Some Problems in Anatolian Phonology and Etymology

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1 The Phonological Problem

There are several Hittite words which appear to have cognates in Cuneiform Luwian and sometimes other Anatolian languages as well, which are written with syllabic signs of the *š*-series in Hittite and the *d*- or *t*-series in Luwian. Such apparent correspondences are found both in initial and internal position. They are not regular in the sense that inherited **s* normally yields *s* both in Hittite and Luwian, and inherited dental plosives likewise appear as dental plosives in both languages. Another source of ⟨*s*⟩ in Hittite is found in the assibilation of initial **di* and **dy* to *ši*. This change, like the parallel one of **ti > zi* [*tsi*], is special to Hittite itself.

2 Approaches to the Problem

Some scholars either reject the correspondences altogether, or explain the differences as having a morphological basis. Others have been impressed by the good semantic and morphological matches, and have tried to find solutions for the phonological problems, but none of the proposed explanations has, as yet, proved entirely convincing.

J. Puhvel (1975 and 1979), encouraged by the Anatolian outcomes of PIE **dyēus/diw-* in Hittite *ši-i-uš* 'god', *ši-i-wa-az* 'day' but Luwian *Ti-wa-az*, Palaic *Ti-ya-az* 'sun-god', tried a combination of **dy-* or **dhy-*. Unfortunately, as has often been pointed out, **y* in such combinations does not otherwise disappear. The resulting root etymologies were also semantically tenuous. But Puhvel's idea that a correspondence of ⟨*s*⟩ and ⟨*d/t*⟩ might reflect a palatalized consonant was a positive advance. Following a similar line of thought F. Josephson suggested tentatively that these correspondences

might go back to a palatal laryngeal *hy (1979: 100–1). In a wide-ranging discussion of palatalization and assibilation in Anatolian languages, Josephson proposed that inherited palatal and velar plosives were kept distinct in Anatolian, and that there might also have been distinctively palatal laryngeals which were susceptible to palatalization and assibilation, even before /a/ and /u/. A serious drawback of this theory is that where etymological connections in other Indo-European languages have been proposed, the assumed cognates begin with vowels of *o- rather than *e-quality, which would be difficult to reconcile with an original palatal laryngeal.

H. C. Melchert suggested that inherited *s might change to /d/ in the Luwian branch of Anatolian (1994: 274–5), but this remains inconclusive, as conditions for it are not clear.

In this paper I propose to re-examine the evidence to see if any common solution can be found.

3   The Material

Hittite *šākuwa* nominative-accusative neuter plural with possible singular stem *šakui-* 'eye(s)':[1] Luwian *da-a-u-wa* nominative-accusative neuter plural; *da-a-u-i-iš* nominative singular, common gender. These words, which inflect as neuter root nouns in the plural, have in Luwian singular forms with nominative in -*iš*.[2] The *i*-stem forms found in Hittite texts mainly conceal the root under the logographic spelling IGI^HI.A with a plural determinative, although the endings look singular:

Nom. sg. IGI^HI.A-*iš* KUB XXXIV 85: 7
Acc. sg. IGI^HI.A-*in* KUB XXXIII 113 i 11, 12; KUB IX 34 iii 34; KUB XXXVI 14 (6)
Loc. sg. IGI^HI.A-*i* KUB XXXIII 98 iii 19.

The form *ša-ku-iš-ši-it* 'its eyes' KUB XVII 28 i 15 appears from its agreement with the plural *adanta* to be a neuter plural nominative, though not of the usual type. Rieken (1999: 61) suggests that it could be an old neuter dual. If so, the form, which refers to the 'eyes' of a needle, may have survived in this transferred sense while it was normally supplanted in the literal sense by the plural *šākuwa*. Starke argued that the logographic examples in Hittite texts with *i*-stem case endings concealed Luwian forms of the nominative and accusative singular, because they conformed to the pattern known as

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[1]   For the most recent discussion of the authenticity of the stem *šakui-* as Hittite see *CHD*, vol. Š/1. 67.
[2]   Rieken (1999: 59–61) has a thorough discussion of the morphological problems with references to earlier literature.

'i-Motion', very common in Luwian but not in Hittite. There is a slight difference between the Luwian and Hittite examples, however, in that in Hittite texts even those words with endings which are formally singular have the plural determinative ḪI.A, whereas in the Luwian texts this is found only with plural endings of the noun. These details are strange, but may be important for the question of etymology.

There are two competing etymologies for the Hittite word, both of which go back to a time before the possibility of a connection between the Hittite and Luwian words was contemplated. Of these, Melchert prefers the PIE root *sek^w- 'follow, accompany', which in Germanic languages has developed the secondary meaning 'see'.

The semantic difficulties should not be underestimated. Either Germanic and Anatolian shared a common innovation against the rest of the Indo-European languages, or the meaning 'seeing' was original and the languages other than Anatolian and Germanic had in common taken a path of development from 'see' to 'track with the eyes, follow, go along with'. Neither of these alternatives seems particularly attractive, despite Philip Baldi's attempt (1974) to revive the second.

The Hittite word would in Melchert's view be from a thematic adjective *$sók^wo$- 'seeing'. The single writing of ⟨ku⟩ in Hittite was attributed not to lenition after a long accented vowel, since the inherited vowel would have been short, but to an automatic voicing of the voiceless labiovelar in internal position, for which there are some parallels. For these compare Melchert (1994: 61, 96). The alternative etymology also requires this change, but in that case only if the inherited vowel had been short, which is uncertain.

This second etymology connects the Hittite word with the PIE word for 'eye', *h_3ek^w-. Apart from the initial segment this is a much better fit. The meanings are identical. The morphological correspondence could hardly be better. The Indo-European word for 'eye' is represented not only by root nouns in various languages, especially in the second elements of compounds, but also by *i*-stems which are sometimes confined to specific cases.[3] In Old Church Slavonic the *i*-stem occurs only in the dual paradigm, although in Lithuanian it has been generalized throughout the declension.[4]

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[3] In Greek there are compound nouns both with -ωπ- and with -οπ-, e.g. εὐῶπιδα (acc. sg. fem.), Αἰθίοψ. The simple root noun is rare, but compare the neut. pl. τὰ ὦπα at Plato, *Crat.* 409 c. The Sanskrit neuter *i*-stem *ákṣi* is defective, making its oblique cases from a stem with suffix -*n*-, as in gen. sg. *akṣnás*. Of particular interest is the nom.-acc. dual *akṣí*, which finds parallels both in Avesta *aši*, with *š* on the analogy of *uši* 'two ears', and also in Lithuanian *aki*, Old Slavonic *oči* beside nom. sg. *oko*. There is also the isolated Greek dual ὄσσε from *$ok^wī$ with the added dual ending -*e*.

[4] For further details see *IEW* 775–7.

The comparative evidence suggests that the *i*-stem may have originated in the dual. It could be that Hittite has preserved some traces of this situation, although the dual itself has disappeared. The existence of *i*-stem forms in several other ancient Indo-European languages makes it more likely that the Hittite examples are also inherited, rather than the result of Luwian *i*-Motion, of which the origins are in any case still not completely understood.[5]

The initial ⟨*š*⟩ of the Hittite word has sometimes been explained by assuming an '*s*-mobile' before the laryngeal. This goes back to a proposal by Hoenigswald (1952) but the lack of a prothetic vowel before initial *sh-* is difficult. Even if it can be defended,[6] it would work only if the Hittite–Luwian correspondence were rejected.

Hittite *šankuwai-* 'nail' (of finger or toe). For the declension cf. Weitenberg (1979) and *CHD*, vol. Š/1. 180–1. The Hittite word has often been compared with Lat. *unguis* 'nail'. J. Kuryłowicz noted that the correspondence was like that in the word for 'eyes' (1958: 226). Apart from the initial *š*- the comparison is excellent. It may be noted that Hittite goes with Italic and Celtic in having a form of the root with no vowel between the nasal and the final consonant ($*h_3ng^wh$-) rather than the full grade $*h_3nog^wh$- which appears in most other branches.[7] These variants no doubt reflect an old holokinetic paradigm. It is also notable that *i*-stems or extensions of an *i*-suffix occur in association with the zero grade of the root in Italic and Celtic as well as in Hittite. It has been traditional to reconstruct the root as $*nogh(w)$, $*ngh(w)$ but in the light of more recent research a root-final labiovelar $*-g^wh$ seems more likely.[8]

The single possible Luwian cognate for Hittite *šankuwai* (neuter plural) is *ta-am-mu-u-ga* (neuter plural) in KUB XXXII 8 + 5 iii 17.

The context is:

    16′   *iš-ša-ra(-aš-ša)-an-za-ti-it-ta*
    17′ *pa-a-ta-aš-ša-an-za ta-am-mu-u-ga la-a-at-ta*
    18′ *za-an-da du-ú-pa-im-mi-in iš-ša-ri-in*
    19′ *za-an-da du-ú-pa-im-mi-in* EME-*in*

He/she has taken away nails of his/her hand(s) and foot/feet, (and) therewith the stricken hand, therewith the stricken tongue.

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[5] For a detailed account of this phenomenon see Starke (1990: 59–90).

[6] Kimball (1999: 381–2) suggests that the prothesis may have happened only before $*sh_2$.

[7] A detailed discussion of the variants may be found in Szemerényi (1964: 239 ff.).

[8] On Germanic preconsonantal treatment of PIE $*g^wh$ see Lass (1994: 20–1). On the Celtic problems see McCone (1996: 38 ff.).

The interpretation 'nails' was made by Starke, and is perfectly convincing (1990: 47).

There is a similar Hittite passage at KUB IV 47 i 13–14:

> GÙB-*la-aš-ša* ŠU.MEŠ -*aš* GÌR.MEŠ-*aš-ša ša-an-ku-wa-i da-a-i*
> He trims the nails of the left hands and (of the) feet.

The phonological development is complex. In the absence of counter-examples it may be assumed that before a nasal *g^wh became /*gw*/, exactly as in Lat. *ninguit* 'it snows', beside *nix, nivis* 'snow'. Next came assimilation of the nasal of the root to the following *gw*, giving pre-Luwian **tamgwa*. For a not dissimilar kind of change compare Tocharian A *makw*, B *mekwa* 'nail'. The final stage must have been a metathesis of /*gw*/ > *ug*, perhaps like that found in the occasional Hittite spelling *e-uk-zi* for usual *e-ku-zi* 'drinks'.

The recognition of Luwian *tammūga* as corresponding to Hittite *šan-kuwai* adds another member to the group of words showing initial ⟨š⟩ in Hittite but ⟨t⟩ or ⟨d⟩ in Luwian as well as matching words of the same meaning in other Indo-European languages with probable initial *h_3.

Hittite *še-(e)-ḫur* and Luwian *du-ú-ur* 'urine'

The identification of these words is attractive. F. Starke (1990: 568–70) made out a strong case in its favour because of inflexional morphology, meaning, and appearance in similar contexts, but found the phonological difficulties insuperable. As well as the difference between the initial consonants, there is the disappearance of intervocalic ⟨ḫ⟩ in Luwian, and the fate of the ⟨ē⟩ of Hittite, completely absent in Luwian. But loss of the internal single laryngeal in Luwian is not without parallels. Melchert accepts the possibility, and cites also cases where a laryngeal is lost before /*w*/ (1994: 258).

The vowel of the first syllable in Hittite *šēḫur* has various possible sources. Before a laryngeal it could go back to a diphthong just as easily as to a long vowel *$\bar{e}$. Lenition of the laryngeal after the long accented vowel at the Proto-Anatolian stage would have given single *-ḫ-* in pre-Hittite and pre-Luwian. The vocalism of the Luwian word need not be as problematical as Starke supposed in view of Luwian *ú-ut-ti-iš* 'you drink' (KUB XXXV 133 ii 25), where the root vowel has been assimilated after the change of *g^w to Luwian /*w*/. For the interpretation of the form compare the comments of Melchert, *CLL* 241.

This leaves the initial consonant correspondence. Unlike *šākuwa* and *šankuwaiš*, the words for 'urine' have no obvious etymological connections

outside Anatolian.[9] The proposed connection of šēḫur with the verb šaḫ 'block up, obstruct, fill, stuff', is untenable. It is clear from the examples in the *CHD*, vol. Š/1. 1–2, that the verb has nothing to do with causing impurity. Nor is there any serious reason to doubt that the basic meaning of the word šēḫur was 'urine'.

A connection with Greek οὖρον 'urine' might be possible, but for the syllabic augment in past tenses of the verb οὐρέω in Attic, normally an indication of initial $*F$. Ionic, however, does not have an augment in this verb. The standard etymology from a root $*wers/wors$ 'to rain' implies an unusual, though not unique, treatment of Attic intervocalic -ρσ- as -ρ- with compensatory lengthening of the preceding vowel, rather than the normal -ρρ- seen in θαρρεῖν 'be confident' etc.[10]

Since the traditional etymology is uncertain, an alternative solution may be sought.

In view of the preceding discussion, one might look for an initial $*h_3$. If the following ⟨ē⟩ of the Hittite word went back to an *i*-diphthong, this could only have been $*oi$. Thus one may posit a form $*h_3oih_2wr$ as ancestral to the Anatolian words. In Greek the word for 'urine' is a thematic neuter, but apart from the extra suffix it looks like a good match for the Anatolian words. Both the laryngeals would be lost, leaving a form $*oyurom$. By the regular loss of intervocalic $*y$ the form οὖρον would result. The verb οὐρέω would then be an ordinary denominative in $*-ey\bar{o}$ rather than the model for a back-formed noun.[11]

The next two Hittite words beginning with š do not appear to have counterparts in Luwian, but elsewhere have possible cognates which could point to initial $*h_3$.

Hittite šarḫuwant- 'insides, belly, womb, embryo' was compared by J. Schindler (1969: 159) with Greek ὀρύα 'sausage'. The comparison seems unobjectionable.

Hittite šuwaiš 'bird', found only once in a vocabulary fragment 902/z i 15, which seems to correspond with MUŠEN-eš in HT 42 obv. 2 and 4, may be related to a widespread group of words for 'bird' in other Indo-European languages, where there are several difficult problems of both phonology and morphology. In a long article devoted to the words for 'bird' and 'egg'

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[9] For earlier suggestions about šēḫur alone cf. Rieken (1999: 340–3).

[10] The question is discussed by Lejeune (1972: 138 with n. 5).

[11] First proposed by Wackernagel (1888: 129) and often repeated since; cf. Chantraine (1968–80: 839).

in Indo-European Schindler (1969) was impressed by the resemblance of the Hittite form to Vedic nom. sg.*véḥ* and *víḥ*, gen. sg. *véḥ*, nom. pl. *váyaḥ*, and posited an original paradigm with nom. sg. *$*hwois$*, gen. sg. *$*hweis$*. The Vedic paradigm also contained examples of the root form *$*hwi-$*, as in the Vedic instr. pl. *víbhiḥ* 'with birds'. The alternative nom. sg. *víḥ* could be explained as remodelled according to the regular *i*-stem pattern seen in *agniḥ* 'fire' with gen. sg. *agneḥ*.

In languages other than Indo-Iranian, Albanian, and Anatolian forms of the root occur in which there is a vowel before the *$*w$*. This suggests an initial laryngeal, but it is not entirely clear whether *$*h_2$* or *$*h_3$* should be posited. Greek presents conflicting evidence with οἰωνός 'bird of prey, ominous bird' as against αἰετός 'eagle'. Schindler had doubts about οἰωνός on account of difficulty in analysing the second element -ωνός, but this hardly affects the identification of the first part with the word for 'bird'. Italic *avis* would point to *$*h_2$* if it had a full grade *$*hewi-s$*, but a zero grade might be expected to produce a form with no initial vowel, as in Vedic.

According to Schrijver's rules (1991: 15–31) a laryngeal before an initial consonant would disappear, so that *avis* would have a full grade of the root. This would be contrary to Schindler's reconstruction of the word as a root-noun *$*hwoi-s/hwei-/hwi-$*. Schrijver prefers to start from *$*h_2ewi-$*, but also mentions a suggestion by Peters that a form like Vedic *víḥ* could have had its initial laryngeal vocalized in order to avoid a short monosyllable. If that were the case, any laryngeal might be expected to give /a/ in Latin. If the laryngeal was *$*h_2$*, the connection with Hittite *šuwaiš* would fail in any case since initial *$*h_2$* in Anatolian regularly becomes ⟨ḥ⟩.

Latin *avis* might seem to indicate initial *$*h_2$*, but this is not the only possibility. G. Meiser (1998: 84–5) describes conditions in which Italic *$*o >$* *a* at a time when laryngeals were still preserved even after consonants. The change took place after /m/, /w/, all labiovelar plosives, and perhaps /l/, when the vowel stood in an open syllable, but was inhibited when the syllable was closed, even by a laryngeal. Possibly an initial *$*h_3$* could have produced the same result as the other consonants mentioned. In that case an original *$*h_3owis$* would have developed to *avis*, while *$*h_2owis$* 'sheep' came through into Latin as *ovis*. All this, however, is quite uncertain.

The problem of the Greek forms remains so far unresolved. It is notable that Greek did not preserve the Indo-European word for 'bird' as such but replaced it by a derivative of the Indo-European word for 'eagle'. This necessitated the creation or adoption of a new word for 'eagle'. It is worth asking why the original simple word for 'bird' was abandoned. Did it suffer a fatal collision with the word for 'sheep'? If so, a proto-Greek *$*owis$* in both

meanings would have been intolerable, but if 'bird' had been *awis (as in Latin) the problem would not have arisen. As for αἰετός, it might be a word for 'eagle' which Greek borrowed from some other language with which it had come into contact whereas οἰωνός preserved the word for 'bird' in its regular Greek form.

There seems therefore to be no strong reason for preferring a reconstruction with $*h_2$ to one with $*h_3$ in the word for 'bird'. The evidence on either side is not abundant, but it is perhaps easier to account for a change of $*o >$ *a* in Latin than for one of $*a > o$ in Greek.[12]

It is therefore possible that the Hittite word belongs to the group under discussion, although it is found only in this one form.

MUNUS*alḫuešra-* and *alḫuitra-*

This title of a priestess of Huwassana of Hupesna is found in Hittite texts, but mainly in the 'Luwian' variant. Its origin is unknown, but it is included here for the sake of completeness.[13]

The case of the verbal root represented in Hittite by *ḫuiš-*, in Cuneiform Luwian by *ḫuid-* 'live', is complex. As with the previous word the correspondence ⟨š⟩ : ⟨d⟩ is in internal position.

Many of the difficulties involved in reconciling the Hittite and Luwian forms stem from the generally held conviction that the Hittite verb must be derived from the Indo-European root $*h_2wes$, which had the basic meaning 'stay the night, dwell' but not 'live, survive' as in Hittite and Luwian. I believe that the attractions of this etymology are superficial, the difficulties deep-seated, although there has been no lack of attempts to remove them. The root vocalism is a problem for both languages. In Hittite the spellings in the older texts are with ⟨i⟩, which is replaced by ⟨e⟩ in late texts or late copies of Old Hittite documents. Luwian also has ⟨i⟩, although the expected outcome of short *e* in that language is ⟨a⟩. A special rule has therefore been proposed whereby (in both languages) short *e* became ⟨i⟩ between /w/ and a dental obstruent.

There are some (few) Old Hittite spellings of the root as *ḫuš-* in derived forms such as the causative *ḫušnu-* beside the usual *ḫuišnu-*, and the verb *ḫuišwe-* 'be alive'. It may be no accident that all the examples of the spelling *ḫuš-* occur in forms where the following syllable contains ⟨u⟩ or ⟨w⟩. It seems possible that in rapid pronunciation of such forms the /i/ in the unaccented

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[12] For other arguments in favour of $*h_3$ see Lindeman (1997: 73).

[13] See the discussions in *CLL* 10; *HED* i. 33–4; *HW*² i. 57.

root syllable might have been suppressed by a failure to unround the lips before the following labial vowel or glide. If there had been a genuine ablaut variation /ḫwes/ : /ḫus/ in Old Hittite it would be surprising to find it eliminated in later stages in favour of the full grade of the root, since this would have been inherited only in the simple verb itself.[14] The absence of a weak stem *ḫut-* in Luwian would also be remarkable.

It is difficult to dissociate the noun *ḫu-i-ta-ar* 'animal, game' from the verbal root seen in Cuneiform Luwian *ḫuid-* 'live'. This word has been recognized as an early loan from Luwian into Hittite both because of its root-final consonant and because /dn/ is not assimilated to /nn/ in the oblique cases.[15]

There are also several occurrences of the word for 'animal' and its derivatives in Hieroglyphic Luwian from different sites and periods. The examples given in Hawkins (2000) are:

(BESTIA)*HWI-tara/i* MARAŞ 1 §11 (end of ninth century)
("ANIMAL.BESTIA")*HWI-sa₅+ra/i* BOHÇA §5 (second half of eighth century)
⌜(BESTIA)⌝*HWI-sa₅+ra/i* BULGARMADEN §7 (second half of eighth century)
(BESTIA)*HWI-sà+ra/i-sa* ALEPPO 2 §5 (late tenth or early ninth century)

Derived forms

(BESTIA)*HWI-sá-na-ma-ia* ASSUR a §10 (late eighth century)
BESTIA-*sa-na-mi-zi* TELL TAYINAT 2 line 2 fragment 3 (before 738; probably eighth century)
HWI-tà-ni-ia-za ŞIRZI §4 (early to mid-ninth century)

It thus emerges that there is variation not only between Cuneiform and Hieroglyphic Luwian, but even between different times and places within the Hieroglyphic area. These variations between spellings with *t-* and *s-* signs must surely be phonological in character (*pace* Starke 1990: 563–4), and render even less plausible any attempt to trace the root-final consonant either to inherited *s or to a dental plosive.

4   Discussion

The correspondences discussed above form a coherent pattern. This appears similar to that of the Ancient Greek dialects, where the outcomes of palatalized consonants varied between -σσ-, -ττ- from the voiceless groups

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[14]   For the forms cf. Oettinger (1979: 91, 116) and *HED* iii. 332 ff.
[15]   Starke (1990: 560–4). Cf. Rieken (1999: 304–6).

$*-ky-$, $*-khy-$, and $-\zeta-$, $-\delta\delta-$, from the voiced groups $*-dy-$, $*-gy-$ as well as for some cases of initial $*y$.[16]

These Greek developments result from palatalization, but it is difficult to explain the Anatolian facts in such a way. The evidence from outside Anatolian would seem to point to $*h_3$, but this laryngeal had precisely the wrong characteristics (lip-rounding and voicing) to undergo palatalization. Of the fate of initial $*h_3$ in Hittite there are conflicting views. Eichner believes that it was lost, but Melchert and Kimball have maintained that it was preserved in initial position, although it could not be distinguished in writing from the outcome of $*h_2$. The critical evidence is in Lycian, which preserves the outcome of $*h_2$ both initially and internally, but not those of $*h_3$.[17]

If $*h_3$ did survive in Hittite there is no sign there of lip-rounding effects: $*h_3$ does not become $\langle hu \rangle$. This need not imply that the feature often ascribed to $*h_3$ had never existed. Possibly before $*o$ a change took place which resulted in the suppression of the labial element, as in Lat. *colo* < $*k^welō$ or *coquit* < $*pek^weti$ (with previous change of $*pek^w-$ to $*k^wek^w-$-> k^wok^w-).

If the normal outcome of initial $*h_3$ in Hittite was $\langle h \rangle$ initially, while in other positions it was lost, special conditions must be sought in order to explain the anomalous development which resulted in Hittite $\langle š \rangle$, Luwian $\langle d \rangle$.

It so happens that in all the examples where $*h_3$ appears to give this bizarre result the enviroment contains a nearby /u/ or /w/. Possibly the presence of such sounds exercised a dissimilatory effect on a neighbouring $*h_3$, if this had been phonetically something like $[\gamma^w]$. It is impossible to be certain exactly what happened here, but in order to arrive at the eventual result, something like a change of $[\gamma^w] > [\gamma^y]$ might be postulated. An intermediate stage of development might have been an affricate $[dž]$ which was subsequently simplified in Hittite to $[ž]$ but in Luwian to $[d]$, which would sooner or later have become $[t]$ by the devoicing of initial voiced stops. Hieroglyphic Luwian shows by the spelling variations in the word for 'animal' that it is not simply a descendant of Cuneiform Luwian, but a distinct member of the Luwian subgroup.

The variations within Luwian make it clear that the words for 'life' and 'animal' cannot go back either to a root ending in inherited $*s$ or to one ending in an inherited dental plosive. To regard the Hittite and Luwian words either as unrelated or as having different root-enlargements does

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[16] A full account of these changes can be found in Lejeune (1972: 100–16).

[17] On the Lycian details see Melchert (1994: 305) with references; on Hittite see Kimball (1999: 384–7).

not help, for if there can be variation within Luwian, and even within Hieroglyphic Luwian, it should be no surprise that Hittite and Cuneiform Luwian diverge.

Since the final consonant of the root *ḫuiš/ḫuid* was not IE *s, identification with the root *hwes* 'spend the night, stay, dwell' can no longer be maintained. Since the set of correspondences here is apparently the same as that found in several other words which have cognates with initial *h_3, it seems reasonable to start from the hypothesis that the same set of correspondences can also go back to an inherited *h_3 in internal position.

The numerous derivatives from this root have a /w/ suffix, which suggests that they may be based on the adjective *ḫuišu-* 'raw' (of meat), 'fresh' (of vegetables), but must originally have meant 'alive', a meaning in which it has been replaced by *ḫuišwant-* and in Luwian by *ḫuidwališ*. The root vowel was not short *e, but, in view of the rare plene-spellings with ⟨*i*⟩ in the root of the simple verb, most probably *ei/i.

It remains to ask if there was an Indo-European root meaning 'live' which terminated in *$-eih_3$, and was often found with a suffix /w/. Indo-Europeanists will recognize the root *$g^w eih_3/g^w ih_3$ 'live' as an almost ideal match, even down to the fact that it forms a thematic present stem in -*we/wo* (Lat. *vīvo*, Skt. *jīvati*) and an adjective with the same suffix (Lat. *vīvus*, Skt. *jīvas*). Only the initial ⟨*ḫu*⟩ stands in the way of this identification. But how did *g^w come to appear as Anatolian ⟨*ḫu*⟩?

If the original shape of the root was *$g^w(e)i\gamma^w$, the root-initial and root-final consonants were already very similar. In this kind of situation complete assimilation may readily occur. For example, IE *$penk^we$ '5' gave Lat. *quīnque*; Lat. *bibit* 'drinks' also shows assimilation of the first consonant to the second, as compared with Skt. *pibati* < *$piph_3eti$. In the case of Anatolian, the assimilation of *g^w . . . γ^w must have preceded the assumed dissimilation of the root-final consonant from [γ^w] to [γ^y]. Dissimilation following assimilation is not unknown: for example, Modern French *cinq* '5' had its initial consonant, Lat. /qu/ in *quinque*, dissimilated to /k/ in Late Latin from the second /qu/ of *quinque* (Pope 1934: 318).

It is important to note that the secondary *γ^w produced by assimilation had a different result in Anatolian from original h_3, which lost its labial element at some stage when inherited *o was still a rounded vowel. It was only the [γ^w] of secondary origin which yielded ⟨*ḫu*⟩. The rounding of *e > *o after *h_3 is usually taken to have occurred in Proto-Indo-European itself, but at that stage the initial consonant in the root in question was still the plosive *g^w, which had no such effect. The chronology of the changes described above may be summarized as follows:

(1) $*h_3e$ and $*h_3a > *h_3o$ in Proto-Indo-European.
(2) Assimilation of $*g^w \ldots \gamma^w$ to $*\gamma^w \ldots \gamma^w$ within Proto-Anatolian.
(3) Dissimilation of the second $*\gamma^w$ to $*\gamma^y$ in the neighbourhood of /u/ or /w/ before the end of Proto-Anatolian.
(4) Loss of the labial element of $*h_3$ before /o/. This change must have happened later than (3) or it would have prevented it.

The morphological consequences of the proposed etymology of the verb ḫuiš- are:

The adjective ḫuišu- is closely related to Lat. vīvus, Skt. jīvas etc. although these have acquired an additional thematic vowel suffix.

The verb ḫuišwe- 'be alive' (which is most probably thematic)[18] corresponds well with the thematic present stems of Lat. vīvit and Skt. jīvati. The proposed connection of the Hittite verb ḫuiš- with the Indo-European root $*g^weih_3$ is not original. It was made by Johannes Friedrich in 1922, but he later withdrew it when greater knowledge of the Hittite consonantal system and the identification of Hittite ⟨ḫ⟩ with one or more of the hypothetical Indo-European laryngeals seemed to rule out the possibility of deriving Hittite ⟨ḫu⟩ from PIE $*g^w$ (Friedrich 1922: 159).

It now appears that Friedrich's first thoughts may after all have been correct. As for the root $*h_2wes$, it may indeed be represented in Hittite by the verb ḫušk- 'wait', but there is no obvious connection between this verb and ḫuiš- 'live'.

The many difficulties involved in deriving ḫuiš from $*h_2wes$ which have been discussed above have if anything been increased by the discoveries in Hieroglyphic Luwian, discoveries to which Anna Morpurgo Davies has herself made such notable contributions.

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[18] For verbs with the suffix -we- see Oettinger (1979: 330–6; for this verb see 331). It is doubtful if the stem ḫuišwai- is genuinely old: for KBo III 63 as a later copy of an Old Hittite text see Oettinger (1979: 331 with n. 151).

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