The Word for 'mouth' in Hittite and Proto-Indo-European[*]

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No reconstruction of the PIE word for 'mouth' has yet been able to account satisfactorily for the Hittite reflex (thus correctly Kloekhorst 2008: 167). A convenient summary of the many attempts is now available in Wodtko et al. (2008: 387-90). Features of the Hittite word to be explained include: ablaut, mobile accent, descriptive *i*-vocalism, and a geminate -*šš*- in the weak stem: nom.-acc. sg. *a-i-iš* (OS)/*a-a-iš*, gen. sg. *iššaš*, dat.-loc. sg. *iššī*, all. *iššā*(=*šma*) (OS), abl. *iššāz*, inst. *iššit*.[1] Whether *a-i-iš* represents merely an alternate spelling for the long diphthong in *a-a-iš* /á:ys/ or an archaic not yet contracted disyllabic /áyis/ cannot be determined. The frequent "scriptio plena" in the final syllable of the weak case forms (*iš-ši-i*, *iš-ša-a*, *iš-ša-a-az*) does argue for mobile accent: /iss-'/.

Any derivation of the Hittite must also consider the evidence of Cuneiform Luvian, which attests nom.-acc. sg. *a-a-aš-ša* (*a-a-aš* plus the obligatory particle -*ša*) and nom.-acc. pl. *a-a-aš-ša-an-ta*. The latter confirms that the Luvian stem also had a geminate -*šš*-. The "hyperplene" spelling *a-a-aš*- may or may not represent a disyllabic /a_ass-/, as assumed by Starke (1990: 101) and Rieken (1999: 185).[2] We also find the word as first compound member in Palaic *aš-kummāuwa*- 'ritually pure' (of food), literally 'mouth-

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[1] I use the now standard sigla to indicate Old, Middle, and New Hittite compositions (OH, MH, NH) and manuscripts of the respective periods (OS, MS, NS).

[2] One also finds such a spelling where a disyllabic reading with hiatus is excluded, as in *a-a-an-ni-i-[ti]* 'carries out' in KUB 35.88 ii 11. This CLuvian verb obviously is cognate with Hittite *aniye*- 'carry out'. While there is no consensus on the etymology of this verb (compare Oettinger 1979: 345, Puhvel 1984: 71, Melchert 1994: 85, Kloekhorst 2008: 180-81), what is clear is that CLuvian *ānn*- reflects a single prehistoric syllable and can hardly represent a disyllabic sequence with hiatus.

tabu' (Watkins 1987 after Szemerényi) and in CLuvian $^{KÁ}\breve{a}\check{s}$-tummant- 'ga-te(-way)' (*'mouth(like)-aperture').

As correctly argued by Rieken (1999: 186-7[868]), the Palaic and Luvian reflexes with consistent a-vocalism make highly implausible any attempt to derive the Hittite paradigm from a preform with a suffix *-is- (contra Melchert 1994: 116). The alleged parallel of Hittite ḫappeššar 'limb, member' beside CLuvian ḫappiš- 'idem' is false (cf. Rieken 1999: 404). I also know of no parallels in a neuter stem in -is- for the necessarily presumed proterokinetic ablaut.

The most popular derivation starts from an archaic proterokinetic s-stem *h₃éh₁-(o)s, *h₃h₁-és-os: thus tentatively Eichner (1973: 84[5]), more definitively Schindler (1975: 264), followed by Rieken (1999: 186), Stüber (2002: 194-7), and Wodtko et al. (2008: 387-8). By this account Hittite aiš reflects *h₃éh₁-es with replacement of *-(o)s by the *-es- of the weak stem *h₃h₁-és-os, which itself was altered to *h₃h₁-es-ós, allegedly after ablauting root nouns and t-stems with monosyllabic stems (thus Rieken).[3] The reflexes of all other languages can continue *h₃éh₁-(o)s (Schindler) or in part leveled *h₃éh₁-es (Stüber).

Although Hittite is the supposed basis for the archaic weak proterokinetic stem*h₃h₁-és-, such a preform cannot in fact remotely explain the attested Hittite weak stem /iss-'/. First of all, the putative analogical shift of the accent from suffix to ending within the prehistory of Hittite modeled on other monosyllabic ablauting stems lacks foundation. Most examples of preserved mobile accent in Hittite nominal paradigms clearly show disyllabic stems: nom.-acc. tēkan, dat.-loc. taknī 'earth'; nom.-acc sg. wātar, nom.-acc. pl. widār 'water'; nom.-acc. ēšḫar, dat.-loc. išḫanī; nom. sg. keššar (KBo 6.3 i 6), dat.-loc. sg. kišrī 'hand'; nom. sg. ḫāššaš, dat.-loc. sg. ḫašší 'hearth' (see Harðarson 1994: 35-9).[4] In the case of 'foot' the possible presence of a the-

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[3] As per Rieken (1999: 186[868]), the alternative reconstruction by Zucha (1988: 135-7) of *h₁éh₃-(o)s,*h₁h₃-és-os with *h₃ adjacent to the *e leaves no source for the restoration of the *e in the nominative-accusative, since the *h₃ would have colored the *e to *o throughout the paradigm already in PIE.

[4] Kloekhorst (2008: 318) assigns one instance of dat.-loc. sg. ḫašší to the root noun ḫāšš- 'ash, dust', but without a textual reference the interpretation remains unverifiable. The accusative plural la-a-aḫ-ḫu-u-uš (KBo 16.86 i 10) probably belongs to a disyllabic stem laḫḫa-. In any case the plene spelling of the first syllable as in the rest of the paradigm argues for fixed accent.

matized stem *pódo- (cf. Skt. pā́da-) beside the root noun *pód-/p(e)d-' leaves the relevance of this word in doubt (see Rieken 1999: 19 but for another view also Kloekhorst 2008: 654).

Hittite does preserve ablaut in some nouns with monosyllabic stems, but not mobile accent. The word k(a)raitt-/k(a)ritt- 'flood' (reflecting a t-stem *ĝrói-t-s, *ĝri-t-és) cited explicitly as a model for 'mouth' by Rieken (1999: 186) attests no weak case forms with plene spellings in the endings. Even more significantly, the two ablauting neuter nouns in Hittite with monosyllabic stems that might be expected to be the most immediate analogical models for neuter 'mouth' with monosyllabic stem likewise show no evidence of mobile accent. The root noun ker/kard- 'heart', which is quite well attested, never shows plene spelling in the allative kar-ta, kar-da, ŠÀ-ta (20+ times) or in the ablative kar-ta-az (5x). The only OS spelling of the dative-locative is kar-ti and kar-di, and the latter is also the standard later spelling (9x). In view of this evidence we may ignore the hapax kar-ti-i in a late New Hittite manuscript. While it is not historically a root noun, it is worth noting that per/parn- 'house', likewise an ablauting neuter with monosyllabic stem, shows not a single plene spelling in the endings of its weak case forms. In sum, there simply is no credible model for secondary end-accent in Hittite /iss-'/ 'mouth'. The very isolation of mobile accent in 'mouth' (reflected in the plene spellings iš-ši-i, iš-ša-a, iš-ša-a-az vs. nom.-acc. a-i-iš/a-a-iš) versus its absence in other comparable nouns argues that it is an archaism.

Furthermore, the geminate -šš- of the weak stem cannot reflect either *h₃h₁-és-os or *h₃h₁-es-ós. There is no gemination of intervocalic *s after accented short vowel (see Melchert 1994: 152 and Kimball 1999: 435-9 contra Eichner 1980: 161-2). Nor is *s geminated before an accented vowel (contra Kimball 1999: 440-41 and Eichner loc. cit.). The -šš- of the causative wašše/a- 'clothe' is analogical after weš- 'to wear', where the geminate is regular before another consonant in wēšta (see Melchert 1994: 150-52). The stem lišši- 'liver' may reflect *lihₓs- (see Schindler 1966: 78). Hittite šiššuriya- 'irrigate' and related forms are based on a reduplicated stem *(h₁)si-h₁s- (Rieken 1999: 329-30) and show the regular assimilation of *-Vbₗ/₃sV- to -VssV- (Melchert 1994: 77-8).

Incontrovertible positive evidence for pretonic *s appearing as single -š- is also scarce, since most examples appear in ablauting paradigms. However, there is one compelling formally isolated example: wi/ešuriya- 'to twist, press

together'.[5] As per Eichner (1973: 77) this verb is denominative to a stem *weisuro- seen also in ORuss vichŭrĭ 'whirlwind' to the root *weis- 'to turn'.[6] The verb is frequently spelled ú-i/e-šu-u-ri-ya-°, pointing to a Hittite accentuation *weisúro-. However we are to account for the fact, Anatolian consistently accents the first vowel of the suffix in "complex" *ro-stems (i.e. descriptively *-Vro-): compare likewise Hittite išnúra- 'kneading tray', Palaic tašúra- 'sacrificial table', ḫašíra- 'dagger'.[7] The Hittite weak stem /iss-'/ 'mouth' with a geminate -šš- can only be explained by a sequence of *-Vh₁/₃V-.

The combined i-vocalism, end-accent, and geminate -šš- of the weak stem severely restrict the possibilities for its preform. Most significantly, it eliminates any reconstruction with *h₃ in the root! The geminate -šš- compels a sequence *(H)VHs- (NB not *HHes-!), which means that both a root-initial and root-final laryngeal would have been *adjacent* to the *e and therefore an *h₃ in either position would have colored it to *[o] throughout the paradigm. However, we need pretonic *e in the weak stem in order to account for the attested Hittite i- (for pretonic *e > i see Melchert 1994: 139).[8] This in turn inexorably means that the attested o-vocalism of the

word (e.g. Latin ōs) must continue an o-grade (see for this possibility already Eichner 1973: 84[5]). An o-grade is summarily rejected by Stüber (2002: 195), but the competing o- and a-vocalism in the PIE word for 'ear' (contrast Greek οὖς with Latin auris) is most easily explained from an acrostatic root noun or s-stem *h₂óus-(os), h₂éus-(es)- (see Wodtko et al. 2008: 339-41 with references and citation of opposing views). There is no a priori reason to exclude such a paradigm for 'mouth'.

The evidence of Vedic Sanskrit, taken at face value without preconceptions, leads in the same direction as Hittite. There we find ablative āsás (āsá á) and instrumental āsá, never scanned disyllabically. The latter fact could be due to chance, and the end-accent could be analogical to other nouns with monosyllabic stems (see Stüber 2002: 195-6), but both could also be old. The Hittite and Sanskrit together point to an acrostatic *(h₁)óh₁(-)s, *(h₁)éh₁(-)s-e/os (thus also for the strong stem Matasović 2004: 110 without argumentation). The accent in the weak stem was shifted to the ending already in PIE, hence *(h₁)eh₁(-)s-é/ós (for which compare Skt. loc. sg. padí 'foot' and gen. sg. vācás 'word' of the same type and see Schindler 1972: 33). This derivation accounts for both the consistent monosyllabic scansion of Vedic ās- and the accent of āsás, āsí. It also leads directly to the attested weak stem in Hittite: *eh₁s-V̆- > *essV̆- > išš-' (with assimilation of *-h₁s- to -ss- *before* the change of tautosyllabic *eh₁ > PA *ǣ, for which see Melchert 1994: 56).

The strong stem *(h₁)óh₁(-)s contained a word-final sequence of obstruent plus *s. Other such sequences were subject to a regular prehistoric anaptyxis rule in Hittite, most prominently in preterite third singulars of the ḫi-conjugation (Oettinger 1979: 41, Melchert 1994: 174): hence *aks > akkiš 'died', ḫūwappiš 'hurled', maniyaḫḫiš 'managed', etc. (the i-vocalism after -ḫ- is analogical).[9] Nothing precludes preservation of *h₁- into pre-Hittite

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5   The meaning 'twist' is clear in the example in KUB 9.6 + 35.39 iii 20-23, where the practitioner and ritual client grasp two reed baskets from opposite ends and break them by twisting in opposite directions. Likewise in the opening of the Telipinu Myth (KUB 17.10 i 6-8), animals, burning logs and the altars of the gods are not 'stifled' (contrary to the popular interpretation), but rather put askew, into disorder, as shown by the fact that when Telipinu returns they are put back in proper order (KUB 17.10 iv 22 ḫandantati). That neatly stacked burning logs in a fireplace become twisted as they burn is commonplace.

6   The objection of Kloekhorst (2008: 1014) to this derivation on semantic grounds is unfounded, since a change from 'turn' to 'twist, press, squeeze' is quite easy. Compare English 'to wring'.

7   An anonymous reviewer justifiably raises doubts about the direct comparison with the Slavic cognate and suggests that the Hittite verb is derived from a verbal noun. I agree that a verbal noun *weis-wr̥ (in my view *"twisting, wringing') is a very viable source for the Hittite verb. However, by whatever means we account for it (most likely by columnarization of accent after the original weak stem in *-wén-), Hittite verbal nouns in -ur (properly /-or/, as per Kloekhorst 2008: 55-56) descriptively show plene and accent on the suffix: cf. a-ni-u-ur 'ritual'. Therefore the *s of wišuriye- was pretonic also by this derivation.

8   I stress that this conclusion is entirely independent of one's views regarding the fate of word-initial *h₃ in Anatolian. I continue to regard ḫ- as the regular result in Hittite,

Palaic and Luvian (see Melchert 2007 for another example), but the point is not crucial for present purposes. The word for 'mouth' cannot have contained an *h₃ either root initially or finally because its presence would have eliminated all e-vocalism of the root already in PIE and leave Hittite išš- unexplained.

9   For reasons to be discussed in detail elsewhere I now accept Oettinger's formulation by which the unmarked result of the anaptyctic vowel was Hittite [e]. When the original accent was to the right of the anaptyctic vowel, the latter drew the accent and remained [e]: *pĕrsnó/éh₂- > paršēna- 'hip, haunch'. When the anaptyxis was to the right of the original accent, the inserted vowel remained unaccented and underwent

long enough to trigger the rule: thus *(h_1)ó$h_1(-)$s > *óhes (*[óhes] or [ó?es]) > *ó_es > *ó_is > ai$\check{s}$ (with contraction to a diphthong or possibly glide insertion and at first [áyis], if this is the reading of OS a-i-i$\check{s}$). I know of no evidence for or against assuming that the anaptyxis rule was shared by Luvian. If it was, then we may suppose likewise *ó_es > CLuvian a-a-a$\check{s}$- (/a:s-/ or with Starke and Rieken perhaps still /a_as-/).

Additional Hittite words that might corroborate or refute the above scenario are difficult to find, and our very limited evidence for Anatolian beyond Hittite leaves the relative chronology of the assumed changes frustratingly indeterminate. Since I have invoked for the anaptyxis in the nom.-acc. singular the parallel of the preterite third singular in the $\hbar$i-conjugation, I should note explicitly that if one follows Oettinger (1979: 405 and passim) and Jasanoff (2003: 178 and passim) in assuming that the attested ending /-s/ reflects *-s-t, then the word-final anaptyctic rule obviously must follow the loss of final *-t after *-s-.[10] The CLuvian root noun $\hbar$ā$\check{s}$ 'bone' < *Host (Hamp 1984: 199), *$h_2$ésth_2 (Oettinger 1995: 218) or *$h_3$ést(h_1) (Kloekhorst 2008: 326) shows that Luvian shared the latter change, so as per above the anaptyxis in a word-final sequence of obstruent plus *s may also be relatively old within Anatolian.

An anonymous referee raises the matter of Hittite preterite third singular dā$\check{s}$ 'took' putatively from *déh_3-s(-t) with no evident anaptyxis. However, Hittite ara$\hbar$z(a) (which by the consistent spelling a-ra-a$\hbar$-za and non-existence of †ar-a$\hbar$-za must be disyllabic /araHts/) from *(h_1)ér$_{(e)}h_2$-ti shows that at least *h_2 colored the Hittite anaptyctic vowel. If this was likewise true for *h_3, then a virtual *déh_3s would lead to attested dā$\check{s}$. In any case, *déh_3-s(-t) is in all likelihood an entirely anachronistic construct. The prehistory of the Hittite $\hbar$i-conjugation, including its preterite, is notoriously controversial, but by all scenarios known to me the preterite third singular with ending *-s(t) is intrusive into a paradigm where the third singular was *(de-)dóh_3-e, whether one regards this as an unreduplicated h_2e-conjugation root aorist (Jasanoff 2003: 151), a dereduplicated "proto-intensive" (Oettinger 2006: 44), or a dereduplicated perfect (Kloekhorst 2008: 137). It is not

only possible, but indeed likely, that by the time of the intrusion of the *-s(t) into the paradigm, it was added to what was already a form *dā (thus explicitly Jasanoff loc. cit.).[11]

Another anonymous referee has reminded me of the analysis by Rieken (1999: 189-90), who (revising Oettinger 1979: 476) interprets the Hittite $\hbar$i-verb tai$\check{s}$ti- 'to load' as a univerbation of a neuter s-stem *tai$\check{s}$ and dai- 'put'. While the s-stem could continue a *d^hóh_1-es, the unusual o-grade of the root leads her to suggest an acrostatic *d^hóh_1-s, *d^héh_1-s-(e)s of the same structure as I have proposed for 'mouth' above. While the two analyses mutually support each other, it is obvious that neither is nearly transparent enough to count as evidence.

The derivation just presented does have the merit of accounting for the attested shape of the Hittite word for 'mouth' starting from the same preform as for all other reflexes, including those in Anatolian, while relying only on already independently established sound changes. Its one cost is the need to assume a PIE paradigm with unusual ablaut, but as mentioned above the word for 'ear' appears to require the same acrostatic *ó/é type. It is likely that we may add a third body-part term, *dóu(-)s, *déu(-)s- 'arm' in Sanskrit dó$\hbar$ and Avestan dao$\check{s}$. The root vocalism cannot be strictly determined,[12] but the consistent full grade again suggests an acrostatic paradigm. I deliberately leave open the question of whether we are dealing in all three cases ('ear', 'mouth', and 'arm') with derived s-stems or root nouns to "enlarged" roots.[13]

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normal raising to [i] (Melchert 1994: 139-40), unless colored to [a] or [u] (Melchet 1994: 175 after Oettinger).

[10]   In the case of é$\check{s}$- 'be' and fientives in -e$\check{s}\check{s}$- one may assume restoration or maintenance of the final stop by analogy to other mi-verbs. In the $\hbar$i-conjugation where the ending was consistently *-s-t there would have been no basis for restoring -t.

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[11]   The source of the intrusive ending is irrelevant to the question at hand. The older derivation of the stem dā- 'take' from a medio-passive *dh_3e/o- (Eichner 1975: 93-4, Oettinger 1979: 500-01, Melchert 1984: 25) would likewise leave no place for a genuine preform *deh_3-s(-t).

[12]   Since *eu > ou in Celtic, Old Irish doë, doat (gen. pl.) < *de/ous-(V)nt- unfortunately does not prove o-grade, despite the implication in Pokorny 1959: 226.

[13]   The analysis just cited of Hittite tai$\check{s}$ti- 'to load' as containing a reflex of a neuter s-stem *d^hóh_1-s *'load' to the root *d^heh_1- obviously would point to derived s-stems.

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