow to find a definite answer to this phonetic question.

4.4. <sup>(LÚ, MUNUS)</sup> *haruant-* ‘nurse’ (=Sum. *UMMEDA*): Lith. *šerti* ‘to feed’; Gk. κορέννυμι ‘to satiate’ etc. (Pokorny 1959, 577). This root comparison is suggested in Puhvel 1991, 205 as an example of laryngeal assimilation (*haruant<karhuant*). I

maintain that the existence of internal laryngeal in this root cannot be proved (cf. 2.3 above).

No alternative etymologies are known to me.

4.5. Hitt. *huis-/hues-/huēs-/hus-* ‘be alive’; *huisu-/huesu-/huēs-/-husu-* ‘fresh, raw < lively’; *huitar/huetar* ‘fauna’; Luv. *huiduali-* ‘living’: IE. *g<sup>v</sup>ei-* etc. ‘to live’ (Skt. *jīvati* ‘to be alive’, Av. *jyātu-* ‘life’, Av. *gaēdā-* ‘living creature’ etc., Pokorny 1959, 467). For the verbal suffix *-s-* see 4.3 above. The non-productive suffix *-u-* was used to form deverbative adjectives; cf. *aru-* ‘high’, *hatku-* ‘tight, pressed’ etc. apud Puhvel 1984-. The variants like *husu-* ~ *huesu-* ‘raw’ O.Hitt. *husvant-* ~ *huisuant-* ‘alive’ cannot serve as an argument against the phonological interpretation \*[χ<sup>v</sup>ei-s]>[χ<sup>v</sup>es] and for the apophonic alternation [χves] ~ [χus]. Here we deal not with the old ablaut, but with the new syncope: cf. *kuera-* ~ *kura-* ‘field’, *huesa-* ~ *husa-* ‘spindle’, *hu(w)allis-* ~ *hullis-* ‘cone’ etc.

The currently most popular etymological solution disconnects the roots *hues-* and *huet-*. *hues-* was connected by J. Kuryłowicz with Skt. *vāsati* ‘to dwell’; Goth. *wisan* ‘to be’ etc. (Pokorny 1959, 1170 ff.). J.Puhvel compares *huitar* and *huituali-* with ON. *vitnir* < IE. *\*huedniyo-* ‘creature’. In my opinion, splitting Hitt. *huisuant-* ‘living’ and Luv. *huituali-* ‘id.’ looks generally suspicious, especially in view of Luv. *sahuwi-huisuali-* ‘legitimate???’. There are also particular objections against the second etymology. I fail to understand why the root *\*hvet* gives Luv. *huituali-* and not *\*huatuali-* with the usual development *\*/e/>/a/* in Luvian; the suggestion of C.Melchert 1994, 262 for Luvian: “*\*/e/>/i/ / w\_\_dental*” looks dangerously *ad hoc*. ON. may have cognates in Germanic: O.Engl. *wiht* ‘being, demon, matter’ OHG. *wiht* ‘being, thing, wight’ ON. *vétrr, vítr* ‘creature, wolf’ etc. (Friedman 1999)<sup>9</sup>.

The answer about the etymology of *hues-* ~ *huis-* may come from the Late Hittite texts of Tuthalia IV and Suppiluliuma II that are possibly characterized by the graphic distinction *e*<*\*e* and *i*<*\*ē*<*\*ei* (Melchert 1994, 145). If the spelling *huisu-*; *huitar* etc. is predominant then the suggested etymology is correct, if *huesu-*; *huetar* etc. occurs frequently enough, one would maybe fare better returning to that of

<sup>9</sup> Both J.Friedman and I recognize that this etymology does not explain the short *i* of *vitnir*. Yet it is not clear whether one ought to prefer the phonetically perfect connection between Old Norse and Anatolian or the Germanic etymology presuming a phonetically natural but irregular change.

Benveniste. One must note, however that the existence of the closed  $e < ei$  in Hittite is not completely assured.<sup>10</sup>

5.1. It is very difficult to argue against phonetic laws, without trying to establish alternative phonetic laws. Those who maintain that the development  $K > K$  and  $H > H$  is perfectly regular in Hittite can accuse me of producing a claim that cannot be falsified and therefore simply does not merit consideration. Therefore I must define my method of argumentation and explicitly state the possible ways to refute my arguments.

My method of argumentation is etymological criticism. I try to compare etymologies that imply the spontaneous development  $K > H$  with their alternatives on the case-to-case basis, to see which one implies less complications. To be sure, intuition plays an important part in giving preference to one or another etymology, yet some points can be clearly stated.

a) I maintain that every etymology that implies many step semantic changes is inherently weaker than its more straightforward alternative. Thus, the comparison of Hitt. *harsar* ‘head’ with Skt. *ṛṣva-* ‘high’ (2.3) implies first a metaphor (‘head’ → ‘top’) and then a change in syntactic properties (‘top’ → ‘high’). Not that it is impossible, but when the alternative etymology implies no semantic changes, the scales are tipped, and heavily tipped, in favor of the latter.

b) I maintain that every etymology that implies formally regular but unnatural phonetic changes is in no way better than one that introduces irregular, but articulatorily trivial phonetic changes. Thus Craig Melchert’s rule stating that Anatolian *-e-* becomes *-i-* between a labial glide and a dental stop as opposed to *-a-* in most other positions (cf. 4.5) can hardly be justified in terms of natural phonology. In absence of abundant empirical material to back it up (the rule is illustrated by two examples that are probably cognate with one another) the whole reconstruction of IE *Huet-* ‘to live’ becomes dubious.

c) I maintain that the reliability of the comparison crucially depends on the reliability of the attestation of the words involved. Thus the comparison of Hitt. *halina-* ‘clay’ with Gk. *ἄλινω* ‘to smear’ etc. (2.2) relies on the initial alpha of the Greek word that is attested once in Hesychius only (its derivatives occur twice in inscriptions). Such a rare word can always be a substrate form, and it is suspect of all

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<sup>10</sup> Hitt. <sup>NINDA</sup>*kuwitta-* ‘a kind of bread’ is plausibly compared with O.Pruss. *geits* ‘bread’, OCS. *žito* ‘grain, cereal’, Breton *boed* ‘food’. Yet the connection of this root with *\*g<sup>v</sup>ei-* ‘to live’ is unlikely since Slavic *žiti* ‘to live’ and *žito* ‘grain’ are accentually incompatible. Cf. Puhvel 1984- IV, 315.



possible types of analogical development. It is risky to base phonetic arguments on such a shaky foundation.

I recognize that the irregular development K>H must also be regarded as a fault of any etymology. Yet if all alternative etymologies have more faults, then the etymology with K>H is to be preferred. My critics must either find better cognates without K>H for the etyma in question or must show that my etymology, in comparison with theirs, has an equal or bigger number of faults of other kinds.

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