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**Disertační práce**

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**Aspekty hetitských nominálních *i*-kmenů**

Aspects of Hittite nominal *i*-stems

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*In Prague, 30.3.2022*

I hereby declare

that this dissertation is the result of my own work and that I wrote it independently, using only duly listed and properly cited sources and references; and that it has not been submitted in connection with any other university course or in fulfilment of the requirements of the same degree or of any other.

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In Jenštejn, 30.3.2022

Dita Frantíková

*To my family*

**Keywords**

Indo-European, Anatolian, Hittite, nominal inflection, nominal derivation, ablaut, *āi*-stems, *i*-stems.

**Klíčová slova**

Indoevropština, anatólština, chetitština, jmenná flexe, jmenná derivace, ablaut, *i*-kmeny, *āi*-kmeny.

## Abstract

The present study offers a detailed investigation of two important groups of Hittite nominal *i*-stems, namely the *āi*--stems and the so-called "core" *i*-stems. It is divided into three parts. The first part offers an introduction to the problem of *i*-stems in PIE and in Hittite itself. The second part comprises the selected lexemes and provides their attestations, information on their inflection and origin. It strives to present a current picture of the synchronic evidence for the selected groups, which is necessary taking into account the rapid progress in Hittite studies. Preliminary conclusions are also provided for the historical analysis of the individual items. The third part builds upon the information gathered about the individual lexical items to offer new views on the ablaut patterns and origins of the words. Besides providing an overview and useful summary, my goal is to confront some of the generalizations previously made about *i*-stems and offer new solutions, which could also be of a profit to historical linguists outside of Anatolian studies. The major finding of the thesis is the fact that only a very few *i*- and *āi*-stem nouns and adjectives can be considered directly inherited from Proto-Indo-European.

## Abstrakt (česky)

Předkládaná studie nabízí vhled do dvou důležitých skupin chetitských nominálních kmenů – *āi*-kmenů a základních *i*-kmenů. Práce je rozdělena do tří částí. První část nabízí úvod do problému studia praindoevropských a následně chetitských *i*-kmenů. Druhá část obsahuje slovníková hesla včetně jejich nálezoých dokladů, informací o jejich původu a flexi. Tato část si klade za cíl přestavit současný pohled na jednotlivá lemmata, který vzhledem k rychlému vývoji této oblasti vědeckého zájmu nabyt v posledních letech významných změn. U jednotlivých hesel jsou předkládány i předběžné závěry ohledně jejich historické analýzy. Třetí část vychází ze závěrů získaných studiem jednotlivých slov. Poskytuje shrnutí a závěry k otázkám ablautových vzorců a původu slov. Cílem práce bylo z velké části přinést nové pohledy na základní otázky týkající se jak jednotlivých *i*-kmenů, tak celé této kategorie. Klíčovým získaným poznatkem je fakt, že pouze velice málo *i*- a *āi*-kmenů lze odvodit přímo z praindoevropštiny.

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## Abbreviations and Symbols

### General abbreviations

abl. ablative

acc. accusative

adj. adjective

Akk. Akkadian

Alb. Albanian

all. allative

Arm. Armenian

Avest. Avestan

CLuv. Cuneiform Luvian

coll. collective

c. common gender

dat. dative

ed. editor

erg. ergative

gen. genitive

Gr. Greek

Hatt. Hattic

Hitt. Hittite

HLuv. Hieroglyphic Luvian

Hurr. Hurrian

IE Indo-European



Iir.	Indo-Iranian
ins.	instrumental
Lat.	Latin
loc.	locative
Lith.	Lithuanian
Luv.	Luvian
Lyc.	Lycian
MH	Middle Hittite
MIr.	Middle Irish
MS	Middle script
n.	neuter
nom.	nominative
NH	New Hittite
NS	New Script
OCS	Old Church Slavonic
OE	Old English
OH	Old Hittite
OS	Old Script
p.c.	personal communication
PIE	Proto-Indo-European
pl.	plural
Rs.	reverse
sg.	singular

Skt. Sanskrit

Sum. Sumerian

Vs. obverse

Toch. Tocharian

Ved. Vedic

voc. vocative

x used in transliteration, an illegible sign

= marks clitic boundaries

\* the following form is not attested

\*\* the following form is non-existent

(...) in Hittite encloses omissible part of word

[...] in Hittite encloses illegible or broken text material

[ ] these brackets are used to encircle a lemma or paragraph which discuss a word that does not belong to the group of words.

[(...)] encloses material restored from a duplicate

< develops from

> develops into

/.../ encloses phonological/phonemic interpretation

#### Bibliographical abbreviations

CHD = Guterbock, H. G. / Hoffner, H.A. / van den Hout, T. P. J. (eds.). 1983-.

*The Hittite Dictionary of the Oriental Institute of the University of Chicago, Chicago,*

- CTH = Laroche, Emanuel. 1971. *Catalogue des textes hittites*, Paris (with suppl. in *Revue hittite et asianique* 30, 1972, 94-133 and *Revue hittite et asianique* 32, 1973, 68-71).
- EDHIL = Kloekhorst, Alwin. 2008. *Etymological dictionary of the Hittite inherited lexicon*. Leiden: Brill.
- HED = Puhvel, Jaan. 1984-. *Hittite Etymological Dictionary*, Berlin – New York.
- HEG = Tischler, Johannes. 1983-. *Hethitisches Etymologisches Glossar*, Innsbruck.
- HW<sup>2</sup> = Friedrich, Johannes / Kammenhuber, Annelies. 1975-. *Hethitisches Wörterbuch*. Heidelberg: Carl Winter.
- HZ = Rüster, Christel / Neu, Erich. 1989. *Hethitische Zeichenlexikon*. Wiesbaden: Harrasowitz.
- IBoT = *Istanbul Arkeoloji Müzelerinde Bulunan Boğazköy Tabletleri*, 1944-1988, Istanbul.
- JCS = *Journal of Cuneiform Studies*. 1947-.
- KBo = *Keilschrifttexte aus Boghazköy*, Osnabruck / Berlin, 1923-.
- KUB = *Keilschrifturkunden aus Boghazköy*, Berlin, 1921-1990.
- LIV<sup>2</sup> = Rix, Helmut / Kümmel, Martin Joachim / Zehnder, Thomas / Lipp, Reiner. 2001: *Lexikon der indogermanischen Verben: die Wurzeln und ihre Primärstammbildungen. 2., erw. und verbess. Auflage*. Wiesbaden: Reichert Verlag.
- LSJ = Liddell, Henry George / Scott, Robert. 1972. *Greek-English lexicon*. Oxford: Clarendon Press, 15<sup>th</sup> ed.
- MsK = Siglum of text from Meskene Emar (see CHD Abbreviations)
- StBoT = *Studien zu den Boghazköy-Texten*. 1965-. Wiesbaden.
- VBoT = Goetze, A. 1930. *Verstreute Boghazköi-Texte*. Marburg a.d. Lahn.

## Introduction

Hittite texts are unusually abundant in *i*-stem nominals, a feature not encountered in other ancient IE language. They form the second largest class, with over 1000 lexemes (though they remain far behind the *a*-stems, which number in the thousands) and are frequent for both genders and also as adjectives. Of the overall total about 600 of them are common gender, fewer than 200 are neuter, for approximately 150 of them the gender is presently unidentifiable and slightly under 200 are adjectives.

There are two main reasons for the frequency of *i*-stems in Hittite. First of all, there are hundreds of loan words ending in *-i-*, above all Hurrian but also Hattic and Akkadian. Those of Luvian provenance may have been other than *i*-stems in Luvian (e.g., the *t*-stems), could have preserved the Luvian *i*-mutation or even, we find the *i*-mutation feature only transposed to originally Hittite stems.

Second, there is a considerable number of derivational suffixes in *-i-* (for details, see Hoffner, Melchert GrHL: 54). Some were added to verbal bases (*ai-* to form common gender action nouns; *ri-* for common gender and neuter nouns; *ulli-* for neuter instrumental and result nouns; *uzzi-* neuter and common gender instrumental nouns), some to nominal bases (*alli-*; *ašši-* to form denominal adjectives), some to adjectives (*ašti-* to form common gender nouns), some to adverbs (*zzi(ya)-* to build adjectives). Note also *ili-*, which forms adjectives from various bases.<sup>1</sup>

A simple comparison of the number of PIE *i*-stems and Hittite *i*-stems implies that the number of loanwords and inner-Hittite formations is several times higher than the inherited material. Even if "inherited" is taken to comprise both *i*-stems which inherited only the root (and which have changed their stem class some time in

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<sup>1</sup>As summarized by Melchert (2021: 1-27), with regard to the origin of the suffixes we may consider the development of PIE *\*-ti->-zi-*, *\*-ro->-ri-*, *\*-u-ti->-uzzi-*, *\*-ti->-zi-* and *-zzi-*, and *-ulli-/-utri* <*\*-u-t/d<sup>h</sup>li-/\*-u-t/d<sup>h</sup>ri*, renewed from *\*-u-t/d<sup>h</sup>lo-/-u-t/d<sup>h</sup>ro-*. (*-i-* in *-ulli-*, *-utri* is due to influence of *-uzzi-* (Melchert 2021: 18)).

post-PIE) and *i*-stems where the stem too can be traced to PIE, such nouns will number in the tens, not hundreds.

The inherited forms will be of greatest interest in this thesis, the fact that enlarges the scope of the work beyond the limits of Anatolian studies and makes it of interest to other linguists.

## 1 Class of nominal *i*-stems

### 1.1 *i*-stems in the Indo-European language family

Evidence from individual branches of the Indo-European language family suggests that the *i*-stem nominal formations can be confidently reconstructed for the Proto-language. However, examples of reconstructible deradical *i*-stem nominals are scarce (for PIE, see Olsen forthcoming chapter 4). In the provisional overview Wodtko (2008) reconstructs *i*-stem nouns or adjectives for a number of PIE roots. While both root nouns and nouns with other suffixes remain prominent (namely, the thematic suffix *-o/ó-*), the class of *i*-stems is well established. However, in her account the reconstruction of the suffix is mostly based only on one language branch, prototypically Indo-Iranian or, less frequently, Latin (e.g. *\*skob<sup>h</sup>-i-* > Lat. *scobis*, *-is* f. 'filing dust'), Germanic (*\*h<sub>2</sub>ay-w-i-* > *\*aiwi-* > OE *ǣw* 'law') or Greek. Occasionally, an *i*-stem is shared by two or three branches, e.g. *\*d<sub>m</sub>-sth<sub>2</sub>-i-* found in Old Iranian and Old Lithuanian (Wodtko 2008: 637), *\*pr-sth<sub>2</sub>-i-* in Young Avestan, Latin and Old English (2008: 552), *\*h<sub>2</sub>rǵ-i-* 'white' in Hittite and Vedic (2008: 317), *\*h<sub>1</sub>lewd<sup>h</sup>-i-* in Germanic and Balto-Slavonic (2008: 245) or the famous *\*g<sup>h</sup>ost(h<sub>2</sub>)i-* known from Latin, Germanic, OCS and arguably also Paelignian and Lepontic (2008: 173).

Compared to these rather modest attestations, at least with regard to their recorded descendants, there stands out the word for 'sheep', PIE *\*h<sub>2</sub>ów-i-* ~ *\*h<sub>2</sub>éw-i-* (2008: 335), whose cognates are traceable to Vedic, Armenian, Greek, Latin, Umbrian, Germanic, Celtic and Lithuanian, and also to the Anatolian branch (Luvian and Lycian) and Tocharian. To summarize, the handful of examples demonstrated the productivity, if restricted, of the *\*-i*-suffix in IE.

The PIE deradical *i*-suffixed nouns showed an alternation of zero, full and long grade. With regard to nominal gender, *i*-stem neuters are very scarcely attested; e.g., only the PIE numeral *\*trih<sub>2</sub>* was retained as an *i*-stem *\*trī* in Proto-Slavic (Olander 2015: 71), beside the interrogative nom./acc.sg. *\*ki* and gen.sg. *\*kesa* (> OCS *čī(-to)*, *česo*).

As for the accent/ablaut types of the PIE *i*-stems, Grestenberger (2009: 4) summarizes the types as the *o/e*-acrostatic and cautiously also *ē/e*-acrostatic,

proterokinetic *\*-ti*-abstracts, hysterokinetic and amphikinetic *i*-stem substantives with the addition of "Caland" abstracts. The status of the PIE *i*-stem adjectives (and the fundamental question of their existence) is discussed in Part 3 below. Of interest here is the PIE alternation of thematic nominal formations and *i*-suffixed nouns, whereby thematic adjectives changed to *i*-abstracts (with replacement of the thematic vowel as in Ved. *jīrá-* 'swift' vs. *jīrí* 'rapids'(Schindler 1980)). See Nussbaum (1999) for the Latin development of adjectives in *\*-o-* > abstracts in *\*-i-* > adjectives in *\*-i--d<sup>h</sup>o-* (where the suffix is added, rather than replaces, the stem in *-i-*). For more Latin examples, see Vine (2006). More recently, Grestenberger (2016: 157) shows that abstract *i*-nouns of Vedic are typically part of the "Caland" system and that the expected path of internal derivation, where the acrostatic type would develop a proterokinetic form, is not present.

## 1.2 *i*-stems in Hittite

### 1.2.1 Inflection of *i*-stems

Unlike in the prevailing *a*-stem class, the declension of Hittite *i*-stems differs for nouns and adjectives. The stems of the nouns usually do not change (though there are substantives which show ablaut), whereas the adjectives tend to have zero grade of the suffixal vowel in the nom., acc. and instr. sg., occasionally also in dat./loc.sg. (thus, *-i-*) and full grade in other parts of their paradigm (that is, *-a(y)-*).

Although the dat./loc.sg. ending is usually *-i*, this is occasionally replaced in post-OS texts by *-iya*, identical to the allative ending of the *i*-stems.

### 1.2.2 The *āi*-stem subclass

The *āi*-stems form a distinctive sub-group of *i*-stem nominals. While fewer than 80 *āi*-stem lexemes are known, they count among the more frequently used nouns in the language, including lexemes such as 'song', 'sin', 'curse' etc. For some of them, the source is unknown (mainly, the neuters), whereas others have verbal or nominal derivational bases. The *āi*-stem nouns show ablaut of the stem (with the pattern *-āi-* for strong vs. *-i-* for weak cases) and as might be expected, not only do we find paradigm levelling with spread of *-āi-* to previously zero-grade cases

but there is also a mutual influence on and from the *i*-stems. Thus we find on one hand instances of *-i-* inflection (e.g. in acc.sg. *-in*) and on the other a shift of *i*-stem lemma to the *-āi-* class. These nouns also attest the dat./loc. in *-iya-*, e.g., *luttīya 1-iš . . . šipanti* 'he libates ... once at the window' (KBo 17.74+ ii 5 (OS)) to *luttāi-* 'window', Hoffner / Melchert (GrHL: 87).

Still in Sturtevant's Comparative Grammar (1933), the *āi*-stems were not described as a separate category. Some were listed among the *a*-stems (*luttāi-* 'window') and most of the other (*zahhāi-* 'fight', *lingāi-* 'oath', *haštāi-* 'bone', *hurtāi-* 'curse' etc.) among *i*-stems of lengthened grade (Sturtevant 1933: 180). Four years after, the same author lists the *āi*-stems in a separate 5-pages chapter (Sturtevant 1937: 57-62). The *āi*-stems were later briefly treated by Friedrich (1960) and by Kronasser (1966: 204). Weitenberg (1979) presents a discussion of the Hittite diphthongs stems, including the *āi*-stems. Besides dictionaries that treat the *āi*-stem lexemes in detail, the so far most comprehensive work is the monograph of Sylvester Rössle (2002). Grammatical information is shared in GrHL (54, 87, 92 – 94, 174). Personal names and names of deities (both not discussed here) are treated in Jie (1994: 64, 75).

As not all words that could potentially be assigned to the *āi*-stem class are well-attested, one must apply decisive criteria. I adopted the useful definition (Rössle 2002: 4) that a lexeme can be considered an *āi*-stem, if it is attested at least once outside of dative-locative sg., with non-ambivalent diphtong /-á:i/ in auslaut or before the case ending, captured in script by *xa-(a/i)-i* (or *xa-(a/i)-e* as a possibility for the neuters) resp. *-ix/-ex*, if followed by a case ending.<sup>2</sup>

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<sup>2</sup> More than one approach can be taken to split the *āi*-stems to groups on morphological criteria. Rössle's approach (Rössle 2002: 326) is diachronic in the first place: he divides the *āi*-stems to those stemming from Anatolian *a+i*, those from Hittite *a+i*, those from Hurrian *a+* Hittite *-i-*, those derived from verbal stems, those based on words ending in *-atar* and *-eššar*, those that witnessed a stem-class shift (from the *i*-stems or *a*-stems, while one also finds examples of the opposite direction shift, p. 333), those derived from onomatopoeia and contextually analogical (*-ā* : *-ima*), accidental and unclear.



The *āi*-stem nouns of both genders are not scarce. The more striking is the virtual lack of *āi*-stem adjectives (also compared to the *i*-stem adjective class). As summarized below, the *āi*-stems are of different origins and only a small number of them with plausible IE etymology.

## 2 Lexical list

The following part presents the lemmatized corpus of core *i*-stems and *āi*-stems. The entries are structured as follows: For each word, a table with exemplified attestations is first given. The attestations are by no means meant to be exhaustive, but an attempt has been made to include all attested token forms.

The columns in the tables are sorted according to case and number. If an attested form cannot be assigned to a specific case, it is referred to as "other". If more specific information is available for the form, it is given in a footnote. There is no separate column for collectives.<sup>3</sup>

The stem formation and inflection paragraphs provide a summary of basic information and any unusual features. The discussion part is concerned with the attestations, translation, and other issues of interest, followed by an etymological survey.

If there are cognates in other IE languages, they are summarized at the end of the discussion column.

Finally, the bottom line gives information about references for the lemma – mainly dictionaries of the Hittite language, but also other resources when appropriate.

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<sup>3</sup> Old Hittite common gender nouns may have a collective plural alongside the count plural, but the number of assured examples is limited (GrHL: 240). However, they may mistakenly be taken for cases of gender alternation (GrHL: 242, §16.3).

2.1 core *i*-stems2.1.1 Core *i*-stems of common gender

<sup>SIG</sup>*ali-* c. 'fine wool'

<b>nom.sg.</b>	<b>acc.sg.</b>	<b>instr.</b>	<b>abl.</b>
<sup>SIG</sup> <i>a-li-iš</i>	<sup>SIG</sup> <i>a-li-in</i>	( <sup>SIG</sup> ) <i>a-li-it</i> , <sup>SIG</sup> <i>a-li-it-ta</i> <sup>4</sup>	<sup>SIG</sup> <i>a-li-ya-a</i> [z
KUB 15.42 ii 8 (NH)	KUB 15.42 ii 6 (NH)	KBo 14.99 ii 4 (NH); KUB 29.7 Vs. 41 (MH/MS)	KUB 32.122 2 (MH/MS)

**Stem formation and inflection:** *a*. is attested in both strong and weak cases. Underived stem.

**Discussion:** *a*. is attested in MH/MS and NH, in Hittite-Hurrian ritual texts. Its meaning is specified by the determinative <sup>SIG</sup>'wool' and describes a specific kind of wool as to its quality; possibly fine wool, or woollen product.

There is general agreement that the word is of foreign/uncertain origin (so Tischler HEG 1: 16, who also dismisses previous connections to *albus* based on the false assumption that the word means 'white'; Puhvel (HED 1: 34) considers *a*. Hurrian; Kammenhuber (HW<sup>2</sup> 1: 58) considers it of unclear affinity). However, a Hurrian connection is unsupported; Richter (2012: 16) lists the word as Hittite with no similarities in Hurrian texts.

To conclude, the word has no convincing IE etymology; a Hurrian origin cannot be excluded.

HED 1: 34; HEG 1: 16; HW<sup>2</sup> 1: 58; Richter (2012: 16)

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<sup>4</sup> The form consists of *alit* + -additive conjunction *-a* where the *-t-* is regularly geminated.



<sup>LÚ</sup>*antuwašalli*- c. (dignitary)

<b>nom.sg.</b>
<sup>LÚ</sup> <i>an-tu-u-wa-šal-li-iš</i> ; <sup>LÚ</sup> <i>a-an-tu-GAL</i>
KBo 5.7 Rs. 52 (MH/MS); KUB 40.1 Rs.? 33 (NH)

**Stem formation and inflection:** *a.* is probably a compound, and its common gender is assured by the nom.sg. attestation.

**Discussion:** *a.* is mentioned in a list of dignitaries in a MH/MS text, and also (with logographic rendering of the second part of the word) in NH. It is probably a compound, per Puhvel (HED 1: 84) either of *antuwa-* or *antuwaš-* (gen.sg.) and *šalli-* (for the entry *šalli* 'big, great', see below), where *antu(wa)-* has the likely meaning 'goods' (KUB 57.63 ii 40-41).<sup>5</sup> (For further etymological proposals, considered implausible by Puhvel, see HED 1: 85). Tischler (HEG 1: 39) considers the first member of the compound unclear.

Kammenhuber (HW<sup>2</sup> 1: 123) holds the contrary view – she dismisses the idea of a compound and postulates Luvian affinity, which she, unfortunately, leaves unsupported.

Although the use of the logogram GAL 'big' is not decisive for the meaning of the second part of the word, similar form is found in Ugaritic <sup>LÚ</sup>*andubšalli* (Puhvel (HED 1: 85), Kronasser (1963: 214)). The Ugaritic form is a match for *ana* <sup>LÚ</sup>EN É *a-bu-sí* 'the lord/overseer of the storehouse' (MRS 6 181 Rs. 11.732 A8 and B8; CAD 1: 93)).

*a.-* is surely a Hittite calque of the Luvian type of compounds *X-ura-* 'the Great among the X' (Yakubowich 2014: 41). If so, then the second member of the compound is certainly of IE origin.

CAD 1: 93; HED 1/2: 84; HEG 1: 38; HW<sup>2</sup> 1: 123; StBoT 5: 111

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<sup>5</sup> For *antu-*, see also Neu StBot 5, 1968, 11 note 2.

*arki-* c. 'testicle'

nom.pl.	acc.pl.
<i>ar-ki-i-e-eš</i>	[ <i>a</i> ]r-ki-uš(-ma)
KBo 17.61 Rs. 15 (MH/MS)	KUB 10.62 v? 7 (OH/NS)

**Stem formation and inflection:** *a.* is a noun related to *ark-* 'mount'. It is attested only in strong cases, which confirm the common gender *i*-stem but provide no other information on the inflection.

**Discussion:** *a.* is attested only twice, the earlier text is written in MS and the latter in NS. The NS tablet is a fragmentary copy of an OH text. Both texts contain lists of body parts, where it is assumed that *arki-* stands for testicles, as it is listed among words denoting body parts below the waistline.

There is a general agreement that *arki-* is a deverbative of *ark-* 'to mount'. An original analysis which confirms the relationship of the noun *a.* and the verb *ark-* is given by Watkins (1975: 12-14). According to Puhvel (HED 1/2:142) and LIV<sup>2</sup>: 239, the verb is derived from PIE *\*h<sub>1</sub>érǵʰ-/ \*h<sub>1</sub>rǵʰ-* (*\*h<sub>1</sub>orǵʰ-i-* > Hitt. *arki-*; Puhvel without the initial laryngeal). Kloekhorst (EDHIL: 203) claims that the first laryngeal is wrongly reconstructed (said to be based only on the Lithuanian cognate *ežilas* 'stallion', while all other languages reflect *\*o*) and instead suggests PIE *\*h<sub>3</sub>rǵʰ-o, \*h<sub>3</sub>órǵʰ-ei*, which is meant to support the idea that *\*h<sub>3</sub>* is lost before *\*r* (Kloekhorst 2006b). However, the reconstruction is not based (only) on Lithuanian (where there is no reason to this the *-e-* was secondary, but on the other hand, it does not prove a weak stem with root *e*-grade, either), but on Hittite itself: LIV<sup>2</sup> reconstructs from Gr. ἔρχομαι 'I am coming', Hitt. *arkatta* and OIr. imperative *eirgg* 'go!' - initial prevocalic laryngeal *\*h<sub>1</sub>* is expected to be regularly lost, contrary to *\*h<sub>2</sub>* and *\*h<sub>3</sub>*. The proposed counterexamples (listed by Kloekhorst (EDHIL: 204), following Puhvel (HED 1/2:142) and HW<sup>2</sup> 1:307) supporting *\*h<sub>3</sub>* are cognates with initial *\*o*: Gr. ὄρχις 'testicle' (Beekes (2010: 1116)), Arm. *orji-k*, Alb. *herdhë*, Mlr. *uirge*, Av. *arəzi-* 'testicle(s)', ON *argr* 'passive homosexual' (EDHIL lists also Russian *ērzat* 'to fidget' which is not compared here on account of the long inner-Russian development). These do not necessarily contradict *\*h<sub>1</sub>*

(e.g., Gr. *ὄ*- from *\*h<sub>1</sub>o*; cf. *\*h<sub>1</sub>óino-* > Gr. *οἷνη* 'one' etc.), as it is possible to posit *o*-grade here as well (or a zero grade in case of the Av. cognate). To conclude, the data is inconclusive as to the loss of *\*h<sub>3</sub>* before *\*r* and certainly does not prove *\*h<sub>3</sub>* in this case.

If an inner-Hittite derivation, *arki-* to *ark-* is semantically hard to explain. The relationship is metonymic, not a result or action noun in the usual sense, and the cognates confirm that the word is inherited (the *i*-stem is found in Ilr. and Arm). Per Beekes (2010: 1116), the Greek word for testicles *ὄρχις* is an original PIE nominal *i*-stem *\*h<sub>3</sub>e/orǵ<sup>h</sup>-i-*.

To conclude, *h*. reflects <*\*h<sub>1</sub>órǵhi-/ \*h<sub>1</sub>(e)rǵhi-*. The rule about initial *\*h<sub>3</sub>*-disappearing before *\*o* is wrong (but the supposed verbal reflexes with *e*-grade are very dubious). As already posited by Schindler (1980), the pristine acrostic *\*ó/é* inflection was already being replaced in PIE by zero grade, especially in TeR(T)- roots.

EDHIL: 203, HED 1/2:142, LIV<sup>2</sup>: 239, HW<sup>2</sup> 1:307, HEG 1:25

*arši-* c. 'planting, cultivation'

nom.sg.	acc.sg.
<i>ar-ši-iš</i>	<i>a]r-ši-in</i>
KBo 6.12 i 13 (NH) (+ copy KUB 29.21 i 8)	KBo 6.12 i 20 (NH)

**Stem formation and inflection:** *a.* is attested in nom. and acc. sg., which confirm its common gender. Its stem formation is uncertain; *a.* might be a loanword. It is the base for the verb *aršai-* (e.g. Puhvel (HED 1: 174)).

**Discussion:** The word is attested in a single text of the Hittite Laws, on tablet KBo 6.12 (and in nom.sg. also on KUB 29.21), in singular forms. For its context, see Hoffner (1997: 101-102). *a.* seems to be a word with general meaning that covers field or plantation products that can be stolen or burnt.

The etymology of *a.* remains uncertain (so Tischler (HEG 1: 68) and Puhvel (HED 1/2: 173)). Kammenhuber (HW<sup>2</sup> 1: 345) supposes that in case *a.* is not inherited, it could only be a loanword from Hattic. Berman (1972: 10) translates 'cultivated land' and sees its origin in Akkadian adjective *aršu*, *eršu* 'drilled; drilled field' (meaning plowed and sown field), discussed in CAD E: 314 (cf. *errešu*, CAD E: 305).

CAD E: 314; HED 1/2: 173; HEG 1: 68; Hoffner (1997: 101-102); HW<sup>2</sup> 1: 345



*addi-* c. (body part)

<b>nom.pl.</b>
<i>ad-di-eš=še-eš</i> ('her a.')
KBo 15.10 + 20.42 i 16

**Stem formation and inflection:** *a.* is attested only in the nom.pl., so an *a*-stem cannot be excluded. Such a pattern is seen in the *a*-stem *at-ti-eš* 'father' in KUB 56.17 Ro. 6? (the influence of *i*-mutation is explained in GrHL: 86) beside *at-ti-iš* and *ad-du-uš*.

**Discussion:** While Tischler (HEG 1: 94) follows Szabó (Texte der Hethiter 1, 1971: 14) in translating 'body part', the context suggests that it refers to body parts of a woman that are 'broad, wide'. Though Kammenhuber (HW<sup>2</sup> 1: 559) rejects such a translation and lists the form under the noun *atta-* 'father', in the meaning of '(her) ancestors', such an idea is not plausible.

The word is unclear, and if a hapax (and not part of the paradigm *atta-*), it cannot receive any etymology or more detailed information concerning its morphology and inflection. To reach a decision on its status, we must await further attestations.

HEG 1: 94; HW<sup>2</sup> 1: 559

<sup>NINDA</sup>*hali-* c. (bread type)

nom.sg.	acc.sg.	dat./loc.sg.	acc.pl.
<sup>NINDA</sup> <i>ha-a-li-iš</i> , <sup>NINDA</sup> <i>ha-a-liš</i>	<sup>NINDA</sup> <i>ha-a-li-in</i> <sup>6</sup>	<sup>NINDA</sup> <i>ha-)]a-li</i>	<sup>NIN]DA</sup> <i>ha-</i> <i>li-uš</i> <sup>7</sup>
KBo 16.73 Rs? iii 4'(OS), KBo 16.81 i 6 (NH)	KBo 25. 84 Vs. i 9'(OS)	KUB 25.2 i 11 (NH) (+ dupl. KUB 58.42 ii 10')	KUB 41.27 iv 2 (NH)

**Stem formation and inflection:** *h*. is of unknown origin and so of uncertain formation, with attested plene root vowel *a* in both strong and weak cases. No ablaut.

**Discussion:** *h*. is attested already in OH. Besides a bread type, the meaning 'ration, portion',<sup>8</sup> suggested by Puhvel (HED 3: 23), leads him (with Tischler, HEG 1: 129) to seek in *h*. a term for measurement, and so to identify it with *hali*-n. 'night watch'. Such a connection is not impossible but remains rather uncertain.

The etymology of this word is not known. Kammenhuber (HW<sup>2</sup> 3: 33) thinks it is not surprising in case of a bread name. Also, as the other two *hali*- words are neuters, she thinks of unrelated homonyms.

Both claims require comment. Firstly, the word is attested many times, from OS to NS, and so is not a scarcely used loanword. While a bread name may be an areal name, there is a need to look for a cognate bread name in neighbouring

<sup>6</sup> The accusative singular form is preceded by the numeral 12, in the meaning 'he breaks 12 *h*. bread loaves' (Neu StBot 25, 84; 1980: 27, 164).

<sup>7</sup> The accusative plural is preceded by the numeral 13 'and they break 13 *h*. bread loaves and they place (them) before the 'years'. Literally *pá[r]-š[i-y]a-an-zi* Û 13 <sup>NINDA</sup>*ha-li-uš ta* MU.KAM.HI.A-*aš pé-ra-an ti-an-zi*; although *h*. follows the verb, it is obvious that it must have belonged to the previous sentence.

<sup>8</sup> The meaning 'ration' is refuted by Kammenhuber (HW<sup>2</sup> 3: 33) who argues that the word is always connected to cult practices. She also claims that the meaning 'portion' is unlikely, as Hittite bread names always denote a specific bread type.

languages. The only uncertain possibility is offered in the Ugaritic singular *ḥlu*, possibly meaning 'cake' (Olmo Lete, Sanmartín 2015: 384).

As to the gender shift, it needs to be said that the two neuters, meaning 'corral (for herd)' and 'night-watch', are also regarded as having no known etymology other than an uncertain connection to Ugaritic *ḥl* 'strength, vigour; fortress; tower, farm, estate'. With regards to the fact that there are over 60 *i*-stem common bread names (compared with about five neuters), analogical inflection specifically for bread which would not influence inflection of 'night-watch' can easily be imagined. And so the gender shift is no evidence which could deny the connection of the two (for a specific proposals and connections, see also Puhvel (HED 3: 24, 26, 28)).

To conclude, inclusion of <sup>NINDA</sup>*ḥali*- among core Hittite *i*-stems, until proven otherwise, is justified.

HdO 112: 384; HED 3: 23; HEG 1: 129; HW<sup>2</sup> 3: 32; StBot 25, 10, 84

*ḫalki-* c. 'barley';<sup>9</sup> grain'

nom.sg.	acc.sg.	gen.sg.	dat./loc.sg.	instr.
ŠE <sup>10</sup> ; <i>ḫal-ki-iš</i>	<i>ḫal-ki-i[n,</i> <i>ḫal-ki-in;</i> <i>ḫal-ki-im</i> <sup>11</sup>	<i>ḫal-ki-aš, ḫal-</i> <i>ki-ya-aš</i>	<sup>d</sup> <i>ḫal-ki-i;</i> <i>ḫal-ki-ya</i> <sup>12</sup>	<i>ḫal-ki-it; ḫal-ki-</i> <i>it-ta</i>
KBo 6.2 iv 11 (OS); KUB 17.10 Vs. i 14' (MH)	KBo 25.44 4' (OS); <sup>13</sup> KBo 6.11 i 21 (OH/NS); KBo 6.10 i 24	KBo 17.1 Rs. iv 19'(OS); KBo 17.3 Rs. iv 15 (OS)	KUB 34.102 ii 4 (MS); KUB 28.75 Rs. iii 25 (OS)	KBo 12.70 Vs. 14'(OH??/NS); KUB 13.4 i 37' (NH/NS)

abl.	nom.pl.	acc.pl.
<i>ḫal-ki-ya-za, ḫal-</i> <i>ki-ya-az</i>	<i>ḫal-ki-e-eš, ḫal-ki</i> <sup>HIA</sup> - <i>aš, ḫal-ki</i> <sup>(HIA)</sup> - <i>uš;</i>	<i>ḫal-ki-uš, ḫal-ki</i> <sup>HIA</sup> - <i>uš, ḫal-ki</i> <sup>HIA</sup> - <i>aš, ḫal-ki-ya-aš; ḫal-ki-e-uš</i>
KUB 23.1b 10 (NS), KUB 55.19 Vs. 4 (NS)	KUB 26.77 i 5 (OH/NS), HKM 19 Vs. 6 (MH/MS); KBo 4.4 ii 5 (NS)	VBoT 58 i 13' (OH/NS) and HKM 25 Vs. 9 (MH/MS); HKM 19 Vs. 7 (MH/MS); HKM 19 Vs. 10 (MH/MS); KUB 17.8 iv 11 (NS); KBo 34.119 Vs. 4' (NS)

<sup>9</sup> Although another Hittite word, *ewa-*, has several times been assigned the meaning 'barley' (so Puhvel HED 1/2: 320, Blažek 2013: 17), this has not been confirmed; rather, *ewa-* stands for an unspecified kind of grain (Kloekhorst (EDHIL: 264 with references).

<sup>10</sup> So always as the Sumerogram ŠE in the Laws.

<sup>11</sup> Puhvel (HED 3:36) ascribes the ending to a sandhi rule, as the following syllable is pí-. However, in the duplicate KBo 6.11 i 21, the ending is the expected *-in*.

<sup>12</sup> The form comes from a Hattic-Hittite ritual text (Neu, StBot 25, 113 (1980: 195)), in a context 'when he calls on *ḫ.*', in the sense of a divine figure. As expected, this makes both dative examples denoting the Grain Goddess, not barley.

<sup>13</sup> Neu, StBot 25 44 (1980: 106)

**Stem formation and inflection:** The ambiguous spelling in the nom. and acc.pl. is to be understood as *-ki-e-eš*, not as *-ke-e-eš*, based on the reading of the unambiguous case forms in *-iya-*, and also on the occasional contractions of *-iēš* to *-iš*, known from NH (GrHL: 87).<sup>14</sup>

**Discussion:** *ḫ*. is attested throughout the written history of Hittite and (together with spelt) denotes the most frequent Hittite staple food. The theonym <sup>d</sup>*ḫalki*- 'Grain Goddess', is also attested already in OS (for details, see Kammenhuber HW<sup>2</sup> 3: 51). Besides being written syllabographically, it is also found as the Sumerogram ŠE. Used as a measure of wages, barley is differentiated from wheat (spelt) and cannot denote the general word for grain (Hoffner 1997: 211).

The etymology of *ḫ*. is uncertain. Kammenhuber (HW<sup>2</sup> 3: 62) denies a connection to Hurrian, Hattic or PIE (similarly also Puhvel (HED 3: 39)). For an overview of earlier unsupported IE etymologies, see Tischler (HEG 1: 133-134). For an overview of IE words for 'barley', none of them cognate with *ḫ*., consult Blažek (2013: 15-33)

The denial of IE connections by Kammenhuber and Puhvel is quite unnecessary. While there are no known cognates, this does not rule out the possibility of a primary IE noun. One would rather have to prove the opposite, and the formal side of the word and its ancient attestations do not contradict its IE origin.

EDHIL: 274; GrHL: 87 HED 3: 35; HEG 1: 133; HW<sup>2</sup> 3: 51

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<sup>14</sup> As an example of the contraction, GrHL lists nom.pl. *ḫal-ki-iš*, unfortunately without a reference, as others do not include this form among the plurals.

*halpi- c. '?'*

<b>acc.sg.</b>
<i>hal-pi-in</i>
KBo 3.33 Vs. ii 5 (OH/NS)

**Stem formation and inflection:** The acc.sg. attestation of *h*. ensures that we are dealing with a common gender *i*-stem. No more is known about its formation or inflection.

**Discussion:** *h*. is attested only once, as an acc.sg., inscribed on a Palace chronicle tablet fragment. The meaning of the word remains unknown, and so also its origin. Although there are no known cognates in surrounding languages or IE, the word has to be provisionally listed among the original Hittite *i*-stem nouns, unless proven otherwise.

HW<sup>2</sup> 3: 79

[*hari-* c. 'valley'

Given the presently known attestation, it is ambiguous whether the stem form is *hari-* or *hariya-*. Its etymology, which could theoretically aid in its classification, is not known; therefore, *h.* is excluded from the present study.

HED 3: 143; HEG 1: 172; HW<sup>2</sup> 3: 275]

<sup>UZU</sup>*ḫa/urpi- c. '?*

<b>nom.sg.</b>
<sup>UZU</sup> <i>ḫar-pi-iš</i> , <sup>UZU</sup> <i>ḫar-piš</i> , <sup>UZU</sup> <i>ḫar-pi-eš</i>
KBo 11.40 vi 2 (NH), KUB 55.25 Vs. 9' (NH), KUB 55.25 Vs. 10' (NH)

**Stem formation and inflection:** *ḫ.* is attested only in the nom.sg. An *s*-stem cannot be excluded (Rieken 1999: 184).

**Discussion:** *ḫ.* is attested in a fragmentary context and its precise meaning (that is, which part of an animal body, used for ritual offering, it denotes) awaits more attestations. As it is always written with the initial *ḫar/ḫur* sign, the root vowel quality cannot be decided.

The etymology of *ḫ.* remains unknown.

Berman (1972: 12); HEG 1:181; HW<sup>2</sup> 3: 339; Rieken (1999: 184)



[<sup>NINDA/DUG</sup>*harši-* c. 'round, leavened bread/ jar'

See the adjective *\*harši-* 'head-shaped' (p. 61)

The development of (<sup>NINDA</sup>)*harši-* (for attestations see Kammenhuber HW<sup>2</sup> 3: 358) is explained by Rieken (StBot 44, 1999: 311) via an adjective 'round', substantivized as 'round bread' (PIE *\*h<sub>2</sub>ers-* 'head, ball' > *\*h<sub>2</sub>ers-i-* 'round' > (subst.) 'round bread'. However, it is more likely that the bread (and also vessel) were called *harši-* because they resembled the shape of a human head (*haršar/n-*), but that the head's designation is based on the fact that it is on top of the body (Melchert, p.c.). Kloekhorst (EDHIL: 315) also considers *h-* deadjectival, but from a different adjective – 'high'. To conclude, the derivational path of *h-* is uncertain.

The problem of morphological classification of this word is that formally it appears to be derived directly from a base *\*harš-*, but such base is not present in Hittite, and the root is *\*h<sub>3</sub>er-* 'high'. Not unlikely, Hittite could have based its adjective on Palaic *s*-stem *hāriš-* (a body part) which surely means 'head' < 'high/top thing' which was then substantivized into 'boule' and 'pot', as 'headlike thing' (See Melchert forthcoming (DCL: 68) for <sup>d</sup>*Harištašši-* 'goddess of the upper story, bedroom'). (Compare also Hittite *genzu-* < virtual *\*génh<sub>1</sub>-s-u-* to the well-known *\*génos* (see Rieken 1999) and also *tepšu-* (ibid.)).

To conclude, *\*harši-* must have meant 'head-shaped', not a general word for 'round', and it is assuredly neither old nor primary.

EDHIL: 315; HED 3: 190, 197; HEG 1: 186; Hoffner (1974: 156); HW<sup>2</sup> 3: 358; Neu (1985: 259); Rieken 1999 (StBot 44: 311)]

[\*\**hawi-* c. 'sheep'

nom.sg..sg.	acc.sg.	gen.sg.
UDU- <i>uš</i> ; UDU- <i>iš</i>	UDU- <i>un</i>	UDU- <i>aš</i>
?? ; KUB 6.9 5,6 (NH)	KBo 17.54 i 6' (MH/MS) and KBo 6.2 iv 14 (OS)	KBo 6.26 iii 23 (OH/NS)

Only forms with phonetic complements are represented in the table.

**Stem formation and inflection:** The stem is unknown in Hittite.

**Discussion:** The word is syllabically rendered in CLuv., as nom.sg. *ḫa-a-ú-i-iš*, and HLuv. (for attestations, see Kloekhorst (EDHIL: 337). Known IE cognates include OIr. *oí*, Lat. *ovis*, Skt. *ávi-*, all 'sheep', from *\*h<sub>2</sub>owi-* as e.g. per Weiss (2013: 340) or *\*h<sub>3</sub>ewi-* per Kloekhorst (EDHIL: 337). The TochB cognate *ā<sub>u</sub>* < *\*h<sub>2</sub>ewi-* supports the former, i.e. an acrostatic inflection *\*h<sub>2</sub>ówi-* ~ *\*h<sub>2</sub>éwi-* (Schindler 1994: 397).

The meaning 'sheep' is mainly represented in Hittite texts with a Sumerogram UDU (and, syllabically, as a deverbative <sup>UDU</sup>*iyant-* > *i-* 'to go' (Puhvel HED 1/2: 347)). Its original phonetic complement was *-u-*, as seen in OS acc.sg. UDU-*un* and MS nom.sg. UDU-*uš*. The *i*-stem is found in NH UDU-*iš* (KUB 6.9 5,6), which most probably reflects the Luvian form. The *-u-* stem may point to a preservation of PIE *\*pek'u-*.

*ḫ.* is listed here for completeness, though it must be excluded from the Hittite vocabulary, and recognised as a Luvianism (Hoffmann HW<sup>2</sup> 3: 538; Melchert CLL: 66)).

EDHIL: 337; HED 1/2: 347; Hoffner (1997: 328); HW<sup>2</sup> 3: 538; Melchert CLL: 66; Weiss (2013: 340)]

<sup>GIS</sup>*hurki-* c. 'wheel'

nom.sg.	acc.sg.	gen.sg.	dat./loc..sg.	acc.pl.
<sup>GIS</sup> <i>hu-u-ur-ki-iš</i> ; <i>hur-ki-iš</i>	<i>hu-ur-ki-in</i> ; <sup>15</sup> <i>hu-u-ur-ki-in</i> ; <sup>GIS</sup> <i>hur-ki-in</i>	<i>hur-ki-aš</i>	<sup>GIS</sup> <i>hur-ki</i> ; <i>hur-ki</i>	<i>hu-ur-ki-uš</i>
KUB 60.156 Rs. 12' (NH); KBo 13.145 Vs. 7 (NH)	KBo 6.26 iv 14 (OH/NS), KUB 60.156 Rs. 13' (NH); KBo 59.5 Rs. 9' (NH)	IBoT 1.31 vs. 16 (NH)	KUB 5.9 vs. 12 (NH), KBo 12.89 ii 7 (MH/MS)	KUB 34.16 ii 10' (NH)

**Stem formation and inflection:** Deverbative formation, already pre-Hittite, with regular *i*-stem inflection.

**Discussion:** *h*. is found in MS and NS texts from MH and NH times but also in copies of OH compositions, and it is used in various types of texts: rituals, prayers, omens, oracle texts, legal text as well as list of inventories. It is also rendered as the Sumerogram <sup>GIS</sup>UMBIN.

*h*. is a word of IE origin, with cognates in Skt. *vṛj-* 'to turn (around)', OE *wrencan* 'turn, wind', Toch *\*werk-wṛnt-* 'wheel' (A *wärkänt*, B *yerkwanto*), from which one can reconstruct a noun consisting of a weak stem of the PIE root *\*h<sub>2</sub>wérg-* 'to turn' (Kümmel LIV<sup>2</sup>: 290), *\*h<sub>2</sub>wṛg-* 'to turn', plus the final *-i-*, forming in Hittite a noun with the meaning 'turning'.

The *i*-stem is attested only in Hittite.

EDHIL: 364; HED 3: 399; HEG 1: 303; HW<sup>2</sup> 3: 753; LIV<sup>2</sup>: 290

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<sup>15</sup> The sign *in* is written over erased *il*, Hoffner (1990: 156, note 557).

<sup>UZU</sup>*ḫa/urni-* c. '?'

<b>acc.pl. ?</b>
<sup>UZU</sup> <i>ḫa/ur-ni-uš(-ma-aš-ši)</i> ; <sup>UZU</sup> <i>ḫa/ur-[ni]-iš</i>
KUB 8.57 i 9 (OH??/NS); IBoT 3.34 6 (NH)

**Stem formation and inflection:** *ḫ.* is attested only once as an acc.pl. A *u*-stem nom.sg. is also possible.

**Discussion:** *ḫ.* in the Epic of Gilgameš is syntactically nom.; its number is uncertain. Beckman (2019: 77) lists the word as nom.pl. of <sup>UZU</sup>*ḫa/urniu-* but translates as singular 'beard' (ibid. 40). Rieken reads as a *u*-stem *ḫarniu* (hethiter.net/: CTH 341.III.1 (TX 2009-08-27, TRde 2009-08-27), with note 6) following Friedrich and Weitenberg (1984: 43). Tischler suggests both <sup>UZU</sup>*ḫarniuš* (HEG 1: 179) and <sup>UZU</sup>*ḫurni-* (HEG 1: 306). Kammenhuber (HW<sup>2</sup> 3: 323) reads as an *i*-stem. The reasons that she provides for the choice between the *i*- and *u*-stem (the fragmentary attestation at IBoT 3.34 6, see below, and the fact that acc. replaces nom.pl. in this text more often, e.g., line 7 *šallauš* DINGIR<sup>MEŠ</sup>-*uš* 'the great gods?') make the *i*-stem more likely.



IBoT 3.34 (Source: hethiter.net/:fotarch N02842)

*ḫ.* is listed among human physical descriptions, the body height, the chest width and the length of *ḫ.* Therefore, it certainly denotes a (human) body part. The etymology of *ḫ.* is unknown; an inherited IE formation cannot be excluded.

HEG 1: 179, 306; HW<sup>2</sup> 3: 323

*kappi-* c. 'a bit of (grain), grain'

<b>nom.sg.</b>
<i>kap-pí-iš</i>
KBo 11.14 ii 20 (NH)

**Stem formation and inflection:** *k.* is a deadjectival noun, derived from *kappi-* 'small'.

**Discussion:** The word in the single context of KBo 11.14 ii 20 may be translated 'grain' or better 'a bit (of grain)'. It is translated '*kappi*-Korn' by Chrzanowska, with reference to Hoffner JAOS 120 (2000: 72), who translates 'a small particle'. It refers to a seed which escapes a millstone (Collins (2014: 198)).

The adjective *kappi-* is of IE origin, with cognates in Av. *kamna-* (superlative *kambišta*), OP *kamna-* (both 'small'), possibly also Lydian *καμβειν* 'grandchild'.

The corresponding PIE root proposed by Szemerényi (1966: 207, with note 94, followed by Tischler (HEG 1: 491) and Kloekhorst (EDHIL: 439)) is *\*kmb-*, with a development of *\*-ṃb-* to Hitt *-pp-*. He supports such a possibility by attested *\*-ms-* to *-šš* (without examples), referring for the former to Melchert (1994a: 162). There, Melchert assumes the same assimilation of */-mb-/* to */-bb-/* and supports it with the similar example of *ištapp-* 'stop up, shut' from PIE *\*stémb<sup>h</sup>-*. The *i*-stem is attested only in Anatolian. Melchert (2012: 180-182) argues for *k.* <*\*kṃb(h)i-* with loss of nasal but fortition of the stop. The suffix was probably accented (the lack of plene spelling is not significant due to the scarcity of evidence).

EDHIL: 439; Collins (ICH 8: 198); HEG 1: 491; HED 4: 61; A. Chrzanowska (ed.), *hethiter.net/*: CTH 395.1 (Expl. A, 16.06.2015)

*karpi-* c. 'anger'

nom.sg.	acc.sg.	dat./loc.sg.	nom.pl.
<i>kar-pí-iš</i>	<i>kar-pí-in</i>	<i>kar-pí</i>	<i>kar-pí-uš</i>
KBo 21.6 Vs. i 7 (NH)	KUB 9.34 iv 8 (MH/NS)	KUB 5.1 ii 23 (NH)	KBo 2.6 i 10 (NH)

**Stem formation and inflection:** Deverbative from *karp-* 'to get/be angry' (Tischler (HEG 1: 515); Kloekhorst (EDHIL: 452)). *k.* is attested in both numbers, with regular inflection of an *i*-stem noun.

**Discussion:** *k.* is a deverbative noun, based on the medio-passive verb *karp-*. It is attested in NH and NS copies of MH texts.<sup>16</sup> In comparison with the scarcely attested verb, the noun is found more frequently.

*k.* is of PIE origin; among its IE cognates might be Lat. *incredāre* 'to shout out, to upbraid', Skt. *kṛpate* 'to lament', Russ. *kropotá* 'conflict, fight' (for the discussion, see Kloekhorst (EDHIL: 452), following Eichner (1979a:61) and Puhvel (HED 4: 98)). The PIE form suggested by Kloekhorst is *\*kṛp-* (?).

The Sanskrit and Russian reflexes point to PIE *\*krep-*. The *i*-stem noun is attested only in Hittite.

EDHIL: 452; HED 4: 98; HEG 1: 515

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<sup>16</sup> Kloekhorst (EDHIL: 452) mentions nom.sg. MH/MS without the exact reference.

<sup>(GIŠ)</sup>*kurak(k)i-* c. 'dais; column, pillar'

nom.sg.	acc.sg.	gen.sg.	dat./loc.sg.	dat./loc.pl
<i>ku-ra-ak-ki-iš</i> ; <sup>GIŠ</sup> <i>ku-ra-ki-[iš</i>	<i>ku-ra-ak-ki-</i> <i>in</i>	<i>ku-ra-</i> <i>ak-ki-ya-</i> <i>aš (-ša-</i> <i>an)</i>	<i>ku-ra-ak-ki</i> ; <sup>GIŠ</sup> <i>ku-ra-ak-ki-</i> <i>ya</i>	<i>ku-ra-ak-ki-<sup>[</sup>ya-</i> <i>aš(-ša)<sup>]</sup></i>
RS <sup>17</sup> 25.421 Rs. 28 (??time?); KUB 21.15 iv17 (NH)	KUB 2.2 i 28'(NH)	KUB 2.2 i 27' (NH)	KUB 2.2 i 27' (NH); KUB 39 7 iii 1 (NH)	KBo 24.45 Vs. 10' (MH/MS)

**Stem formation and inflection:** *k.* is of uncertain derivation; a deverbal origin is possible, but a loanword cannot be excluded. It is attested in both strong and weak cases, with regular *i*-stem inflection.

**Discussion:** For the details of the meaning of this wooden object, see Popko (1978: 39-41). *k.* might be derived from Hittite *kurk-* 'to hold back, to retain, to preserve' (HED 4: 266). Such a connection is refuted by Puhvel (HED 4: 262), based on the fact that *kurakki-* can also mean a free-standing pillar. Instead, Puhvel suggests a derivative of Hitt. *kuer-* 'to cut' in the sense of 'a carved object'. His objection does not seem to be semantically convincing. Also, while he defends *-ak(k)i-* comparing *antaki-*, *tupanzakki-*,<sup>18</sup> both of which are of uncertain derivation, Puhvel himself (HED 1: 77) suggests an uncertain origin of *-ki-* in *antaki-* and differentiates it from the *-kk-* in *kurakki-*.

The etymology of *k.* remains uncertain. Though both the above suggested candidates for a derivational basis, *kurk-* and *kuer-*, have probable IE etymologies, the semantic derivation is not obvious from either.

HED 4: 260; HEG 1; 644; Popko (1984: 39-41)

<sup>17</sup> Ras Shamra tablets, Ugarit. It is a trilingua with Hittite and Akkadian besides Sumerian text.

<sup>18</sup> *tupanzaki-* possibly from Hurr. *dupanziki* (Tischler (HEG 3: 446)).

:*liki*- c. 'saltlick'

<b>acc.sg.</b>
: <i>likin</i>
Bo 86/299

**Stem formation and inflection:** *l*. is a hapax. In the edition of the Bronze Tablet, CTH 106, Otten (1988: 66) lists the form as an acc.sg.c. of unknown meaning.

**Discussion:** *l*. is attested in the cuneiform script exclusively with the Glossenkeil. The Glossenkeil marks a Hittite word glossing the usual word for 'saltlick', a loanword from Luvian *lapan(a)*-, whose sense is discussed in detail (and confirmed as 'saltlick') by Watkins (1997). The fact that it glosses an identical Luvian passage confirms the meaning, which is also attractive with regard to its possible IE affinity.

In this context, the Glossenkeil is used to gloss a Hittite word, not a Luvian borrowing (Melchert 1994: 255). Puhvel (HED 5: 99) considers *liki*- "a primary deverbative animate *-i*- stem abstract noun" to the primary verb *lik*- 'to lick' < PA \**lik*-. The PIE form \**leyǵʰ*- 'to lick' has cognates in Lat. *lingō*, Goth. *bi-laigōn*, Czech *lizat*, Arm. *lizem*, Gr. *λείχω*, Avest. *raēz*, Skt. *lihāti*.

HED 5: 99; Otten (1988: 66); Watkins (1997)



(GIS)*mūri-* c. 'grape-cluster'

nom.sg.	acc.sg.	nom.pl.	acc.pl.
<i>mu-ri-eš; mu-ú-ri-iš</i>	<i>mu-ri-in</i>	<sup>GIS</sup> <i>mu-u-ri-e[-eš]</i>	<i>mu-u-ri-uš</i>
KUB 36.89 Rs. 58 (NH); KUB 57.110 ii 8	KBo 11.32 Vs. 21 (OH/NS)	KUB 39.7 i 17	KUB 43.23 Rs. 21 (OS)

**Stem formation and inflection:** *m.* is of unknown formation.

**Discussion:** *m.* is attested from OH onwards. Its derivatives are *mūriyan-* with individualizing *\*-e/on-*, which is effectively equivalent to the base, though it is worth noting that it occurs only in a plural sense, where individuation might be motivated. For the formation compare also *memi(y)an-* 'word, matter'. Note also, the common noun denoting a bakery product made with raisins, *muriyala-*.

*m.* denotes grapes of wine, as well as of other fruit (clusters of *ippiya*-tree fruit, clusters of *iyatnaš* wool, see CHD L-N: 333). For discussion of insufficiently supported etymological suggestions, see Tischler (HEG 2/1: 233). Puhvel (HED 6: 194) rejects all IE etymological proposals (incl. that of Weiss (1996: 199-214) who connects to Gr. μύρτος) and considers *m.* a local or areal word, traceable only in toponyms. Poetto (1993: 165-166) suggests a PIE root *\*mur +i* for Hittite and also Cuneiform Luvian (comparing the roots *\*kur-(ko)*, *\*sur-(ko-)*), while the *-i-* suffix was in his opinion replaced in Hieroglyphic Luvian by *-want*, as found in *mu-ru-wa-ta+za*.

Luvian *muri-?* (*mu-ri-i[š]*, KBo 29.34 i 5; CTH 770 from a Luvian ritual fragment) is a possible cognate, see Melchert forthcoming (DCL: 186).

To conclude, the etymology of *m.* remains uncertain.

CHD L-N: 333; DCL: 186; HED 6: 192; HEG 2/1: 233

<sup>DUG</sup>*palḫi-* c. 'basin, vessel for holding beverages; kettle'

nom.sg.	acc.sg.	gen.sg.	dat./loc.sg.
<sup>DUG</sup> <i>pal-ḫi-</i> <i>i[š; pal-ḫi-iš]</i>	<sup>DUG</sup> <i>pal-ḫi-in</i> , <sup>DUG</sup> <i>pal-ḫa-an</i>	[ <sup>DUG</sup> ] <i>pal-ḫa-aš</i>	<sup>DUG</sup> <i>pal-ḫ[i]</i>
KUB 44.56 iii 8 (OH/NS); KBo 24.59 i 7 (NS)	KBo 22.116 Vs. 13 (NS); KBo 23.43 ii? 5 (MH/MS) and KUB 17.5 i 11 (NS)	KBo 20.3 Rs. 4' (OS)	KBo 24.63 ii 4 (MS?)

nom.pl.	acc.pl.	collective	dat./loc. pl.
<sup>DUG</sup> <i>pal-ḫi-iš</i> ; [ <sup>DUG</sup> <i>pal-ḫ</i> ] <i>i-e-eš</i> ; <i>pal-</i> <i>ḫa-eš</i>	<sup>DUG</sup> <i>pal-</i> <i>ḫi-uš(-</i> <i>ma)</i>	<i>pal-ḫa-e-a</i> <sup>H1.A.</sup> ; <sup>DUG</sup> <i>pal-ḫi</i> ; <i>pal-ḫi</i> ; <sup>DUG</sup> <i>pal-ḫa</i> ; <i>pal-ḫi</i> <sup>H1.A.</sup> ; <sup>DUG</sup> <i>pal-ḫi-</i> <i>aš</i>	[ <sup>DUG</sup> ] <i>pal-</i> <i>ḫa-]aš</i> <sup>19</sup>
KUB 33.8 iii 7' (OH/NS); KUB 33.54 ii 5 (OH/NS); KUB 33.66 ii 9 (OH/MS?)	KBo 26.83 12'	KUB 31.143 ii 22 (OS); IBoT 3.141 iv 11 (OH/MS?); KUB 17.10 iv 15 (OH/MS); KUB 17.6 i 6 (OH/NS); KBo 30.21 2 (? <sup>20</sup> ); KBo 23.43 Rs. iii? 8' (MH/NS?)	KBo 3.7 i 17 (OH/NS)

There are several uncertain or ambiguous (with regard to number) forms which, except for *pa-al-ḫa-aš* (KBo 17.51 Vs. 4, 6, MS), are formally the same as those listed above; for a list of attestations, see CHD P: 66.

<sup>19</sup> For the reading, see both [hethiter.net/](http://hethiter.net/): CTH 321 (TX 2012-06-08, TRde 2012-06-08) and CHD P: 66.

<sup>20</sup> Very fragmentary tablet, fragments of 5 words on 3 lines.

**Stem formation and inflection:** *p.* is based on an ablauting *i*-stem adjective *palḫi-* 'wide'. Some case forms show irregularities compared to other *i*-stem nouns, see the discussion below.

**Discussion:** *p.* is attested from OS onwards. It denotes wide vessels of different sizes. The nom.pl *pal-ḫa-eš* (OH/MS?) reflects the ablauting pattern of *i*-stem adjectives. The gen.sg., dat./loc.pl. and nom./acc.pl. n. show the OH oblique stem with deletion of intervocalic *-y-*. The post-OH acc. sg. *palḫan* is a secondary creation based on reinterpretation of the OH stem *palḫa-*. Tischler sees in the OS neuter plural forms *pal-ḫa-e-a* either *palḫa=ya* or *palḫaya* (HEG 2/1: 393).

The *i*-suffix is a usual formant of Hittite core adjectives, such as *nakkī*, *ukturi-*, *mekki-*, *šalli-* etc. (see GrHL: 94). Based on the Luvian verb *palḫā-* 'to flatten, to spread out' (Melchert DCL: 204), Puhvel (HED 8: 68) assumes an unattested Hittite verb as the source of *palḫi-* and other words, formerly considered derivatives of the adjective *p.* (*palḫeššar*, *palḫatar*, *palḫanu* and others; see also Kloekhorst (EDHIL: 620) in the entry for adj. *p.*, where he points out the fact that the derivatives are based on the root, not on the *i*-stem). What leads Puhvel to assume so is the fact that inherited *i*-stem adjectives are scarce. However, since the root is a "property concept" root 'broad, wide', there is no reason to suppose an original verbal root.

*p.* has cognates in Lith. *plóti* 'to flatten', Lat. *plānus* 'flat, smooth', Czech *pole* 'field', Arm. *lain* (for more suffixed cognates, compare Puhvel (HED 8: 68)). The PIE root is reconstructed as *\*pleh<sub>2</sub>-*.

As noted by Kloekhorst (EDHIL: 621), the adjective probably inflected *\*pléh<sub>2</sub>-i-s*, *\*pḷh<sub>2</sub>-éi-s*, and its oblique stem was generalized. If 'originally' here means 'in PIE', one needs to be cautious with regard to the *i*-suffix, which is not preserved in other IE branches.

CHD P: 66; EDHIL: 620; GrHL: 94; HED 8: 64; HEG 2/1: 397; DCL: 204

*pattarpalhi-* c. 'broad-winged' (oracle bird)

nom.sg.	acc.sg.	gen.sg.	nom.pl. (or sg.?)	acc.pl. ?
<i>pát-tar-pal-ḫi-iš,</i> <i>pát-tar-pal-ḫi-eš(-</i> <i>ma)</i>	<i>pát-tar-pal-</i> <i>ḫi-in, pát-tar-</i> <i>pal-ḫi-en</i>	<i>pát-tar-pal-</i> <i>ḫi-ya-aš</i>	<i>pát-tar-</i> <i>pal-ḫi-iš<sup>21</sup></i>	<i>pát-tar-pal-</i> <i>ḫu-[uš?]</i>
KUB 18.5 ii 15, KBo 24.126 Rs. 22	KUB 16.46 i 11; AT 154 i 30	KUB 18.57 iii 14	KUB 16.46 i 7	KBo 11.68 i 20

All attestations NH.

**Stem formation and inflection:** *p.* is a compound consisting of *pa/ittar* and *palhi-*.

**Discussion:** *p.* denotes an oracle bird used in divination. Which specific bird is meant remains unknown. It is attested only in NH.

The type of compound, where the adjective follows a noun, is quite unusual for IE. Therefore, Tischler (HEG 2/1: 544), following Riemschneider (JCS 27, 1975: 233), thinks of an exact translation from Akkadian *kappa-rapaš* 'wing-wide'. This idea is rejected in CHD P: 243 on the basis of different semantics for *kappa-rapaš*, which is rather a kind of poultry, not a flying bird.

Tischler reminds the reader of an important fact noticed already by Sturtevant (1933: 145), that the fact that the *r/n*-stem first member of the composite is found in its *r*-form confirms that instead of a true compound, the word is a univerbization with the first member in the accusative. Similar formations listed are Goth. *gasti-gods* 'guest-good', OIr. *nert-mar* 'strength-great' etc. (for the compound, compare Brosch 2008: 106ff. with refs.).

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<sup>21</sup> *p.* here follows the numeral 2. The form might better be considered a nom.sg.; singular forms are frequently found following numerals in Hittite.

See <sup>DUG</sup>*palḫi-* (above) for the etymology of *palḫi-* 'wide, broad'.

The *r/n* stem *pa/ittar-* 'wing' is known from MS onwards. Because of the ambiguous reading of the first syllable *pat/pit/pet*, different etymological connections have been suggested with regard to its reading. Ved. *pátra-* n. 'wing', which is also based on an *r-/n*-stem (*\*pat-r-/ \*pat-n*), is the most likely candidate; cf. also Lat. *penna* 'wing', OHG *fedara*. Not Gr. *πτερόν* with Beekes (2010: 1248), as it is based on PIE *\*pet-* 'fly', not the enlarged *\*pet-r-*; nor Sl. *pero-* 'feather' from IE *\*(s)per-*. Hitt. *pa/ittar-* goes back to PIE *\*póth<sub>2</sub>-r / \*pth<sub>2</sub>-én-* or *\*péth<sub>2</sub>(ō)r- / \*peth<sub>2</sub>-én-* per Kloekhorst (EDHIL: 658).

To conclude, while the compound consists of two members of IE origin, because it is unparalleled elsewhere and found only in NH, it must be an inner-Hittite formation.

CHD P: 242; EDHIL: 658; HED 9: 105; HEG 2/1: 543

*pēri/e-* c. (unknown meaning<sup>22</sup>/ functionary<sup>23</sup>)

nom.sg.	acc.sg.
<i>pé-e-ri-iš</i> <sup>24</sup> , <i>pé-e-re-eš</i> <sup>25</sup>	<i>pé-e-ri-in</i> <sup>26</sup>
KBo 17.43 iv 5 (OS); KBo 25. 12 ii 17 (OS)	KBo 20.33 Vs. 15 (OS)

**Stem formation and inflection:** *p.* is attested only in the strong cases singular. Its formation is unknown.

**Discussion:** The former translation 'bird' (e.g., Singer StBot 27 (1983: 97)) is irrelevant today. CHD describes *p.* as an object carried in the KILLAM festival, following metal ornaments and accompanied by animals. It is translated as '(an ivory icon of?) elephant; ivory' by Puhvel (HED 9: 22), who relates it to OPers. *piru-* 'ivory', Akk *pīru* 'elephant'. However, there is no proof that *p.* is carried. In the text, it is contrasted with wild animals, and the status of the word *lahma-* as ivory is uncertain. So, besides a model carried by someone, it could also refer to a person.

Melchert (1984: 96, note 45) thinks of inherited *\*-ēis*, which would account for the ending *-eš* in the nom.sg.; one could expect regular *i*-stem endings in the oblique cases and later analogical spread of the *i*-stem inflection also to the strong cases. This speculation is not impossible, but with the insufficient attestation cannot be confirmed.

Because of the uncertainty of meaning, establishing etymological connections (such as the previously suggested Slavonic *pero* 'feather') is impossible.

CHD P: 312; EDHIL: 668; HED 9: 22; HEG 2/1: 575; Melchert (1984: 96 n. 45)

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<sup>22</sup> So CHD P: 312, HEG 11-12: 575, EDHIL: 668

<sup>23</sup> Melchert (1984: 96)

<sup>24</sup> Neu, StBot 25.43 (1980: 103-106)

<sup>25</sup> Neu, StBot 25.12 (1980: 29-36)

<sup>26</sup> Neu, StBot 25.19 (1980: 52)

[*šāri-* c. 'file, column']

nom.sg.	nom.pl.
<i>ša-a-ri-ya-aš</i> ; <i>ša-a-r[i-ya-aš(-pát)]</i>	<i>ša-a-ri-i-e-eš</i>
IBoT 1.36 ii 37 (MH/MS); IBoT 1.36 iv 8 (MH/MS)	IBoT 1.36 ii 36 and 37 (MH/MS)

**Stem formation and inflection:** *š.* is attested only in the nominative of both numbers. A stem in *-ya* is also possible. The nom. sg. of *š.* points to a stem *šāriya-*, while the plural forms point to *šāri-* (see Güterbock (1991: 83, *šāriya-*). The forms are sufficient to decide about the gender. Information about ablaut is not available.

**Discussion:** The word is attested only in one text, the Instructions for the Bodyguard, IBoT 1.36. As the meaning of *š.* must be based purely on its context in the instructions, opinions differ. Güterbock (1991: 19 resp. 33, 52) translates 'file' in the meaning 'the guards and the palace attendants march in three files: two files of guards and one file of palace attendants' (IBoT 1.36 ii 36-37) and 'when only half the file (of) the spearmen has gone through the portico...' (IBoT 1.36 iv 8). Tischler (HEG 2/2: 895) lists as *šariya-* 'Kolonne, Marschordnung, Reihe'. CHD S: 257 thinks of a connection to the verb *šariya-* 'to embroider, to sew, decorate; to truss/sew up (?)' based on the notion 'file, line', 'since embroidering involves lines or rows of fabric/yarn/thread' (ibid. 259). If the etymology is correct, it would confirm IE ancestry (the verb has likely cognates in Lat. *serō*, Gr. εἶρω).

To conclude, there is no assured evidence for an *i*-stem. Under these circumstances one must suppose a common gender *šariya-*, an action noun to *\*šariya-* 'to line up'.

CHD S: 257; Güterbock (1991: 52, 83); HEG 2/2: 895]

*tarumaki-* c. (a bird)

<b>acc.sg.</b>
<i>ta-a-ru-ma-ki-i[n]</i>
KUB 8.62 Vs. i 7'

**Stem formation and inflection:** *t.* is a hapax, where the acc.sg. ending confirms common gender.

**Discussion:** *t.* is a hapax found on a fragmentary tablet of the Epic of Gilgamesh. It is translated as 'woodpecker' by Hoffner (1966:377) and taken from *taru* 'wood' + *wak-* 'bite' with dissimilation of \*-*uw-* > *-um-*. Rieken (hethiter.net, 2009) translates the passage (lines 6-8): "(6) [Das Wild?] der ge[s]amten Steppe [...] (7) [...] den *tarla*-Vogel (und) de[n] *tarumaki*-Vogel [...] 8 [...] bei Ullu [...]."

While Hoffner's analysis is semantically possible, unfortunately the use of the word does not allow for specification of the type of the bird (there is no information about its action or appearance), and so it must remain merely a possibility.

The formation of the compound is unusual for Hittite, as the noun+verb type is otherwise not found, although as compounds are infrequent, one could in theory encounter an otherwise unknown type. While there are several noun+noun compounds, as well as adjective+noun and preposition+noun (GrHL: 63), verbal components are found in nominal univerbizations, where verbs are preceded by adverbial formants and end in one of the suffixes *-ātar*, *-ant-*, *-alla-* (e.g. *antiyant-* 'son-in-law' from *anda* 'into' and *iya-* 'to go'; for further examples and discussion, see Brosch (2008: 60)). *t.* would be the only compound using the bare stem of the verb, not its nominalized form. The examples of *dvandva* verb+verb compounds given by Brosch (2008: 67-69, following Rieken) confirm the use of verbal noun-like suffixes. If *t.* were (with Hoffner) an *i*-stem verbal adjective, its formation would be just as unparalleled.

Though the above etymology cannot be confirmed with certainty, nevertheless, as stated by Borsch (2008: 99) 'es spricht jedenfalls nichts gegen sie.' As to the verb



*wāk(k)-*, per Kloekhorst (EDHIL: 939) it has cognates in both Anatolian (Pal. *wakk-* 'to bite?') and elsewhere in IE (TochAB *wāk-* 'to split, to burst', Gr. ἄγνομι 'to break').

If a compound, *t.* would be an inner-Hittite formation.

Brosch (2008: 90-91); HEG 3: 239; Hoffner (1966: 35); E. Rieken et al. (ed.), [hethiter.net/](http://hethiter.net/): CTH 341.III.6 (TX 2009-08-27, TRde 2009-08-27)

*ūrki-* c. 'trail, track'

nom.sg.	acc.sg.	dat./loc.sg.	nom.pl.
<i>u-ur-ki-iš, u-ur-ki-iš; u-ur-ke-eš</i>	<i>u-ur-ki-in</i>	<i>u-ur-ki-ya</i>	<i>u-ur-ke-e-eš</i>
KBo 16.97 Rs. 47(MH/MS); KBo 16.97 Rs. 6 (MH/MS); KUB 29 7 ii 45 (MH/MS)	KUB 13.2 i 6 (MH/NS)	IBoT 4.33 Rs. iv 3 (NH)	KUT 49 Vs. 4.5 (MH/MS)

**Stem formation and inflection:** *u-* is a word of PIE origin, synchronically underived in Hittite. Its inflection confirms a (non-ablauting) common gender *i*-stem.

**Discussion:** *u-* is attested from MH as a part of oracle texts. Etymologically, the word has cognates in OIran. *vrájati* 'marches, walks', OE *wracan* 'drag', Lat. *urgeō* 'push, urge' etc. and goes back to PIE *\*wṛg-i-*, or *\*h<sub>1</sub>urg-i* per Kloekhorst (EDHIL: 927). Kloekhorst bases the need for a laryngeal on the examples of PIE *\*ulk-sro-* > OH *ulkiššara* > MH/NH *walkiššara* 'skilled' and PIE *\*urh<sub>1</sub>ór(i)* > OH *urāni* > MH *warāni* 'burns', which would point to an expected development *\*wṛgi-* > OH (*u-*)*urki* > MH/NH *warki-*. In my opinion, this reasoning is unacceptable, unless the author left some part of it unexplained. If there was a general development of OH initial *ul-/ur-* to MH/NH *wal-/war*, one would not find any word beginning *ul-/ur-* from MH onwards. And even if there were, such an inner-Hittite shift would have nothing to do with PIE laryngeals. This on the other hand does not mean that there cannot have been an initial *\*h<sub>1</sub>*, which would not have left traces in OH. Since there is no other IE cognate that would require the laryngeal, I assume it is more economical not to posit one. More likely, in 'to burn' an old zero-grade *\*ur-ó-ri* was replaced due to the transitive *warnu-*. Furthermore, since Hittite nowhere else allows [u] (<ú>) before *-r-*, one should consider the idea of Eichner, ICH 8 (unpublished) that we have a spelling for /wrV-/ , which is certainly possible from PIE onwards.

EDHIL: 927; HEG 4: 99

*weši-* c. 'pasture'

nom.sg.	acc.sg.	gen.sg.?	dat./loc.sg.
<i>ú-e-ši-iš</i>	<i>ú-e-ši-in; ú-e-še-in</i>	<i>ú-e-ši-ya-aš</i> <sup>27</sup>	<i>ú-e-ša-i; ú-e-ši</i>
KBo 1.45 Vs. 14 (NH)	KUB 29.29 8 (OS) and KUB 7.60 iii 29 (NS); KUB 7.60 iii 24 (NS)		KBo 12.3 iv 6' (OH/NS); KBo 12.73 3 (NS)

abl.	nom.pl.	acc.pl.	dat./loc.pl
<i>ú<sup>1</sup>-e-ši-ya-az</i>	<i>ú-e-ša-e-eš; ú-e-še-eš</i>	<i>ú-e-ša-uš(-ša)</i>	<i>ú-e-ši-ya-aš</i>
KBo 6.10 iv 7	KUB 17.10 i 17' (OH/MS); KBo 32.14 ii 27 (MS)	KUB 31.64 iv 7 (OH/NS)	KBo 32.14 vs. ii 29 (MS)

Ablauting forms in blue.

**Stem formation and inflection:** *w.* is an inherited formation with ablauting stem; its ablaut corresponds to the ablaut pattern of *i*-stem adjectives.

**Discussion:** *w.* is attested from OH onwards.

Kloekhorst (EDHIL: 1007) assumes a PIE ablauting *\*ués-i- / \*us-éi-*, where the ablaut would account for the nom.pl. *wešaēš*, acc.pl. *wešauš*, in which the full grade was generalized. He compares *hēu-/hē(y)au-*, for which he, however, does not reconstruct an ablauting PIE paradigm, but rather expects an ablauting OH suffix *-u-/au-*. He then assumes that as this ablauting type is found in *i*- and *u*-stem adjectives, *h.* may have been adjectival in origin; alternatively, *u*-stem nouns also could be ablauting<sup>28</sup> and subsequently also *i*-stem nouns. Compare (NINDA/DUG)*harši-* (p. 31). As for (DUG)*palhi-*, there is the connection to the adjective *palhi-* 'wide, broad'.

<sup>27</sup> Gen.sg. attestation per Kloekhorst (EDHIL: 1007) without reference.

<sup>28</sup> For the discussion of ablauting nominal *u*-stems, see Neu (1985: 260).

If derived from *\*wes-* 'to pasture, to feed', the IE cognates (EDHIL: 1007) are Skt. *svásara-* n. 'pasture, meadow', Av. *vāstar-* n. 'pasture', *vāstar-* m. 'herd', OIr. *fess* 'food', ON *vist* 'nutrition', TochA *wāsri* 'pasture' Lat. *vēscor* 'to feed oneself'.

If derived from the root *\*weis-* 'to flourish, to grow' (Eichner 1971: 79), the cognates would be Lat. *viridis* 'green', OHG *wisa* 'meadow'.

The commonly accepted view is that *w.* is of IE origin, with inherited stem ablaut. Either it was an ablauting noun already in PIE (adjectives and nouns may not have been as differentiated at that stage, so that the type of ablaut attested in Hittite adjectives would not surprisingly also occur in nouns), or the original (PIE) form was an adjective, for *w.* as well as for other Hittite *i*-stem nouns with the same ablaut pattern.

EDHIL: 1007; HEG 4: 519; StBot44 (1999: 311)

2.1.2 Core *i*-stems of neuter gender

[*hāli*- n. 'pen, corral (for herd)']

For this putative primary neuter *i*-stem, see the rejection of a proposed PIE etymology in Kloekhorst (EDHIL: 272).]

[(<sup>GIŠ</sup>)*kattaluzzi-* n. 'lintel, threshold']

<b>nom./acc.sg.</b>	<b>gen.sg.</b>	<b>dat./loc.sg.</b>
<i>kat-ta-lu-uz-zi</i>	<i>kat-ta-lu-uz-zi-ya-aš</i>	<i>kat-ta-lu-uz-zi</i>
KUB 24.7 ii 17	KUB 7.13 Vs. 6	KBo 4.2 i 43

Kloekhorst (EDHIL: 464) analyses *k.* as a compound of *katta-* 'beside' and *luzzi-*, which is an assibilated variant of the zero grade found in *luttāi-/lutti-* 'window' (for its account, see the entry *luttāi-* (p. 197)).

Kloekhorst assumes that while *luttāi-* < *\*lut-(o)i-* generalized the *-tt-* before *-a-*, in *luzzi-* < *\*lutti-* the *\*t* assibilated before *\*i*.

EDHIL: 464; HED 4: 124

For *i*-stem neuters, see also Melchert (2021)]

*le/išši-* n. 'liver'

nom./acc.sg.	dat./loc.sg.	other
<i>li/e-e-ši; li/e-[iš-ši]</i> <sup>29</sup>	<i>li-iš-ši</i>	<i>le-eš-ši</i> <sup>30</sup>
KUB 12.58 i 24 (NH); KBo 1.51 ii 9 (NH)	KBo 3.21 iii 10, 12 (OH/NS)	KUB 22.4 6 (NH)

**Stem formation and inflection:** *l.* is a word with several proposed IE cognates; it is synchronically underived. Formally, it is attested only in one shape. This fact points to neuter gender and is also justified by the cases in which this scarcely used word is found (nom./acc.sg. and dat./loc.sg.).

**Discussion:** *l.* is attested in NS copies of OH texts, as well as in NH. Melchert (1984, 127 note 90) assumes *i*-vocalism throughout the paradigm. However, as it is attested twice with *-e-* in the first syllable and once with *-i-*, one must also take the *e*-vocalism into consideration. Kloekhorst (EDHIL: 525) suggests that the word is likely of foreign origin, just as is the practice of hepatoscopy. On one hand, this is a highly acceptable argument supported by the lack of a convincing IE etymology (for etymological suggestions, see Tischler (HEG 2: 54) and on the problem of comparison with Arm. *leard* Puhvel (HED 5: 98)). On the other hand, the liver as an animal body part must have had a clear designation throughout the whole of Hittite history, regardless of hepatoscopy. As the term *l.* is not duplicated by any other form, the IE etymology of *l.* must remain an open question.

CHD L-N: 72; EDHIL: 525; HED 5: 97; HEG 2: 54; Melchert (2021: 3).

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<sup>29</sup> This word is completed based on its context: it is used in a fragment of lexical list (CTH 309) as an equivalent of Akk. *ga-bi-du*.

<sup>30</sup> This form is found on a fragment of an oracle text.

A.ŠA<sup>1</sup> *terippi-* n. (?) 'plowed field'

nom./acc.sg.	abl.	nom./acc.pl.	dat./loc.pl.
<i>te-ri-ip-pí</i>	<i>te-ri-ip-pí-ya-az</i>	<i>te-ri-ip-pí</i>	<i>te-ri-ip-pí-ya-aš</i>
KUB 33.65 iii 2 (NS)	VBoT 24 iii 26 (NS)	KUB 9.4 ii 32' (MH/NS)	KUB 13.1 iv 2 (MH/MS) and HKM 54 Rs. 6 (MH/MS)

**Stem formation and inflection:** *t-* is a deverbal formation from *teripp-* (cf. *terippiya-*). Per Tischler (HEG 3: 333), such a way of deriving a concrete noun is unparalleled in Hittite.

**Discussion:** *t-* is attested from MH onwards. The stem vowel of *t-* is a subject of discussion. While the second vowel may have undergone a weakening from PIE stressed *\*-e-* to an unstressed *-i-* due to a shift of stress to the (anaptyctic) vowel *-e-* in *ter-* (Melchert (1984: 130)), there remains the possibility of a stressed cluster /trép-/ (see discussion in Kloekhorst EDHIL: 872).

The verbal stem *teri/epp-* most likely has cognates in Gr. τρέπω, Lat. *trepō* both 'I turn', Skr. *trapate* 'is ashamed', PIE *\*trép-* / *\*tr̥p-* (LIV<sup>2</sup>: 650; Kloekhorst (EDHIL: 871)). For other etymological suggestions, see the overview in Tischler (HEG 3: 331-2).

As the *-i-* stem itself has no cognates in other IE languages, it should be considered a post-PIE derivation, the form of which is presently unexplained.

EDHIL: 871; HEG 3: 333 (329); LIV<sup>2</sup>: 650



2.1.3 Core *i*-stems of indeterminate gender*warši-* c./n. '?'

nom.sg.c.	gen.sg.
[ <i>wa-a</i> ]r- <i>ši-ya-za</i>	<i>wa-ar-ši-ya-aš</i>
HT 42 Rs. 10 <sup>31</sup>	KUB 29.8 i 1

**Stem formation and inflection:** *w.* is likely a deverbal formation from *warš-/waršiya-* 'to sooth; to refresh; to lift oneself, to reconcile, to pull oneself together'. A stem in *-ya-* is also possible.

**Discussion:** The word is listed as *waršiyatt-* by Rieken (1999: 107). Several etymological suggestions were made with regard to the IE cognates of the underlying verb. Per Kloekhorst (EDHIL: 971), they are seen in Skt. *várṣman-* 'high', Lith. *viršùs*, OCS *vrǔxǔ* 'top, summit, peak', PIE *\*wérs-* / *\*wrs-* 'to exalt oneself, to come high' (LIV<sup>2</sup>: 691, Wodtko 2008: 724)<sup>32</sup>. Melchert (1994: 163) suggests an original meaning of the verb 'to trickle, to drip', derived from PIE *\*h<sub>2</sub>wers-* 'to rain' (LIV<sup>2</sup>: 291; Wodtko (2008: 356)). To determine its origin, more information has to be gained about its semantics.

So far as the meaning of *w.* is not assured, its status must remain open with regard to etymology.

EDHIL: 973; HEG 4: 364; LIV<sup>2</sup>: 691; Rieken (1999: 107); Wodtko (2008: 724)

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<sup>31</sup> This attestation is in a lexical list, with missing both Sumerian and Akkadian columns.

<sup>32</sup> LIV<sup>2</sup>: 691 and Wodtko (2008: 724) without the connection to Hittite *warši-*.

2.1.4 Core *i*-stem 'proterokinetic' adjectives<sup>33</sup>*ḫarki*- 'white, bright'

nom.sg.c.	acc.sg.c.	nom./acc.sg.n. (or pl.?)	gen.sg.	dat./loc.sg.
<i>ḫar-ki-iš(-š=a)</i> , <i>ḫar-ki-š</i> ; <i>ḫar-ki-š(a)</i>	<i>ḫar-ki-in</i>	<i>ḫar-ki</i>	<i>ḫar-ki-ya-aš</i> , <i>ḫar-ki-aš</i>	<i>ḫar-ki-ya(-aš-ša-aš-ša-an)</i> <sup>34</sup> , <i>ḫar-ga-ya</i> , [ <i>ḫar</i> ]- <i>ga-i(i=š-ta)</i> , <i>ḫar-ga-a-i</i>
KUB 10.52 vi 8; KUB 16.6 12; KBo 4.6 Vs. 13	KBo 15.10 Vs. ii 9 (MH)	KUB 7.3 13-14 (NS)	KBo 13.248 i 17 (NS); IBoT 1.31 Vs. 16	KUB 35.145 ii 12 (NS); KBo 34.260 6 (NS); KBo 34.23 11 (NS); KUB 60.164 ii 13 (NS)

nom.pl.c.	acc.pl.c.	nom./acc.pl.n.	dat./loc.pl.
<i>ḫar-ga-e-eš</i>	<i>ḫar-ga-uš</i> , <i>ḫar-ga-<sup>l</sup>e-uš</i>	<i>ḫar-ga</i> ; <sup>35</sup> ( <i>ḫar-ki</i> , <i>ḫar-ki-ya</i> )	<i>ḫar-ki-[aš]</i> <sup>36</sup>
HT 1 iii 8-9 (NS)	KUB 57.76 i 7' (NS); KUB 41.18 ii 7 (MS)	HT 1 i 14;?; ? <sup>37</sup>	KUB 33.66 ii 18 (OH?/MS)

<sup>33</sup> For the choice of adjectives, compare Sturtevant (1934).

<sup>34</sup> See HW<sup>2</sup>: 312.

<sup>35</sup> This form is translated as singular by Görke (ed.), hethiter.net/: CTH 757 (TX 05.06.2014, TRde 05.06.2014) and as plural in HW<sup>2</sup>: 312. As it is followed by <sup>GIŠ</sup>*ḫaḫḫal* 'undergrowth, schrub', the only decisive factor is the form of *ḫ*. Its *-a* ending here implies the plural nom./acc.n. ending (GrHL: 94). In another example, <sup>GIŠ</sup>*ḫaḫḫal* is preceded by *ḫar-ki* (singular; KUB 35.145 ii 12).

<sup>36</sup> The ending is emended based on the following word: IGI<sup>HL.A</sup>-*aš ḫar-ki-[aš] da-an-ku-wa-ya-aš* KL.MIN 'on the white and the dark of the eyes as well.'

<sup>37</sup> Both forms are listed by HW<sup>2</sup>:307 and EDHIL: 307, without reference, therefore, uncertain without context.

**Stem formation and inflection:** *ḫ*. is an ablauting adjective with *-i/-ai-* stem ablaut.

**Discussion:** *ḫ*. is attested from OH onwards. In texts it is often replaced by the Sumerogram BABBAR. Its nominalized form, 'the white', is found e.g. in KUB 11.23 vi 7, with several meanings connected to the colour ('silver (?); 'the sclera', 'leucoma (?)', 'the white-dressed' (HW<sup>2</sup>: 313 with ref.)). It can be used in an adverbial sense too, e.g. KUB 34.76 *ḫar-ki wa-aš-ši-ez-zi* 'dresses in white' (E. Rieken et al. (ed.), hethiter.net/: CTH 334.1.2 (INTR 2009-08-12)).

*ḫ*. has cognates in Gr. ἀργι-όδων 'white-toothed', ἀργός 'bright, shining white; quick' (see Beekes 2010: 126 for more examples), Skt. *ṛjrá-* 'shining reddishly; quick', *ṛjī-śvan-* 'with fast dogs', TochA *ārki*, TochB *ārkwī* 'white' (Kloekhorst (EDHIL: 307)), all from PIE *\*h<sub>2</sub>(e)rǵ-*. A connection to Lat. *argentum* is also possible (Puhvel HED 3: 171).

What has been extensively debated is the onset of *ḫ*. as an *i*-stem adjective. It is noted by Grestenberger (2009: 9) that *ḫ*. is the only 'real' *i*-stem adjective out of the list of cognates.<sup>38</sup> She agrees with Rieken (2005: 56) that its proterokinetic suffix ablaut may rather be an innovation, an analogy to the inherited suffix ablaut of the *u*-stems. An important point worth addressing is the fact that there is no attested 'original' *i*-stem abstract noun that could have been the source for the adjective, which is explained by analogical derivations from *o*-stem nouns. Another suggestion, proposed by Grestenberger, is that 'the Caland *i*-abstracts were reinterpreted as adjectives when used as noun characterizing appositions.' The third solution presented is that of Schindler,<sup>39</sup> who considers the *i*-adjectives back-formations from compounds. Grestenberger concludes that whatever explanation is correct, *ḫ*. is hardly an archaic form.

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<sup>38</sup> As stressed by Ronald Kim (p.c.), the *i*-stem-looking TochB *ārkwī*, TochA *ārki* 'white' < Proto-Toch. *\*arkwəy* can go back to PIE *\*h<sub>2</sub>érǵ-i-*, but the final *-i* in both languages is a mystery, as is the relation to the feminine stem (TB *arkwañña*, TA *ārkim* < PT *\*arkwəñña*), which has the same nasal suffix as Ved. *ārjuna-*.

<sup>39</sup> Without reference by Grestenberger.

The idea of a reinterpreted *i*-abstract has to be revised on semantic grounds. Colours belong to the core adjective type (Dixon and Aikhenvald 2004: 3). They are often derived words in languages of the world (p. 29), e.g., denominal as in Manange (p. 69), where 'brown' is derived from 'earth', 'grey' from 'ash' (or to look closer, in Greek); however, according to Berlin and Kay (1969) 'white' and 'black' are crosslinguistically the basic colour terms.

I assume that the adjective denoting the basic colour 'white' must have coexisted with the noun (or verbal stem?) already in PIE. The idea of an *i*-abstract which in certain contexts was reinterpreted as 'white' is more than unlikely. Schindler's idea, which sees the origin of the *i*-suffix in the compounds, remains speculative but not impossible. Rieken's suggestion of analogy to the ablaut of the *u*-stems must be taken as a competing explanation of the phenomena, besides its PIE origin. However, the idea of the derivation of the *i*-adjectives from neuter *o*-stems in the case of *h*. is unnecessary. Would not the fact mentioned by Rieken, that there is no attested underlying *i*-stem noun to any of the *i*-stem adjectives, rather suggest that the adjectives were original?

Kloekhorst (who projects the ablauting *-i/-ei-* stem to PIE) explains the *i*-stem as a Caland variant of the *\*-ro-* stem seen in its Greek cognate ἀργός from \*ἀργρός (with dissimilation) and in the Greek and Sanskrit compounds. As a second member of compounds, *a*. retains its stem, e.g. Gr. στόμαργος 'swift/white at the mouth'. (For its position in the Caland system, see Rau (2009: 72).)

To conclude, while the projection of the *i*-suffix of *h*. to PIE is not conclusive, I still prefer to include *h*. in the PIE lexicon as an adjective.

EDHIL: 307; GrHL: 94; Grensberger (2009: 9); HED 3: 169; HEG 1: 177; HW<sup>2</sup> 3: 307; Rieken (2005)

\**harši-* 'round, head-shaped'

**Stem formation and inflection:** *h.* is an unattested form, expected to be a base for substantives as discussed below. Though it is listed e.g. by Tischler (HEG 1: 186) as an adjective, no attestation is given.

**Discussion:** The hypothetical formation *h.* would be an adjective meaning 'round, head-shaped' (for the meaning see Rieken (1999: 311), Puhvel (HED 3: 197) who compares French *boule* 'bowl, ball, head, military ration loaf'; Kloekhorst (EDHIL: 316) who translates 'high'; Kammenhueber (HW<sup>2</sup> 3: 358)). The adjective would be the base for <sup>NINDA/DUG</sup>*harši-* c. 'round, leavened bread/ jar', and its root is also seen in *haršar/n-* 'head'.

The main reason for assuming the adjectival origin of <sup>NINDA</sup>*harši-* is its stem ablaut, otherwise seen in adjectival declension. Puhvel (HED 3: 197) refutes this line of reasoning, assuming that the oblique case declension is rather an archaism of *i*-stem nominal declension.

To conclude, as \**harši-* is never attested as an adjective alone, and the semantics of the supposedly derived words is not conclusive support for the adjective, \**harši-* is presently not considered an assured lemma. See the entry for <sup>NINDA/DUG</sup>*harši-* (p. 31).

EDHIL: 315; HED 3: 190; HEG 1: 186; Hoffner (1974: 156); HW<sup>2</sup> 3: 358; Neu (1985: 259); Rieken 1999 (StBot 44: 311)

*huelpi-* 'fresh, young, new'

nom.sg.	acc.sg.	nom./acc.sg.	instr.	nom.pl.	nom./acc.pl.
<i>hu-el-pí-iš</i>	<i>hu-u-el-pí-in</i>	<i>hu-el-pí, hu-e-el-pí, hu-u-el-pí, hu-i-el-pí</i>	<i>hu-el-pí-it, hu]-e-el-pí-it</i>	<i>hu-el-pí-iš</i>	<i>hu-el-pí</i>
KBo 25.106 4 (OS)	KUB 11.22 ii 3 (NH)	KUB 24.7 ii 5 (OH??/NS); KUB 27.16 iv 6 (NH); KUB 13.4 iv 3 (MH/NS); KUB 43.55 Vs. iii 18 (MH/MS)	KUB 10.27 i 25 (NS), KUB 27.16 i 13 (NH)	KUB 30.32 iv 12 (MH/MS)	KUB 30.32 iv 11 (MH/MS)

**Stem formation and inflection:** *h.* is an adjective with no attested ablaut and occasional plene root vowel *e*. Although listed as non-ablauting by Hoffner and Melchert (GrHL: 94), the evidence concerning its ablaut is insufficient. Only strong cases (and the instrumental, in which Hittite ablauting adjectives also take the zero grade) are attested, and therefore ablaut cannot presently be excluded.

**Discussion:** *h.* is attested from OH onwards. There are other words with similar meaning in Hittite, *huišu-* 'fresh, raw' and *nēwa-* 'fresh, new', the latter being partly synonymous to *h.*

A convincing etymology of *h.* has not yet been established. Kammenhueber (HW<sup>2</sup> 3: 630) rejects Puhvel's (and originally Hrozný's (SH: 111)) connection (HED 3: 332) with PIE *\*g<sup>w</sup>elb<sup>h</sup>-* 'womb; embryo'. The phonology is impossible: *\*g<sup>w</sup>-* could not have yielded Hittite *hw-*. Alternatively, Puhvel mentions the (improbable, in his view) connection with Lat. *lepōs* 'grace, charm', *lepidus* 'charming'. See also Kammenhueber (HW<sup>2</sup> 3: 631). As a derivational source is unknown, the adjective is provisionally considered primary.

GrHL: 53; HED 3: 331; HEG 1: 259; HW<sup>2</sup> 3: 630

*karši-* 'bare, mere; frank; harsh, astringent (of medicament); sour(?)'

nom.sg.	acc.sg.	nom./acc.sg.	acc.pl.	nom./acc.pl.
<i>kar-ši-</i> <i>iš</i>	<i>kar-ši-in</i>	<i>kar-ši;</i> <i>kar-</i> <i>aš-[ši]</i>	<i>kar-ša-uš;</i> <i>kar-ši-ya-</i> <i>aš;</i> <i>kar-še-ya-aš</i>	<i>kar-ša;</i> <i>kar-ša-ya;</i> <i>ka]r<sup>2</sup>-aš-ša-ya;</i> <i>kar-aš-ši-ya</i>
KBo 4.14 iii 38 (NH)	KBo 5.6 iii 22 (NH)	KUB 15.34 iii 26' (MH/MS); KUB 19.26 i 14 (NH) <sup>40</sup>	KBo 12.8 iv 30' (OH/NS); KUB 32.129 + KBo 33.123 i 21 (NS); <sup>41</sup> KUB 32.103 ii 10 (NS) <sup>42</sup>	KBo 29.142 ii 23-24 (NS); KBo 5.4 Rs. 29-30 (NH); KUB 21.5 iii 7-8 (NH); KBo 5.9 ii 3-5 (NH) <sup>43</sup>

**Stem formation and inflection:** *k.* is attested only in the strong cases; the stem ablaut is found in nom./acc.pl. Formation uncertain.

**Discussion:** *k.* is attested from MH and in a NS copy of an OH text. It is of uncertain etymology. Sturtevant (1934: 267) in his article on the Hittite adjectival *i*-stems considers *k.* a primary adjective and connects it to *karš-* 'to cut' based on the semantic resemblance to English *clean-cut* 'clearly defined, free from obscurity' (so also Hoffner 1974: 168).

An overview of its use is provided by Puhvel (HED 4: 107), where he translates *karši-* as 'unquestioning (servant); unembellished (report), dry (wine), all out (adv., to fight sb.), to the point, outright, bluntly (adv.), sour (bread), plain (plowmen), outright (fill st.), frankly'. Although in the heading of the entry he provides the glosses 'harsh, astringent (medicament), caustic (wood-burn), dry

<sup>40</sup> Cf. HEG 1: 522 and HED 4: 107 for the meaning in this context – possibly 'sour'.

<sup>41</sup> S. Görke (ed.), hethiter.net/: CTH 474.1 (INTR 2015-08-14). Görke follows HED 4:108 here, and offers an alternative translation by Hagenbuchner (2002: 163) '4 saure Brote nach *karš(i)*-Art'.

<sup>42</sup> S. Görke (ed.), hethiter.net/: CTH 474.2 (INTR 2015-08-14).

<sup>43</sup> With meaning 'faithfully', transcribed *kar(aš)šiya* by hethiter.net/: CTH 62 (TX 16.10.2013, TRde 15.10.2013).

(wine), unbaked (bread)'; bread); figuratively 'to the point, forthright, blunt, frank, plain, unembellished, unquestioning'; adverbial also 'outright, all out, unconditionally', most of these meanings are not used in the translations. With full appreciation for the translations, I suggest that the reason for the abundance of alleged meanings is uncertainty about the actual semantics of this adjective.

If to PIE *\*kers-* 'cut', its cognates could be ModHG *harsch*, ModEng *harsh* (Kloekhorst (EDHIL: 454; HED 4: 109). Kloekhorst explains the inherited cluster *-rš-* as generalized from the oblique cases of the PIE adjective *\*kérs-i-* / *\*kṛs-éi-*; an original *\*VrsV* should otherwise yield Hittite *VrrV*. Hittite *karš-*, which could be its cognate, can be translated mainly as 'to cut (off)', in both a literal ('to cut a piece of meat, vine, tree, a piece of fruit') and a figurative meaning (as 'to cut a piece of field, to cut off daily beer'), and also 'drop, stop, cancel, withhold, fail to, remove (e.g., illness)' (per Puhvel HED 4: 100).

Taking into consideration first the wide semantic range in which this adjective is used, which makes etymological connections difficult; secondly, because the root ablaut is not attested (the stem ablaut is, the original *\*-i-* / *\*-ei-* for *i*-stem adjectives); and thirdly, because no reliable adjectival cognates are attested, it must follow that the status of the adjective in PIE remains uncertain. Despite the argument for zero-grade root, the proterokinetic inflection is not guaranteed. Just as Görke (CTH 474.1, §2, 13, note 3) quotes Hoffner (1974: 168) when explaining the meaning of *karši-* as 'sour', 'from the verb *karš-* 'to cut down, cut off' or the adjective *karši-* 'true, honest, frank?', the matter seems far from settled even today. It is just as possible that the adjective is a pre-Hittite deverbal derivation (the verb is attested also in CLuv. *karš-* 'to cut', and Lyd. *fa-karse-* 'to cut' and has reliable IE cognates, see e.g. EDHIL: 455). That, however, does not account for the semantic variation.

As an alternative, one might suggest that the adjective is not derived from *karš-* 'to cut' at all and the resemblance is just homonymic. The meaning of *k.* could be rounded up as 'straight', in the sense 'upright, honest', which could also apply to the quality of wine and bread.

EDHIL: 454; HED 4: 107; HEG1: 522; Sturtevant (1934: 267)



*mēkki-*, *mēkk-* (or *mēkka-*?) 'much, many'

nom.sg.	acc.sg.	nom./acc.sg.	gen.sg	abl.
<i>me-ek-ki-iš</i> ; <i>me-ek-iš</i>	<i>me-ek-kán</i> ; <i>me-e-ek-kán</i>	<i>me-ek-ki</i> ; [m]e-e- <i>ek</i> ; <i>me-ik-ki</i> ; <i>me-</i> <i>ek-ki-i</i>	<i>me-iq-qa-</i> <i>aš</i> ; <sup>44</sup> <i>me-eq-</i> <i>qa-ya-aš</i>	<i>me-eq-qa-</i> <i>ya-az</i> <sup>45</sup>
KUB 21.47 i 15 (MH/MS); KBo 32.75 Vs. 6 (MH)	KUB 36.98 Rs. 11 (OH/NS); KBo 21.68 i 4 (OS)	KBo 6.2 iv 42 (OS); KBo 25.23 Rs. 6 (OS); KBo 3.28 ii 20; KBo 6.2 ii 46 (OS)	KUB 29.48 Rs. 12; KUB 31.23 Rs. 8	KUB 5.7 Vs. 25 (NH)

nom.pl.	acc.pl.	nom./acc. pl.	gen.sg (or pl.) or dat./loc.pl.	other
<i>me-eg-ga-e-eš</i> ; <i>me-e-ek-&lt;ke-&gt;e-</i> <i>eš</i> ; <i>me-ek-ke-eš</i> ; <i>me-ek-&lt;ke-&gt;eš</i>	<i>me-eq-qa-a-</i> <i>uš</i> ; <i>me-ek-ku-</i> <i>uš</i> ; <i>me-ek-qa-</i> <i>uš</i>	<i>me-eg-ga-ya</i>	<i>me-iq-qa-ya-</i> <i>aš</i> <sup>46</sup>	<i>me-eq-qa-</i> <i>ya-aš</i>
KBo 3.1 ii 25 (OH/NS); KBo 25.23 Rs. 5 (OS);?; KUB 42.29 ii 5 (NH)	KUB 16.77 iii 37 (MH/NS); KUB 43.23 Rs. 20 (OS); ?	KUB 22.61 i 16 (NH)	KUB 31.23 Rs. 8	KUB 18.29 i 6 (NH)

Forms not based on the *i*-stem are marked in blue.

**Stem formation and inflection:** The word is attested both as an *i*-stem and (most probably) a velar stem *mēkk-*. For convenience, those based on the stem *mēkk-* (as

<sup>44</sup> Per Kammenhuber (Hippologia Hethtica 164, note 86, and 337), this form is an s-stem *meqqaš* for a unit of measure. this interpretation is less likely but needs to be taken into account.

<sup>45</sup> The ablative forms are often used adverbially, see CHD L-N: 245

<sup>46</sup> In the text, there is no context for the word, so both gen. and dat./loc. are possible.

listed in CHD L-N: 245) are marked in blue in the above table. All other forms are considered by CHD as belonging to the ablauting stem *mekki-*.

**Discussion:** *m.* is used from OH onwards. In the attributive use, it both precedes and follows its head noun. The syntax of *m.* is discussed in Hoffner/Melchert (GrHL: 272); against CHD N-L: 247, they understand the form *mekki* if used in an appositional phrase as a neuter substantive.

The evidence shows two distinct stems, *mekki-* and the other, which I suggest is an *a*-stem (listed in CHD and elsewhere as *mēkk-*). Both stems are attested in OH. Theoretically, the initial presence of forms resembling *a*-stem nouns (and so seemingly belonging to *mēkka-*, e.g. *mēkkan*) alongside the *i*-stem forms could be caused by the fact that a velar stem, as inherited from PIE (originally *\*meǵh<sub>2</sub>-*), is unfit for an adjective in Hittite and the root required an enlargement by a stem vowel. There are no other adjectives ending in a velar. (Rieken 1999: 61 lists one such neuter noun, *yuk-* 'yoke, pair', attested only once in KBo 25.72 ii 11' in an OH/MS text. GrHL: 105 adds <sup>NINDA</sup>*tūnik-*; besides these, no velar stem nouns or adjectives are found.). Such a treatment also in nom.sg. would encourage reassignment to the *a*-stem class. It is not impossible that the incentive for the choice of the suffix vowel used in different contexts was analogy to the vowel of the noun. Later, only the *i*-stem, with 'regularly' ablauting forms, remained in use. The reasons could be that its ablaut corresponded to the ablaut of its counterpart *tepu-*. Also, the oblique case endings of a consonant stem or *a*-stem would match those of an *i*-stem adjective (gen. sg. and dat./loc.pl. *\*mekkaš*, gen.pl. *\*mekkan* etc.).

The form *[m]e-e-ek* attested in the OS discussed by Watkins (1982: 7-8) may be either an adverb or a noun in nom./acc.sg.n.< *\*meǵh<sub>2</sub>*. It is the only assured example of a root form; see Watkins for hypotheses about its origin.

What remains unprovable is the relation of all forms that do not contain *-i-* to the *i*-stem form, though its inflection is perfectly regular with regard to other Hittite *i*-stem adjectives, which show ablaut in the suffix (GrHL: 94).

Kloekhorst (EDHIL: 572) lists the adjective as *mekk-*, *mekki-/mekkai-*, together with its Anatolian cognates, CLuv. *maya-* (adj.) 'much, many (??)' (nom.sg.c. *ma-ya-aš* (?), gen.adj. *ma-ya-aš-ša/i-* (?)). However, these cognates belong to *mai-* 'to grow (large)' < *\*moh<sub>2</sub>y-o-*. Among the IE cognates are Gr. *μέγα-*, Skt. *máhi*, Arm. *mec*, Lat. *magnus*, Goth. *mikils* 'big'. PIE *\*meǵh<sub>2</sub>-*, *\*meǵh<sub>2</sub>-(e)i-*. (For detailed discussion of etymological suggestions, see HEG 2: 183-5.)

If derived from PIE *\*meǵh<sub>2</sub>-*, one must account for the semantic shift from 'big, large' to 'much, many'. Because of this discrepancy, the connection has previously been rejected (see HEG 2: 184 for the discussion of Benveniste's view) See now Widmer (2004: 138-9) on the PIE abstract noun *\*móǵ-h<sub>2</sub> ~ \*méǵ-h<sub>2</sub>-* '(large) size, amount' (with generalization of *o*-grade in TB *māka*, TA *māk*) and derived proterokinetic *\*méǵ-h<sub>2</sub>-* 'great, large'. According to Hoffner/Melchert (GrHL: §17.9, 272-3), this can be explained by the syntactic parallel with *tēpu*<sup>47</sup> in the Laws. There we also find the example in KBo 6.2 ii 46 where the adjective follows the head noun as a neuter substantive and which can be translated 'buys a field, a large amount' (Hoffner (1997: 56) translates 'buys the largest part'). Gradually, *m*. has taken on the syntax of an "ordinary" adjective.

As for the possible source of the *i*-ending, Melchert (p.c.) suggests that after the loss of *\*h<sub>2</sub>* in *\*meǵh<sub>2</sub>-s* (the loss between a stop and tautosyllabic *\*s*), one might expect *-i-* as the result of the anaptyxis after an accented syllable, as in *akkiš*; hence *\*méǵh<sub>2</sub>s* > *\*méǵs* > *\*méks* > *\*mēkkiš*.

CHD L-N: 245; EDHIL: 572; GrHL: 94, 105; HED 6: 119; HEG 2: 181; Watkins 1982a: 259, 1982b: 7

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<sup>47</sup> *tēpu-* 'little, few' < PIE *\*d<sup>h</sup>eb<sup>h</sup>-*.

*palḫi-* 'wide, broad'

nom.sg.com.	nom.pl.c.	nom./acc.pl.	uncertain
<i>pal-ḫi-iš</i>	<i>pa[l]-ḫa-a-e-eš, pal-ḫa-a-eš, pal-ḫa-e-eš, pal-ḫi-e-eš</i>	<i>pal-ḫi</i>	<i>pal-ḫi-iš</i> <sup>48</sup>
KUB 4.4. Rs. 13 (NH)	KBo 17.22 iii 7' (OS), KUB 57.39 Vs.? 7 (MH); KUB 28.8 Rs. 4b (OH?/NH); KUB 28.8 RS. 6b (OH?/NH)	KUB 42.78 ii? 22' (NH)	KUB 28.8 Rs. 5b (OH/NS)

**Stem formation and inflection:** *p.* is an ablauting adjective attested only in the strong cases. Its ablaut is obvious in the nom.pl.c.

**Discussion:** *p.* is attested from OS texts onwards as an ablauting adjective. For discussion of its etymology and morphological relations, see under <sup>DUG</sup>*palḫi-* c. 'wide, broad vessel'. The substantive shows both the *i-* and the *a-*stem forms. Unfortunately, the adjective is attested only in the nom. or nom./acc, and in the nom.pl.c. only with the ending *-eš*. KUB 28.8, where it is found, is considered OH?/NS by CHD P: 65. Two lines above we find the form *pal-ḫa-e-eš*. One could hypothesize that for the scribe, one of the forms was 'natural' and the other historicizing, expected or properly copied.

*p.* participates in the suffix substitution of the Caland system, with derivatives *palḫanu-* 'to broaden', *palḫašti-*, *palḫatar*, *palḫeššar*, all 'width' (see also Rau 2009: 72).

See Kloekhorst (EDHIL: 620) for discussing the probability of the use of the full grade *\*pleh<sub>2</sub>-* and for ruling out (as also Melchert (1984a: 45)) the form *\*pelh<sub>2</sub>i-* first based on the fact that it would have yielded *\*\*palli-*, and second due to the attestation of reflexes of the regular full grade *\*pleh<sub>2</sub>-* in Lat. *plānus* or Lith. *plóti*. For the form *palahša-* (a garment) (EDHIL: 619), he analyses /plaHsa-/ < *\*pleh<sub>2</sub>-so-* or *\*ploh<sub>2</sub>-so-*.

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<sup>48</sup> This form is found in a fragmentary context.

Besides the famous IE cognates, there are also several uncertain Anatolian cognates, for which see Kloekhorst (EDHIL: 620).

Pre-Hittite *\*p<sub>h</sub>h<sub>2</sub>-i*.

CHD P: 65; EDHIL: 620; GrHL: 96; HED 8: 64; HEG 2: 393

*parkui-* 'clean, pure, free of something'

nom.sg.	acc.sg.	nom./acc.sg.	gen.sg.	dat./loc.sg.	abl.
<i>pár-ku-iš; pá-ku-i-š(a-aš); pá-ku-i-iš; pá-ku-eš; pá-ku-u-i[š]</i>	<i>pár-ku-in; [pár-ku-i-in<sup>1</sup>]; pá-ku-un</i>	<i>pár-ku-i; pá-ku-ú-i; pá-ku-u-i</i>	<i>pár-ku-wa-ya-aš; pá-ku-wa-aš</i>	<i>pár-ku-wa-i; (pár-ku-wa-ya?)</i>	<i>[pá]r-ku-wa-ya-az; pá-ku-wa-ya-za</i>
HKM 46.24 (MH/MS); KBo 4.6 Rs. 13 (NH); KUB 31.74 ii 10 (OH/NS); KUB 35.92 RS. 19 (NS)	KUB 36.110 Rs. 7 (OS); KUB 35.29 i 15; KUB 24.7 ii 10	KUB 17.10 ii 25 (OH/MS); KUB 46.23 Rs. 20 (NS); KUB 24.5 Vs. 29 (NH)	KBo 10.20 ii 4 (NS); KUB 10.11 i 11 (NS)	KUB 15.34 ii 15 (MH/MS); KUB 40.1 Rs. 22	KUB 9.6 i 2 (NS); KUB 22.35 iii 14 (NH)

instr.	nom.pl.	nom./acc.pl.	dat./loc.pl.
<i>pár-ku-wa-a-it</i>	<i>pár-ku-wa-e-eš; pá-ku-wa-e-&lt;eš&gt;; pá-ku-wa-a-eš; [pá]r-ku-wa-a-iš; pá-ku-wa-iš; pá-ku-i-e-eš; pá-ku-e-eš; pá-ku-u-e-eš</i>	<i>pár-ku-i; pá-ku-e; pá-ku-wa-e; pá-ku-wa-ya; pá-ku-wa; pá-ku-e</i>	<i>pár-ku-wa-ya-aš; pá-ku-ya-aš; pá-ku-i-ya-aš</i>
KBo 21.8 ii 4 (MH/MS)	KUB 29.7 Rs. 24 (MH/MS); KUB 13.17 Rs. 15 (pre-NH/NS); KUB 30.31 i 17; KUB 17.16 iv 3 (NS); KUB 13.4 i 14 (MH/NS); KUB 30.31 i 43 (NH); KUB 29.7 Rs. 48	KUB 17.21 i 2 (MH/MS); KUB 43.58 ii 23 (MH/MS); KUB 29.8 i 43 (MH/MS); KBo (MH/MS); KUB 13.245 i 4 (OH/NS); KBo 20.111 13 (NH); KUB 43.58 ii 23	KUB 15.34 ii 38 (MH/MS); KUB 5.6 ii 61 (NH); KUB 5.6 iii 4 (NH)

	(MH/MS); KUB 41.22 iii 2 (NH)	(MH/MS)	
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**Stem formation and inflection:** *p.* is an ablauting *i*-stem adjective, with one attested acc.sg. in *-un*. It is often spelled with a long vowel in the stem.

**Discussion:** The unusual acc.sg. in *-un* is considered a contamination from *parku-* 'high' by Tischler (HEG 2: 476), probably after *parganuši* in the next line (see CHD P: 358). For the stem vowel deletion in derivatives, see GrHL: 51.

As stressed by Puhvel (HED 8: 146), older etymologies suggested enlargement of a *u*-stem by *-i-* suffix, but one must accept the labiovelar *k<sup>w</sup>* instead of *ku*. Kloekhorst (EDHIL: 639) supports this view by stating that there is no root form attested without *-u-*.

*p.* became a base for both verbal and nominal derivations (for the list of derivatives, see HEG 2: 479 or CHD P: 166). In other Anatolian languages, we find cognates in Pal. *parkui-* 'to purify', CLuv *parkuwa(i)-* 'to cleanse, to purify' (Tischler HEG 2: 477, Kloekhorst EDHIL: 638). As to cognates in other IE languages, Kloekhorst suggests a connection to OHG *furben* 'to clean', MHG *vürben* 'to clean', going back to a PIE adj. *\*prk<sup>w</sup>-(e)i-* and verb pres. *\*prk<sup>w</sup>-ye/o-*.

Originally, LIV<sup>2</sup> (2000: 492) hesitatingly connected *furben* to PIE *\*prep-* 'fall in the eye, shine'. However, in the Addenda and Corrigenda, it follows Kloekhorst (EDHIL: 638) with a question mark, connecting it to PIE *?\*perk<sup>w</sup>-* 'to clean' > *\*prk<sup>w</sup>-yé-*, stating that while the root is attested only in Germanic and Anatolian, most of these forms could be denominative to the adjective *parkui-* 'clean'. Kloekhorst's etymology is also accepted by Sasseville and Opfermann (eDiAna #565). Although they cite Ringe (2006: 112) for the uncertainty about the development of *\*k<sup>w</sup>* in Germanic, which might in theory cast doubt on Kloekhorst's etymology, there still remains the semantic match and the deradical *\*-ye/o-* present attested in Hittite.

An alternative is to reconstruct for PIE an adjective attested only in Hittite (not even in other Anatolian languages). What supports its antiquity is the semantics:

'pure, clean' etc. are notions of an expectedly old age. However, what needs to be said is that the semantics and stem ablaut can serve as an aid rather than as a guarantee, given that all the cognates are verbs. While the common Hittite-Germanic isogloss of the verbal present stem seems certain (as stated in eDiana #565), the projection of the adjective back to PIE is indeterminate.

Rieken (2005: 52-55) explains the final *-u-i-* of *parkui-* as the outcome of a Caland suffix, where the *\*-i-* was attached directly to the root, replacing *\*-o-*. She reckons that the Hittite ablauting *\*-i-/-ey-* adjectives in their formation followed that of the *u*-stems (ibid. 54), which, as she explains, correlates with the low number of deradical adjectives. Thus e.g. *\*meĝ-h<sub>2</sub>-o* > *\*meĝ-h<sub>2</sub>-i* > Hitt. *mekki-*. As she observes very precisely (ibid. 56), for none of the *i*-adjectives supposedly belonging to the Caland system is there attested the underlying *i*-abstract (the two, possibly older, stems attested alongside the *i*-stem adjectives are also adjectives, *ĥatuka-* and *mekk(a)-*).

CHD P: 163; EDHIL: 637; GrHL; HED 8: 133; HEG 2: 475; HS 118.50-51; Rieken (2005: 52-55); Sasseville and Opfermann eDiAna #565



*šalli-* 'great; adult, large, important, vast'

nom.sg.	acc.sg	nom./acc.s g.n.	gen.sg.	all.	dat./loc.sg	abl.
<i>šal-li-iš; ša-al-li-iš; šal-le-eš</i>	<i>šal-li-in</i>	<i>šal-li</i>	<i>šal-la-ya-aš; šal-l[a-y]a-ša; šal-la-aš</i>	<i>šal-la</i>	<i>šal-la-a-i; šal-la-i; šal-li</i>	<i>šal-la-ya-a[z]</i>
KUB 29.1 ii 23 (OH/NS); KBo 3.7 iv 17 (OH/NS); KUB 24.3 i 32 (NH)	KUB 45.20 ii 10 (NH)	KUB 23.11 iii 33 (MH/NS)	KUB 46.39 iii 22 (NH); KBo 14.89 iv 3+KBo 20.112 Rs 2 (MH/MS); KBo 3.1 ii 31 (OH/NS)	KBo 24.21 +.e 2 (MH?/MS)	KUB 31.100 Rs. 10 (MH); KBo 3.1 ii 49 (OH/NS); KBo 4.10 Vs. 33 (NH)	KUB 31.80 Vs. 2

nom.pl.	acc.pl.	nom./acc.pl.n.	gen.pl.	dat./loc.pl.
<i>šal-la-e-eš; šal-le-eš; šal-la-uš</i>	<i>šal-la-a-i-uš; šal-la-mu-u[š];</i>	<i>[ša]-la-la (?); ša-al-la-ya; šal-la-i</i>	<i>šal-la-ya-aš</i>	<i>šal-la-ya-aš; šal-li-ya-aš</i>
KBo 1.30 Vs. 10 (NS); MsK 74.57 9; KUB 8.57 7 (NS)	KUB 57.73 iv 5; KBo 27.11 Vs. 2	KUB 1.16 ii 66 (OH/NS); KUB 1.16 ii 72 (OH/NS); KBo 1.42 iv 24 (NH)	KUB 33.93 iv 10	IBoT 1.12 i 5; KUB 30.31 iv 44 (NH)

**Stem formation and inflection:** *š.* is an *i*-stem adjective with stem ablaut found in the weak cases of singular and plural.

**Discussion:** *š.* is attested from OH, both as an adjective and a noun, in the sense 'head, chief, elder'. It is also found as a Sumerogram GAL or Akkadogram *RABŪ*.

Its derivatives are based on the Caland system with substitution of the *i*-suffix: abstract *šallātar* 'greatness', inchoative *šallēšš-* 'to become large', factitive *šallanu-* 'to raise; to magnify'. There are examples of *i*-stems where the *-i-* is preserved, followed by *-ātar*, such as *nakkiyatar* and *parkuyatar*, but forms containing *-i-* are not found for *š*. (for further examples, see GrHL: 51, 178).

Per Oettinger's rule (1979: 549), Hittite must reflect an adjective with accented root *o*-grade (the assimilation rule implies that for PA one can expect  $*VRHV(') > VRḫV$ , as opposed to assimilation after an accented vowel,  $*V'RHV > VRRV$ ). Thus  $*swolh_2-ó-$  could have yielded CLuv. *šalḫanti-* 'growth, greatness', while in Hittite the accentuation must have been different (see Rieken (2010: 659) for reconstructing  $*/swolH-o-/$  for Luvian  $/salxa-/$ ).

As for Luvian, CLuv. shows evidence for a  $*šalḫa-$  'growth' (or sim.), formally matching the HLuv. word, from which was made a possessive adjective  $*šalḫant-$  'having growth' and its *i*-abstract *šalḫanti-*, effectively equivalent to the original base. There are also synonymous variants *šalḫianti-* and *šalḫitti-*. The suffix *-tti-* suggests that the base  $*šalḫi-$  is an endocentric *i*-stem derivative that turned into an adjective 'grown' (compare Nussbaum 2017). *šalḫianti-* is likely to be based on this base + suffix  $*-e/ont-$  + abstract noun suffix *-i-*.

Puhvel (HED 10: 80) derives *šalli-* from *šal(l)-* 'swell, expand, extend', found in several Hittite derivatives (*šallai-* 'ripen, melt, dissolve', *šal(l)iya-* 'extend' etc.), and connects *šall-* to PIE  $*s(w)el(H)-$ , ON *svella*, OE *swellan* 'swell' but also compares the development seen in Hitt *šuwaru-* 'heavy', which cannot be reconciled with  $*swe/ol-$  to *šal-*. While his explanation offers a plausible etymology, he does not account for the phonological development of loss of  $/w/$  before  $/e/$ . The disappearance of  $/w/$  between alveolars and  $*/o/$ , already described by Čop (1956: 25-27), brings about *šalli/a-* beside the zero grade form *šulle(šš)-* 'make yourself big, be arrogant' <  $*swelH-$  'to swell'.

Because of the phonological difference between Hittite (loss of  $*w$  and resulting *-ll-*) and Luvian (loss of  $*w$  and resulting  $*lh$ ), for the Hittite we must suppose a stem  $*swólh_2-i-$  'the great one' <  $*swélh_2o-$  'great' (see Nussbaum 2017: 232), which could in turn be readjectivized, hence again 'great, large' (the process is

described in Nussbaum 2014a). However, this root-accented form is hard to explain unless we set up a modified acrostatic *\*swólh<sub>2</sub>i-*, which does not have support elsewhere.

To conclude, one might look to some of the Anatolian primary *u*-stem adjectives that seem to require *o*-grade root (e.g., *aru-*, Kloekhorst EDHIL: 212 or *dampu-*). Such a formation could then also be possible for an *i*-stem (Nussbaum 2017: 232).

CHD S: 92; EDHIL: 709; HEG S: 767; HED 10: 70; Nussbaum (2017: 219–252); Oettinger 1979: 549)

*šuppi-* 'pure (ritually), sacred, holy; taboo'

nom.sg.	acc.sg.	nom./acc.sg.	dat./loc.sg.	instr.	abl.
<i>šu-up-pí- iš(/eš), šu-up- pí-iš; šu-up- iš; šu-pí-iš</i>	<i>šu-up-pí-in</i>	<i>šu-up-pí; šu- up-pa</i> <sup>49</sup>	<i>šu-up-pa-i, šu-up-pa- a-i, šu-up- pí, šu-up- pa</i>	<i>šu-up- pí-it</i>	<i>šu-up-pa- az, šu-up- pa-za, šu- up-pa-ya- az, šu-up- pa-ya-za</i>
KUB 60.41 Vs. 7 (OS); KBo 9.137 ii 20 (MS); KBo 5.2 iv 64 (MH/NS); VS 28.15 ii 15 (NS)	KBo 21.85 iv 22 (OH/MS)	KBo 17.1 i 14 (OS); KUB 27.29 iii 5 (MH/NS)	KBo 25.94 6 (OS); KUB 57.63 i 5 (NS); KBo 5.2 ii 59 (MH/NS); KUB 30.42 iv 22	VBoT 126 ii? 1 (NS)	KBo 21.22 22 (OH/MS); KUB 10.52 vi 14 (NS); KBo 21.22 23 (OH/NS); KBo 13.122 2 (OH/NS)

nom.pl.	acc.pl.	nom./acc.pl.	gen.pl.	dat./loc.pl.
<i>šu-up-pa-e-eš, šu- up-pé-eš; šu-up-pa- eš; šu-up-pa-a-eš</i>	<i>šu-up-pa- uš</i>	<i>šu-up-pa, šu-up-pí</i>	<i>šu-up-pa- ya-aš</i>	<i>šu-up-pa-aš, šu-up-pa-ya-aš, [šu-up-]pí-ya- aš</i>
KUB 17.21 ii 10 (MS); KUB 25.20 iv? 3 + KUB 46.23 Rs. 7 (NS); KUB 11.34 v 47 (pre-	KBo 30.61 Rs.? 3 (MH/MS)	ABoT 1.35 Vs. 5 (OS)	KBo 12.70 Vs. RCol. 10 (NH)	KBo 17.74 iv 24 (OH/MS); KBo 25.94 6 (OS); KBo 3.16 iii 9

<sup>49</sup> CHD S: 618 comments that the final *-pa* might possibly be emended to *-pí*.

NH/MS?); KUB				
33.62 ii 2 (OH/MS)				

**Stem formation and inflection:** *š.* is an ablauting *i*-stem adjective of unknown derivation. It also shows ablaut in its collective plural derivative <sup>UZU</sup>*šuppa-* 'sacred meat'.

**Discussion:** As opposed to *parkui-*, *š.* is used figuratively in the meaning 'pure, holy, sacred'. It is an attribute of deities, humans, body parts (eyes, hair, liver), objects (bread, containers, trees etc.), buildings and nature; see CHD S: 619 for details. *š.* is used also adverbially (for examples see Tischler HEG S: 1189). The attestation of plene *-u-* in its derivative *Šu-u-up-pí-lu-li-u-ma* (KUB 19.10 iv 2) supports the reading /*sopi-*/ (Kloekhorst EDHIL: 790). With two exceptions, it is attested with geminate *-pp-*.

All derivatives of *š.* retain the stem vowel *i*: *šuppiēššar-* 'purity', *šuppiyahḫ-* 'to purify, sacrilize', *šuppi(e)šarra-* 'priestess', *šuppiyant-* 'purified, sacred', *šuppiyatar-* n. 'purity', *šuppiyawar* 'cleansing'. For the verb *šuppiēšš-*, the status of the *-i-* is uncertain (unlike in *šuppiēššar-* 'purity', dat./loc. *šu-up-pí-ya-aš-ni*, KUB 36.83 i 5) and so the 3sg.pres. *šu-up-pí-eš-zi* (KUB 29.4 iv 40) can equally well be transcribed *šuppešzi* and *šuppiešzi*. This fact does not correspond with other (ablauting) primary *i*-stem adjectives: see *šallatar* to *šalli-*, *palḫešš-* to *palḫi-* etc. Also, it does not resemble that of *nakkī-* 'heavy, burdensome, weighty', which also retains the stem *-i-* in its derivatives (*nakkiatar*, *nakkiahḫ-* etc.); *nakkī-* is a non-ablauting adjective ending in a long vowel, and so the retention of *-i-* in its derivatives comes as no surprise. We see an exceptional behaviour, where the stem *-i-* of *š.* is systematically not subject to derivational substitution (GrHL: 51) but rather follows the pattern of suffix addition, which may be an innovation with regard to PIE. Also of an interest is the fact that there is no factitive *\*\*šupp(a)nu-*, a formation plays an outstanding role among property adjectives (Watkins 1971: 51) and above all in the Caland system (Jasanoff 1978: 122). This could possibly be another hint to its so far uncertain etymology.

Kloekhorst (EDHIL: 789) supposes that *š.* most probably continues *\*sup-i-*, but there are neither Anatolian nor other IE cognates. A number of etymological proposals were suggested (HEG S: 1191-93), among them Watkins' comparison with Umbrian (Watkins, *JIES* 1 (1973): 394), refuted by Weiss in his work on the Iguvine Tables (2010).

The latest proposal has been provided by Puhvel (2021: 162), who understands *š.* as derived from the stem *šupp-/šap(p)-/isp-* and derives it ultimately from *\*spi-* and the PA verb *\*šuppiya-*. The derivatives with *-i-* (*šuppiyant-* etc.) are in his opinion not denominative to *šuppi-* but rather deverbative. While it is logical to try to explain the unusual *-i-* in the derivatives as suggesting an enlarged stem, there are two problems: firstly, the alleged verb is unattested; secondly, this would leave us without any derivatives to the adjective, a fact which would single out *š.* from all other adjectives, which freely form derivatives. The plene spelling would also be hard to explain for an anaptyctic vowel.

To conclude, there is no proof that *šuppi-* is as such of PIE origin.

CHD S: 618; EDHIL: 789; HED 11: 162; HEG S: 1185

*daluki-* 'long'

nom.sg.	acc.sg.	nom./acc.sg.	gen.sg.	dat./loc.sg.	abl.
GÍD.DA- <i>aš</i>	<i>ta-lu-kán</i> (NH), <i>ta-lu-ga-an</i>	<i>ta-lu-ga</i>	<i>da-lu-ga-aš</i>	<i>da-lu-ga-a-i</i>	<i>da-lu-ga-ya-az</i>
KUB 43.8 ii 3a (OH/NS)	KUB 59.71 i 5 (NS); HEG T: 62	HEG T: 62	KUB 18.33 2 (NS)	KBo 10.24 v 9 (NS)	KUB 15.17 i 5 (NH))

nom.pl.	acc.pl.	gen.pl.	dat./loc.pl.
<i>ta-lu-ga-e-eš</i>	<i>ta-lu-ga-ú-uš</i> ; <i>da-lu-ga-uš</i> ; <i>ta-lu-ga-uš</i> ; <i>da-lu-ga-e-eš</i>	<i>ta-lu-ga-aš</i>	<i>ta-lu-ga-aš</i> ; <i>da-lu-ga-u-wa-aš</i>
KBo 17.22 Rs. iii 7' (OS)	KBo 17.22 Rs. iii 6' (OS); KBo 15.10+ iii 35' (NH); KBo 17.61 Rs. 4' (MH/MS); KUB 21.27 iii 38' (NH)	EDHIL: 819 (OS)	KBo 17.22 Rs. iii 8'(OS); KUB 27.67 ii 40 (MH/NS)

**Stem formation and inflection:** an *i*-stem is seen in nom.pl. and acc.pl. Per Kloekhorst (EDHIL: 820), it is (indirectly) seen in dat./loc.pl. *talugaš* < \**talugayaš* with loss of intervocalic *y*. While such a loss is confirmed for prehistoric *-aya-* sequences (GrHL: 94 with ref.), this form neither confirms nor rules out an *i*-stem. One of the attestations (dat./loc.pl) points to a *u*-stem; however, as it is a single attestation with no support, a genuine *u*-stem is very unlikely.

**Discussion:** The OS attestations point to an *i*-stem, while the latter point to a (secondary) *a*-stem. From the latter are derived the adverb *talūga* 'long', verbal forms *daluknu-* 'to lengthen', *dalukē/išš-* 'to become long', and nouns *dalugašti-* 'length' and *daluknul-* 'lengthening'. A connection to *zalukēšš-* 'to take long' and

*zalu-knu-* 'to postpone, to delay' is also likely (Kloekhorst (EDHIL: 1027)). Kloekhorst states that the forms in *-nu-*, *-ēšš-* and *-ašti-* are derived from a consonantal stem, but such a conclusion cannot be supported. As substitution of the final stem vowel was a common derivational process in prehistoric stages of IE languages, of which the suffixes *-nu-* and *-ēšš-* are core examples, one cannot draw conclusions about the derivational stem (cf. *arawēšš-* from *arawa-*, *parkēšš-* from *parku*, *šallēšš-* from *šalli-* etc.).

The exact etymology of this word, abundantly attested in several IE branches, remains uncertain. Kloekhorst sees its origin in PIE *\*dólug<sup>h</sup>-i-*, with IE cognates Skt. *dīrghá-*, GAv. *darāga-*, Czech *dlouhý*, Lith. *ilgas*, Gr. *δολιχός*, Goth. *laggs*, ON *langr*, Lat. *longus* 'long'. But as he states, 'the reconstruction of one proto-form is quite difficult' (for discussion of the different reconstructed outcomes, see EDHIL: 820).

The PIE root must have been *\*delh<sub>1</sub>- / dl̥h<sub>1</sub>-*, as seen in Slavic, with loss of the laryngeal in some of the IE branches (per Rau 2009: 71 and others). For the explanation of the unexpected *-i-* in the Greek form *δολιχός*, see de Lamberterie (2002: 118), where it is derived from the zero grade *dl̥h<sub>1</sub>-g<sup>h</sup>-ó-* with supposed vocalization of the laryngeal *\*h<sub>1</sub> > /i/*. This view is presently unacceptable; the laryngeal would have been lost by the so-called "Saussure effect." Pinault (2017: 651) suggests the existence of parallel formations *\*dl̥h<sub>1</sub>-g<sup>h</sup>ó* and *\*dolh<sub>1</sub>-i-g<sup>h</sup>ó*, *\*dolh<sub>1</sub>-u-g<sup>h</sup>i-* / *\*dl̥h<sub>1</sub>-u-g<sup>h</sup>i-*, which he reconstructs for Hittite. Per Rau (2009: 132, n. 20), the difference between *\*-i-* and *\*-u-* follows from the influence of root-based *i-* and *u-* stem abstracts. Compare also (per Pinault 2017: 652) Neri 2007: 53–54 n. 149 and Balles 2009: 23–24.

The preform *\*dlong<sup>h</sup>-* found in other IE languages may have actually contained a laryngeal in *\*dl̥h<sub>1</sub>-on-g<sup>h</sup>-*. However, its fate in Latin and Germanic is uncertain. de Vaan (2008: 348) derives Latin *longus* from PIE *\*dlong<sup>h</sup>-o*, Plt. *\*(d)longo-*. Weiss (2020: 165), who derives *longus* from PIE *\*dlongos* (that is, without laryngeal), notes that the *-o-* of *longus* has no good explanation and (following Sommer 1914: 64) considers the possibility that the initial *l-* may have prevented the vowel raising to the expected *u* (Weiss 2020: 139, note 18). For Germanic, *\*dlong<sup>h</sup>-* is an



acceptable preform (though Kroonen (2013: 327) posits a laryngeal in *\*dloh<sub>l</sub>-g<sup>h</sup>-o-*).

Hittite is the only branch where the adjective is an *i*-stem. As suggested by Melchert (p.c.), *ḫatugi/a-* and *\*danduki-* likely served as its models.

CEG 7: 118; EDHIL: 819; GrHL: 94; HEG T: 61

*dankui-* 'dark, black'

nom. sg.	acc. sg.	nom./acc.sg.	gen.sg.	dat./loc. sg. <sup>50</sup>
<i>da-an-ku-iš, ta-an-ku-iš, da-an-ku-i-iš, da-an-ku-ya-aš</i>	<i>da-an-ku-in; da-a]n-ku-ú-i-in</i>	<i>da-an-ku-i</i>	<i>da-an-ku-wa-ya-<sup>l</sup>ša-at<sup>51</sup></i>	<i>da-an-ku-wa-i, ta-an-ku-wa-i, da-an-ku-i; da-an-ku-wa-a-i</i>
KUB 43.23 Rs. 13' (OH/MS); ?; KBo 4.2 i 54 (MH/MS); KUB 6.46 iii 48 (NH)	KUB 41.1 i 17 (MH/NS); KUB 35.145 Vo. 8 (MH/NS)	KUB 17.10 Vs. ii 34' (OH/MS)	KUB 33.8. iii 6' (OH/NS)	KUB 33.66 ii 5 (OH/MS); KBo 32.13 ii 10 (MH/MS); KUB 17.10 iv 15 (OH/NS); KUB 33.8 iii 7' (OH/NS)

abl.	instr.	nom. pl.	nom./acc.pl.	dat./loc. pl.
<i>da-an-ku-wa-ya-az, da-an-ku-wa-ya-za, da-an-ku-ya-az, da-an-ku-wa-az</i>	<i>da-an-ku-it</i>	<i>da-an-ku-wa-e-eš; ta-an-ku-wa-e-eš, ta-an-ku-e-eš</i>	<i>ta-an-ku-wa-ya, da-an-ku-wa, da-an-ku-wa-i, da-an-ku-wa-ya</i>	<i>ta-an-ku-wa-aš, da-an-ku-wa-ya-aš</i>
KBo 5.3 iv 40 (MH/NS); KBo 6.28 Vs 41 (NH); KUB 21.1 iv 36 (NH);	?	KUB 9.32 Rs. 7 (?/NS); HT 1 iii 8 (?/NS); KUB 9.31 iii	KBo 3.16 iii 6 (OH/NS); KUB 12.58 ii 24 (MH/NS); KUB	KBo 25.123 Vs. 5' <sup>52</sup> (OS); KBo

<sup>50</sup> For the OH/NS attestations, see hethiter.net/: CTH 324.1 (INTR 2012-05-10); they stem from different tablets featuring the Telipinu Myth (CTH 324.1)

<sup>51</sup> See hethiter.net/: CTH 324.7 (TX 2009-08-26, TRde 2009-08-26), note 5, and CHD P: 25 for translation, which also transcribes *dankuwayaš=at*.

<sup>52</sup> StBot 25: 206. Broken context, case uncertain. See also CHD P: 68.

KUB 19.49 iv 38 (NH)		19 (?/NS)	17.8 iv 18 (pre- NH/NS); KBo 3.18 iii 10 (OH/NS)	40.333 6
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**Stem formation and inflection:** Paradigmatic forms of *d.* show inflections of both a (non-ablauting) *i*-stem and an *aya*-stem. There are a few plene spellings of nom.sg. *da-an-ku-i-iš*, but their attestations are late (that is, not reflecting PIE \*-*ih*<sub>2</sub>).

**Discussion:** Sumerogram GE<sub>6</sub>. The inflection of *d.* shows a mix of deletion of the intervocalic yod in the oblique cases, renewal with *-aya-* and inflection as a non-ablauting stem. It is difficult to establish the relative chronology of the latter two; *d.* is often used in the phrase 'dark earth', especially in the oblique cases, where the older variant could persist.

Starke (StBot 31: 76) explains *dankui-* (together with *parkui-* 'pure' and *warhūi-* 'rough') as original *u*-stems with a fossilized *i*-mutation suffix, a view also followed by Rieken (1999: 258). However, there are no attestations for the *u*-stem, neither self-standing nor in derivatives. The derivatives (*dankuešš-*, *dankunu-* etc.) show the replacement of the final vowel by another suffix, which is regular within the framework of the PIE Caland system. (The derivative listed as *dankutar*, KBo 47.4 ii 4 (HEG T: 111; EDHIL: 829) is likely an error for expected *dankuwatar*.)

Kloekhorst (EDHIL: 639) argues for the labiovelar in his entry for *parkui-* on the basis that one never finds *\*\*parkaw-* or a *u*-less *\*\*park-*. One would expect the *-u-* to be replaced by another suffix in case of derivation. However, I think this can serve only as a hint, not as conclusive evidence.

Theoretically, there could have been a historical *u*-stem which did not leave any derivatives and which was enlarged by *-i-*. This reasoning offers the same line of logic as does reconstructing the *\*-i-* in *\*d<sup>h</sup>ng<sup>w</sup>-(e)i-*: it remains deep in prehistory, without sufficient support for a true claim. In my opinion, it is the cognates that

provide more persuasive evidence for the labiovelar; in particular, the evidence from Germanic points to \*-g<sup>w</sup>-.

*d.* is not assured in other Anatolian languages. The one complete assured attestation of CLuv. *dakkui-* (*da-ak-ku-ú-i-iš* in KUB 25.39 iv 4) cannot be safely translated, and so its understanding as 'dark' remains provisional. For other uncertain suggestions, see Tischler (HEG T: 108).

Kloekhorst (EDHIL: 830) derives *d.* from PIE \*d<sup>h</sup>ŋg<sup>w</sup>-(e)i- with Germanic cognates ON *døkk* 'gloomy, dark of colour', OSax. *dunkar*, OHG *tunkal*, OFr. *diunk(er)* 'dark'. Here, just as in the case of *daluki-* 'long', the reflexes differ in the stem vowel, hence \*d<sup>h</sup>ong<sup>w</sup>o-, \*d<sup>h</sup>eng<sup>w</sup>o-, \*d<sup>h</sup>ŋg<sup>w</sup>lo-, \*d<sup>h</sup>ŋg<sup>w</sup>ro-. What can be said with certainty is that there is no support for reconstructing the final -i- of *d.* for PIE.

EDHIL: 829; HEG T: 107

*warḫui-* 'rough, shaggy; unshaven; covered with trees'

nom.sg.	acc.sg.	nom./acc.sg.	gen.sg.
<i>wa-ar-ḫu-iš</i>	<i>wa-ar-ḫu-in</i>	<i>wa-ar-ḫu-i; wa-ar-ḫu-u-i</i>	<i>wa-ar-ḫu-wa-ya-aš</i>
KBo 6.26 iii 13	KBo 10.23 i 10 (OH/NS)	KUB 30.32 i 9 (MS?); KUB 9.25 + KUB 27.67 iii 68 (MH/NS)	KUB 9.31 i 6

abl.	nom.pl.	acc.pl.	nom./acc.pl.
<i>wa-ar-ḫu-wa-ya-az</i>	<i>wa-ar-ḫu-wa-eš;</i> <i>wa-ar-ḫu-u-iš</i>	<i>wa-ar-ḫu-wa-uš</i>	<i>wa-ar-ḫu-wa</i>
KUB 41.4 iii 9 (NH)	KBo 2.12 ii 3 (NH); KUB 19.37 ii 6 (NH)	KUB 32.63 8 (NH)	KUB 20.4 i 9 (OH/NS)

**Stem formation and inflection:** An ablauting *i*-stem adjective of an unknown morphological origin; attested in the plural only in the strong cases.

**Discussion:** *w.* is attested from MH onwards, and also in copies of OH texts. As in the case of *dankui-* and *parkui-*, *w.* also has been understood as an enlarged *u*-stem. Its derivatives *warḫu(wa)nu-* 'to plant densely', *warḫuēšš-* '?' and *warḫuēššar* 'brushwood' all show substitution of the final *-i-* by noun- and verb-forming suffixes. There are no traces of a separate *u*-stem. Unfortunately, there are no certain cognates which could aid the reconstruction of the possible PIE preform. Oettinger (1979: 549) reconstructs *\*wṛh<sub>2</sub>-u-ih<sub>2</sub>*, citing the parallel of Lat. *suāuis* 'sweet'. Oettinger (ibid.) suggested connecting *w.* with Gk. εἶπος 'fleece' < *\*werw-os*. However, presently there is no good explanation for the Greek treatment of the laryngeal found in Hittite. Per Oettinger's assimilation rule (1979: 549), *\*V'RHV > VRRV*, but *\*VRHV(') > VRḫV*; thus in order for the laryngeal to be preserved, one must posit an original *w(V)rḫu-* with the accent on the suffix.

Kloekhorst (EDHIL: 961) view a PIE root with the cluster *-rHu-* as unparalleled, and so we must accept the root *\*werh<sub>2/3</sub>-* with a *-u*-extension.

Both possibilities, that of the root ending in a labiovelar *h<sup>w</sup>* and of a *u*-stem leading to [x<sup>w</sup>],<sup>53</sup> are acceptable given that no conclusive semantic connection has been established. So a PIE root *\*w<sup>h</sup>r<sub>2/3</sub><sup>w</sup>-* can be reconstructed; but because there are no assured cognates outside Hittite and no parallels in other Anatolian languages (Tischler HEG 4: 320), the reconstruction remains merely an extrapolation of the Hittite facts.

EDHIL: 960; HEG 4: 318

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<sup>53</sup> We do find cases of *u*-extensions in some Anatolian words (e.g. Hitt. *tarhw-zi* < *\*terh<sub>2u</sub>-/w-* or CLuv. *malhu-/malwa-* 'to crush'). To claim a *u*-extension, evidence from another language would be helpful.

2.1.5 Other primary-appearing adjectives

*kāki*- 'thin' (or sim.)

<b>acc.sg.</b>
<i>ka-a-ki-in</i>
KUB 29.7 Rs. 35 (MH/MS)

**Stem formation and inflection:** *k.* is a hapax, attested only in the acc. sg. As such, it appears as an *i*-stem adjective.

**Discussion:** *k.* is used in a MH ritual as an epithet of 'stalk' of peeled onion. Tischler (HEG 1: 462) translates 'kahl, armselig, dünn'. Per Puhvel (HED 4: 18), *k.* might be a cognate to Gk. *κακός* 'bad', Lat. *cacō* 'shit'. However, such a connection is weak semantically and impossible phonologically, since Hittite has a medial single *-k-*.

As the attestations are insufficient to specify more precise semantics or morphology, the IE affinity of *k.* remains merely tentative.

HED 4: 17; HEG 1: 462; HW<sup>2</sup> 5: 16

*kappi-* 'small'

nom.sg.	acc.sg.	nom./acc.sg.	acc.pl.
<i>kap-pí-iš</i>	<i>kap-pí-in</i>	<i>kap-pí</i>	<i>kap-pa-uš, kap-pí-ú-uš</i>
KUB 31.71 iv 35-36	KBo 6.29 i 7 (NH)	KBo 6. 3 iv 18	KUB 12.63 Vs. 31 (OH/MS), KBo 34.47 ii 8 (MH/MS)

**Stem formation and inflection:** *k.* is an ablauting *i*-stem adjective attested only in the strong cases. The unusual acc.pl. *kap-pí-ú-uš* (instead of the expected and also attested *kap-pa-uš*), seen also in *šalliuš* and *karūiliuš* etc., can be explained by analogy from the substantives (GrHL: 95, with n. 75). This explanation does not account for the plene *-ú-*, which, being attested just once, is not taken as an evidence of any phonological feature.

**Discussion:** Sumerogram TUR. Infrequently attested, *k.* is used of children, piglets and mountains, with a verbal derivative *\*\*kapp(ai/e)-*, attested only as the participle *kappant-* 'subordinate, reduced, stunted'.

The Anatolian cognate suggested by Kloekhorst (EDHIL: 439) is Lydian *καμβειν*. In other IE languages, following Szemerényi (1966: 207), he sees Av. *kamna-* 'small', whose superlative *kambišta-* 'least' points to an original *\*kṃb-no-*. If so, then Hittite should reflect *\*kṃb-(e)i-*. Kloekhorst refutes the reconstruction *\*komb-i-* on the basis of the comparison with *dampu-* 'blunt' < *\*tomp-u-*.

The necessary prerequisite to accepting this etymology is the acceptance of the fortition of *\*-mb-* to Hitt. *-pp-* (Melchert 1994: 162). Although semantically the connection to Avestan and Lydian words is plausible, the fortition needs to be accounted for. If otherwise one would expect *\*-mp-* > *-pp-*, the preform would be *\*kemp-* / *\*kṃp-* or the like. Such a preform is compared to Gk. *κάμπτω* 'to bend' (Puhvel HED 4: 62), which is semantically less appealing than the former. But compare the argument of Melchert (2012: 181) for Hitt. *āki*, pl. *akkanzi* 'die' which goes back to *\*nók̂- ~ \*ṃk̂-*

An example of *lumpašti-* / *luppašti-* 'chagrin, regret' supports the view that syllable-final /m/ was relatively weak (Melchert 1994: 123). As to syllabic nasals,



one would expect *-am-* from PIE *\*m*, so a development from *\*kmb-* > *\*komb-* > *\*kapp-* is likely (see the references under *kappi-* c. 'a bit of (grain), grain', p. 37).

EDHIL: 439; GrHL; 95; HED 4: 61; HEG 1: 491; HW<sup>2</sup> 5: Melchert 1994: 162

*kaši-* (a colour)

nom.sg.	nom./acc.sg./pl.
<i>ka-a-ši-iš; ga-ši-iš</i>	<i>ga-ši</i>
IBoT 2.115, 6; KUB 42.65 Vs. 2	KBo 18.199 Vs. 1-7

**Stem formation and inflection:** *k.* is attested with plene root vowel, only in nom.sg.

**Discussion:** *k.* is an epithet of wool in the list of different coloured wools. Puhvel (HED 4: 119) suggests the meaning 'off-white', as distinct to the *ašara-* 'bright-white' mentioned in the same text (see Košak 1982: 157, THet 10). Based on the semantics, he connects it with Lat. *cānus* 'grey-white' < \**kas-no*, cf. OHG *hasan* 'grey, shiny', Skt. *śaśá-* 'hare'. (For the noun *kaši-* written with Glossenkeil, see HEG 1: 534).

HED 4: 119; HEG 1: 534; Košak (1982: 157)

\**lazzi-* 'good, fine'

nom.sg.	other
<i>la-az-zi-iš</i>	<i>la-az-z[</i>
KUB 31 143a iii 1-2 + VBoT 124 Rs. 12 (OH/OS)	KBo 1.42 iv 50 <sup>54</sup>

**Stem formation and inflection:** With only one attestation of the inflected stem, in the nom.sg., the word is likely an *i*-stem adjective.

**Discussion:** The word is attested in one OH text and in a syllabary KBo 1.42 iv 50. The attestation in KUB 29.38 i 2, supposedly belonging to this lemma, is broken to such an extent that it is better to exclude it.

*l.* is considered nominalized by Puhvel (HED 5: 68). Because of the broken context, it cannot be decided whether *l.* precedes a noun or stands alone, and so both translations, 'the Good' (HED 5: 68) and 'a pleasant...' (CHD L-N: 50) are equally possible. Though the nominalization would leave us without a single attestation of the adjective, this does not have much practical effect, as the adjective is well-attested in its verbal derivatives *lazziya-* 'make good; be good' (Sum. SIG<sub>5</sub>), SIG<sub>5</sub>-*aḥḥ-* 'to make right, to repair', SIG<sub>5</sub>-*ēšš-* 'to become good'.

Kloekhorst (EDHIL: 522) lists among the cognates of *l.* only HLuv. *arḥa lada-* 'to prosper, to flourish' and its causative *arḥa ladanu-*. He disagrees with Sturtevant's connection (1934: 270) to Gr. *λῶϊον* 'better'. He also says that SIG<sub>5</sub> is a logographic rendering of this syllabically almost unattested adjective. However, a connection with the adverbial SIG<sub>5</sub>-*in* cannot be convincingly established (HEG 2: 49; CHD L-N: 50), as the reading of the latter is not known.

CHD L-N: 50; EDHIL: 522; HED 5: 68; HEG 2: 49

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<sup>54</sup> CTH 303, Izi, a lexical list with Sumerian, Akkadian and Hittite columns.

[*manni-* 'related to pregnancy']

<b>nom.sg.c.</b>
<i>ma-an-ni-iš</i>
KUB 44.4.Rs. 27 +KBo 13.241 Rs. 15

**Stem formation and inflection:** A single attestation in the nom.sg., syntactically an attribute to MUNUS-*iš* 'woman', points to an *i*-stem adjective.

**Discussion:** The word is difficult to interpret due to the lack of attestations. Listed in Melchert 2021 (DCL: 172) as a Luvian word, it is thought to be connected to the notion of 'pregnancy' from \**manni-* < \**mó/éni-* 'pregnancy' < \*'state of being swollen', rather than to 'fertility', as suggested by Rieken (2021: 464).

CHD (L-N: 163) sees in the complement *-iš* to the Sumerogram for 'woman' an indication of the underlying Luvian *wanatti-/unatti-* 'woman', and so the whole phrase, although in a Hittite cult inventory text, could be in Luvian language.

DCL: 172; CHD L-N: 163; HEG 2: 118]

\**marri*-? 'whole; mere'

<b>adverbial</b>
<i>mar-ri, mar-ri-i</i>
KBo 6.29 i 18-21; KUB 23.91: 33

**Stem formation and inflection:** Attested as an adverb.

**Discussion:** While probably connected to the Latin adjective *merus* 'pure, whole', *m.* is found only in adverbial use throughout the history of Hittite, with a meaning 'exceedingly; utterly; passionately(?)' (see CHD L-N: 185 for details of its semantics). Often found together with *mekki* in the phrase *mekki marri* 'utterly'.

de Vaan (2008: 376) connects *merus* only to Hitt. *marri*, suggesting *PIt. \*mero-* < *PIE \*merH-o-*. If these two stems, Latin and Hittite, are to be reconciled, one must agree with the original *PIE o-stem* nominal. The Hittite *i-stem* could then be either a nominal case form (possibly *dat./loc.* ending *-i*) or some other development (e.g. analogical), which presently cannot be accounted for.

As an inner-Hittite comparison may be the case of *šalli-* < *\*salla-*. The *šalla-* of the compound *šalla-karta-* may be understood as 'with a swollen heart', 'haughty', as the usage has always suggested. Here (despite Puhvel) one would find a compound with an *a-stem* adjective as first member. Thus *marri-*, like *šalli-*, could be a derived *\*mérH-i-* 'the X one' which was then readjectivized. What the original sense really was remains unclear.

CHD L-N: 185; EDHIL: 556; HED 6: 69 ; HEG 2: 135

\**marši-* (modifies ritual)

acc.pl.	gen.pl. (or sg.)
<i>mar-ša-ya</i>	<i>mar-ša-i-ya-aš</i>
KBo 17.65 Rs. 5 (MH?/NS)	KBo 16.97 Vs. 34 (MH/MS)

**Stem formation and inflection:** The zero-grade stem of *m.* is not attested; the forms could also belong to the stem *maršaya-/maršai-*.

**Discussion:** *m.* is attested on two occasions: in the first, as an adjective which modifies sacrifices in a birth ritual; in the other, as a modifier of sacrifices mentioned in an oracle question.

CHD (L-N: 199) also considers the possibility of *m.* belonging to *marša-* (adj.) 'unholy, unfit for sacred use'. The ritual sacrifice would then be made against such a negative quality. The adjective *marša-* is attested only in acc.sg. *mar-ša-an* and acc.sg.n. *mar-ša* (CHD L-N: 195), and also as Luvian nom.sg.n. *mar-ša-aš-ša* with Glossenkeil. This adjective cannot be simply connected to *m.*; per Puhvel (HED 6: 87), it is 'of unclear relevance'. Luvian also has the factitive verb *marša-* and abstract *marš/zaštri-*. The most plausible analysis is that this simply is a Luvian adjective *maršaiya/i-* derived from the same base noun \**marsa-* as *marsassa/i-*. This would avoid the peculiarity of deriving an adjective from the Hittite adjective. Kloekhorst (EDHIL: 562) rightly rejects all attestations of Hittite *marša-*.

As the *i-/ya-* stem adjective appears only in connection with SISKUR, it is likely best kept separate from *marša-*. Its origin remains unknown.

CHD L-N 199; GrHL; HED 6: 87; HEG 2: 146

*teri-* 'three'

nom.c.	acc.c.	nom./acc.n. (or adv.?) <sup>55</sup>	gen.	abl.
3- <i>e-eš</i> , 3- <i>i-e-eš</i>	3- <i>uš</i>	3- <i>e</i>	<i>te-ri-ya-aš</i> ; 3- <i>aš</i>	3- <i>az</i>
KBo 17.58 i 5' (OS); KUB 10.55 12' (?/NS)	KBo 21.85 i 48' (OH/MS)	KUB 9.30 iv 7 (NS)	KUB 43.60 i 9 (OH/NS); IBoT 2.5 r. 5 (NS)	KUB 20.78 iii 6' (OH/NS)

**Stem formation and inflection:** The numeral *t.* is with one exception always rendered as a cuneiform sign for number '3'. This one attestation points to an *i*-stem *teri-*. *t.*, as seen in the phonetic complements to number signs, follows adjective declension.

**Discussion:** Most number words in Hittite texts are recorded by a cuneiform numeral sign. Of cardinal numbers, we find recorded syllabically three numerals, *šia-* 'one', *teri-* 'three', *meu-* 'four'. 'One' through 'four' were declined in both PIE and Hittite (GrHL: 153).

Kloekhorst (EDHIL: 873) recalls the two renderings, OS 3-*e-eš* and later 3-*i-e-eš*, that could be reminiscent of an original PIE nom. *\*tréi-es* > Hitt. *\*\*terēš*. If so, the *i*-stem would be secondarily created in the strong cases (analogically to other ablauting *i*-stems). However, one must consider the facts that do not support this hypothesis. First, the attestation with *-i-* is not securely dated. Also, the fact that the *-i-* is missing in 3-*e-eš* by no means shows that it was not there, as there is enormous variation in phonetic complements after Sumerograms. Secondly, similar graphic variation is found in the numeral 'one', namely 1-*aš*, 1-*iš*, both nom. and both attested from OH onwards (GrHL: 154), which has hardly anything to do with ablauting *i*-stem adjectives.

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<sup>55</sup> See GrHL: 156, note 12.

The numeral 'three', PIE *\*tri/ei-*, is well-attested in most IE languages: Lat. *trēs*, TochB *trai* etc.; of the Anatolian languages, cognates are known from CLuv, HLuv as well as Lycian (for the list of cognates, see EDHIL: 872-873 and HEG T: 321-323). CLuv. *tarrīyanalli-* shows an immediate preform *\*téri-*, so just as in *terippi-* < *\*trép-*, the *-e-* may be anaptyctic.

To conclude, the stem *-i-* in *teri-* is likely inherited from PIE.

EDHIL: 872; GrHL: 153; HEG 3: 320



*walli-* 'shorn, smooth (?)'

nom./acc.sg.n.	nom.sg.c.
<i>wa-al-li</i>	<i>wa-al-li-iš</i>
KBo 6.26 iii 13 (OH/NS)	IBoT 1.31 i 25 (NH)

**Stem formation and inflection:** *w.* is attested only as a nom.sg.n. and as nom.sg. Could be a deverbal formation.

**Discussion:** The meaning of the word is cautiously discussed by Tischler (HEG 4: 259). *w.* has originally been translated on the basis of Akk. *haruptu*, which in fact means 'early' in the first place, but also is used of sheep, while *w.* refers to a goat. The possibility of a broader meaning, beside 'shorn' also 'smooth', would make it possible to also include nom.sg.c. *wa-al-li-iš*, used in IBoT 1.31 i 25 as an epithet of a leather sack, or *wa-al-liš* in HT 50 Vs. 1.c. 7' as an epithet of a head-cover etc.

*walli-* in the meaning 'shorn' is connected to Lat. *vellō* 'pluck, pull out' < PIE \**welsō* per Tischler (HEG 4: 260, apud Duchesne-Guillemin). Though insufficiently attested, the chances that *w.* is of IE origin still remain.

Not connected to the hapax noun gen.sg. *wa-al-li-ya-aš* 'of exaltation' (KUB 19.13 i 48 (NH)), used as an epithet of *pēdan-* 'place'.

EDHIL: 947; HEG 4: 258

2.2 *āi*-stems2.2.1 *āi*-stem nouns of common gender*āi-wāi*- c. 'pain and woe'

acc.sg.	nom./acc.sg.	other
<i>a-i-in wa-a-i-in</i> [: <i>a-i-in (ú)-wa-a-i-in</i> ; <i>a-i-in ú-wa-a-i-in</i>	<i>ú-wa-a-i, ú-wa-i</i>	<i>a-i; a-i a-i a-i; a-a-i;</i>
KBo 17.7 Rs iv? 9' (OS); KBo 17.3 iv 27 and 30 (OS); KBo 17.7 Rs iv? 5' (OS)	KBo 6.29 iii 38 (NH); KUB 23.1 ii 32 (NH)	KBo 1.44 + 13.1 i 61 f (pre-NH/NS); KBo 13.119 iii 24; KBo 21.19 Rs. 2 (NH)

**Stem formation and inflection:** The word is certainly an imitative formation, and as an inflected word attested only in the acc. (OS) and nom./acc.sg (NS).

**Stem formation and inflection:** The word is certainly an imitative formation, and as an inflected word attested only in the acc. (OS) and nom./acc.sg. (NS).

**Discussion:** Contrary to Friedrich, Kammenhuber (HW<sup>2</sup> 1: 47), Rössle (2002: 256) splits *āi* / *ā(y)i-* into two lemmas, the first being an interjection, attested as *a-i, a-a-i, a-i a-i a-i*, attested also in an Akkadian vocabulary where it equals Akk *ai*; the other 'ach, das Ach', attested (only) as acc.sg. *a-i-in* in OH texts KBo 17.1, KBo 17.3 and KBo 17.7. The attestations of the interjection are excluded from the grammatical structure of the *āi*-stems. To the Hittite examples, Watkins (2013: 250-251) adds the Luvian nominative *úwāiš* (KUB 35.87, 7), to which the accusative [w]*a-a-i-in* (KUB 35.109 iii 13) also surely belongs.<sup>56</sup> See Watkins for

<sup>56</sup>The certain restoration of the two preceding lines assures that there is no space for any sign before [w]a-, which is line-initial.

a discussion of cognates and the reconstruction of PIE *\*wai-*. Besides Latin, Old Avestan, Old Iranian, older Germanic and Homeric Greek, the exclamation *\*wai-* survives today in English *woe*, German *weh*.

The second part of the phrase, *wā(y)i*, is known exclusively in the accusative in Hittite. The purely nom./acc.sg. NH attestations of the noun *ú-wa-a-i* 'misery, lack' (e.g. KBo 4.10 Rs. 12), which also forms the base for the denominative verbs *uwaya-* and causative *uwayanu-*, are considered a distinct lemma by Rössle, but a diachronic development by Tischler (HEG 4: 204); he sees the rendering *wa-a-* as the original, and *ú-wa-a-* as a later addition. The hardly explainable use of *ú-* before *wa-*, known also from other words than *wa-a-i-*, was accounted for by Melchert (1984: 13). It may be analogical to *ú-e-* and *ú-i-*, producing a redundant spelling of *ú-wa-*. Less likely is the suggestion that it serves the purpose of sign differentiation (Tischler (HEG 4: 204), as other existing values of the *wa* sign were used only outside Hittite cuneiform, see Rüter, Neu (HZ: 251).

The neuter gender of *(ú)wāi-* in NH reflects a late borrowing rather than a development of the OH word: commune forms are only attested in OS, and neuter forms not before NS. Against Melchert (CLL 1993: 250) & Otten (1981: 103), the formal analysis of Starke (1990: 184–5), of *ú-wa-a-i-ti-is-ke-u-an* at KBo 3.6 i 29 as a Hittitized form of a CLuvian denominal verb *\*(u)wāiti-* from a stem *\*(u)wā(y)it-* is now affirmed by the functionary <sup>MUNUS</sup>*u-wa-i-ti* 'mourner, *Klagefrau*' (or similar) in KBo 29.65+ iv 18 (reference indebted to Rieken, p. c.). But the sense of the verb is 'to bring woe/pain to' (compare *(u)wāi pē/uda-*), not 'to slander', against Starke. The NH nom./acc.n. *(u)wāi* < *(u)wā(y)it-* may be Luvian or Hittite, but pace Starke CLuvian common gender *(u)wāi-* shows that the matching OH commune is a cognate, not an adaptation of the Luvian *it-* stem.

In his discussion of the verb *wāi-/wi-* 'to cry (out)', Kloekhorst (EDHIL: 939) understands it as "derived from the onomatopoeic words *ú-i* 'whee!' (KUB 55.38 ii 19) or *(u)wāi-* 'woe' (in *āi-* *(u)wāi-* 'woe and pain' (acc.sg. *a-i-in ú-wa-a-i-in* (StBoT 25.4 iv 26-7, 35 (OS), StBoT 25.7 iv 5 (OS), *a-i-in wa-a-i-in* (StBoT 25.3 iv 14 (OS), StBoT 25.7 iv 9 (OS))." While the fact is not to be doubted, the attestations need a closer look. The *ú-wa-a-i-in* in StBot 25.4 iv 27 and 35 (that is,

in KBo 17.3, the join of a tablet together with KBo 17.4, KBo 10.15 and KUB 43.32+39) is in fact *wa-a-i-in* only. Neu (StBot 25: 17, note 46) suspects that the *ú* was erased in the tablet in both instances; therefore one must assume original *ú-wa-* anlaut ("Anlautschreibung also ursprünglich *ú-wa-*").

The following photos are from lines 27 and 30 of KBo 17.3. In line 27, the word is in the beginning of the line, while in line 30, it is in the second half, preceded by text. While the following signs are clearly readable (*wa-a-i-in*), the erasure in the beginning of both words is beyond doubt.



Picture 1: Bo 2416, iv, line 27 and 30. Source: hethiter.net/: fotarch BoFN06510.

If in an OH text the *ú* was actually recorded on the tablet, and erased at a later time in both instances, it must have been considered a mistake by the corrector.

Another assured OH attestation of *ú-wa-* anlaut is StBot 25.7 5': the phrase *a-i-in ú-wa-a-i-in* is to be found on KBo 17.3 + KBo 25.7 + IBoT 3.135 (contra Rössle's [*wa-a*]-*i-in* without the join KBo 25.7), followed on line 9 with *a-i-in wa-a-i-in*.

The attestations (so far) speak in favour of the *ú-* being a graphic unit rather than phonological. Neither do they support the claim of Tischler (HEG 4: 204) for an original *wa-a-* anlaut, nor the conclusion of Neu (StBot 25: 4) that the erasure points to the originality of the *ú-*. Although we know that the *ú-wa-* was systematic in NH, the OH provides only limited hints to conclude whether it was favoured already then and if so, what its function was.

The first part of the phrase can be reconstructed as PIE \**ai*, the latter as PIE \**wai*, with an Anatolian cognate in CLuv *wāi-* c. 'woe' and wider cognates in Lat. *uae*, Gothic *wai*, OAv *auuōi*.

EDHIL: 939 (under the entry *wai-/wi-* 'to cry (out) '); HEG 1:5; HEG 4: 170, 204; HW<sup>2</sup> 1: 47; Rössle (2002: 256-259); StBot 25. 4 + 7; Watkins (2013).

*armuwalašḫā(i)*- c. 'moonlight'

<b>nom.sg.</b>
<i>ar-m]u-wa-la-aš-ḫa-iš</i>
KUB 8.30 Vs. 21 (OH/NS)

**Stem formation and inflection:** Deverbal from the denominal verb *armuwalā(i)*-. As an *āi*-stem attested only once (besides more numerous *a*-stem attestations), as nom.sg.

**Discussion:** This stem is listed by Rössle among erroneous attestations and formations. He sees its listing as a stem variant of the *a*-stem *armuwalašḫa*- as unnecessary, pointing to the fact that there is only a single such attestation, preceded by an *a*-stem attestation on the same tablet (KUB 8.30 Rs. 3-4). The word is understood as 'waxing of the moon' in Puhvel (HED 1/2: 153), which acknowledges both stems. Friedrich, Kammenhuber (HW<sup>2</sup> 1: 327) lists the word as an *a*-stem, with the *āi*-stem shown in *ar-m]u-wa-la-aš-ḫa-iš*. The *āi*-stem is considered an ad hoc formation, confirmed by analogical formations in Hittite.

As the occurrence of the two forms does not require the assumption of a nonce, the form listed above properly belongs to the *āi*-stems.

GrHL: 57; HED 1/2: 153; HEG 1: 64, under the entry for the verb *armuwalai*- 'sanft wie der Mond scheinen'; HW<sup>2</sup> 1: 327; Rössle (2002: 255)

†*a(u)wa(u)wāi-* c. (an animal; a golden vessel in the shape of an animal)

acc.sg.	gen.sg.	instr.	uncertain
<i>a-u-wa-u-wa-an</i>	<i>a-u-wa-wa-aš</i> , <i>a-u-wa-u-wa-aš</i>	<i>a-u-wa-u-wa-a-it</i>	<i>a-u-w]a-u-wa-aš</i>
KBo 16.101 6' (pre-NH/MS) (also VSFN 12.65 i 19 (pre-NH/NS))	KBo 13.1 i 50' (pre-NH/NS); KUB 54.10 ii 8 (pre-NH/NS)	KBo 16.100 6' (pre-NH/MS)	KBo 16.101 2' (pre-NH/NS)

**Stem formation and inflection:** Probably onomatopoeic. According to Puhvel (HED 1/2: 244), *a*. is a reduplicative onomatopoeia, plausibly a (Luwoid?) phonetic variant of *akuwakuwa-* 'spider, tarantula' (HED 1/2: 26). Such a connection is contradicted by Friedrich, Kammenhuber (HW<sup>2</sup> 1: 54).

**Discussion:** The possible *āi*-stem appears solely in the instrumental case; the other attestations confirm the *a*-stem. As an *a*-stem, the form is used as a PN <sup>m</sup>*A-wa-u-wa-a* (KBo 15.28 Vs. 2).

The only readable signs of the form ending in *-aš* (suggested as nom.sg.(?) by Puhvel (HED 1/2: 244)) in line 2' of KBo 16.101 are *u-wa-aš*. Its restoration, based on KUB 54.100 ii 8, is plausible, but with uncertainty as to the case.

The *-i-* of the instrumental ending is likely to denote rather the ending vowel of the instrumental ending *-it* than the *āi*-stem. Such an instance would not be unparalleled; cf. likewise the dative-locative *a*-stem singulars in *-ai* (GrHL §3.24 following Neu) and probably inst. IGL.HI.A-*wait* (CHD Š: 67a) 'with the eyes', built to the plural stem. See Rössle (2002: 245) for discussion.

The suggested translation 'spider' (Puhvel (HED 1/2: 244)) is based on 1. the presumption of the connection to *akuwakuwa-*; 2. the attestation KBo 1.44 + 13.1 i 50 matching the Akkadian phrase 'spider's web'. As the Akkadian text is incomplete and the connection to *akuwakuwa-* only provisional, the translation should remain cautiously that of some animal. If we consider that out of the five attestations, four denote a vessel without specification of the respective animal in

question, with KBo 13.1 i 50' being a part of a vocabulary where the Akkadian text is in large part damaged, a more precise translation must await new finds.

HEG 1: 98, only as an *a*-stem; HED 1/2: 244; HW<sup>2</sup> 1: 54, 636; Rössle (2002: 245); DBH 6: 105



*erāi-* c. (part of liver)

<b>nom.sg.</b> (or nom./acc.sg.n.?)
<i>e-ra-i-iš</i> ; <i>e-ra-a-iš(-ma)</i>
KUB 18.14 iii 12' (NH); KUB 52.73 Vs. 4' (NH)

**Stem formation and inflection:** *e.* is a common gender *āi*-stem of an unknown origin.

**Discussion:** *E.* is attested only twice, both in nom. sg., in oracle texts (MUŠEN ḪURRI oracle KUB 18.14 and the small oracle fragment KUB 52.73). The context in which this word is found is very limited. Analogously to other oracle passages, one may with Tognon (2005: 16) conclude that it denotes a part of the liver used in extispicy. Possibly we are dealing with a loanword from Hurrian, comparable to other technical oracle terms (Friedrich, Kammenhuber (HW<sup>2</sup> 2: 89); but see Richter (2012: 97), who considers the Hurrian origin unproven).

Contra Rössle (2002: 286) who does not rule out the possibility of *e.* being an *s*-stem, the *āi*-stem is assured by the context of KUB 18.14 iii 12' where *e.* functions as a subject of a nominal sentence with a predicate DIB-*anza*: *e-ra-i-iš* DIB-*an-za* 'e. is taken' (Tognon (2005: 130 'l'*erai-* (è) preso.').

HEG 1: 109; HW<sup>2</sup> 2: 89; Richter (2012: 97); Rössle (2002: 286); Tognon (2005: 16, 128-130)

<sup>DUG</sup>*ḥakkunnāi-* c./n. (container for precious oil; building part)

nom.sg.	acc.sg.	nom./acc.sg.	ablative	nom.pl.	acc.pl.
<sup>DUG</sup> <i>ḥa-ak-ku-na-a-iš</i> ; <sup>DUG</sup> <i>ḥa-ak-ku-un-na-a-iš</i>	[ <i>ḥa-a</i> ] <i>k-ku-un-na-i-in</i>	<sup>DUG</sup> <i>ḥa-ak-ku-un-na-i</i> , <sup>DUG</sup> <i>ḥa-ak-ku-un-na-ya</i>	<sup>DUG</sup> <i>ḥa-ak-ku-u[n-na-ya-az]</i> <sup>57</sup>	<sup>DUG</sup> <i>ḥa-ak-ku-un-na-e-eš</i>	<sup>DUG</sup> <i>ḥa-ak-ku-un-na-uš</i>
KUB 7.20 vs. (i) 8 (MH?/NS); KBo 9.115 (+ 119) Vs. i 6 (MH?/NS)	KUB 31. 89+ ii 9 (MH/NS)	KUB 31.86(+) ii 20 (MH/NS); KUB 51.82 ii 4 (?/NS)	KUB 41.13 ii 9 (NH)	KBo 5.2 i 11 (MH/NS)	KBo 5.2 i 49 (NH)

**Stem formation and inflection:** The word is of unknown origin, attested as both common and neuter gender.

**Discussion:** The word is used in Kizzuwatnan and other rituals as a container for precious oil (in KUB 51.82 ii 4, used in neuter gender, it ends in *-ya* after the number '1', where the use of an enclitic *-ya* 'and, too' is unlikely), and as acc. sg. and nom./acc.sg. neuter in the sense of an object which is being built by a coppersmith in CTH 261 (both KUB 31.89 and 31.86, *Instructions of Arnuwanda I. to BĒL MADGALTI – the provincial governors*).

The restored ablative in KUB 41.13 ii 9 (NH) is contextually plausible and provides an important reconstruction of an oblique stem, but should certainly be

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<sup>57</sup> The form is assuredly an ablative, based on its context. HW<sup>2</sup> 3/1: 15 restores the ending with non-geminate *-n-*.

given with geminate *-nn-* (contra Friedrich, Kammenhuber (HW<sup>2</sup> 3/1: 15) <sup>DUG</sup>*ha-ak-ku-n[a-ya-az]*).

The word has no Anatolian cognates, and Friedrich, Kammenhuber are sceptical of IE etymological proposals (see the discussion there). Its Hurrian affinity, suggested e.g. by Tischler (HEG 1: 125), is not supported by Richter (2012: 119). It is reminiscent of other names of vessels, e.g. *ḫupuwai-* (Puhvel (HED 3: 10)).

HEG 1: 125; HED 3: 10; HW<sup>2</sup> 3/1: 15; Rössle (2002: 222); Richter (2012: 119)

*halluwāi-* c. 'violence, brawl, quarrel'

nom.sg.	acc.sg.	abl.	acc.pl.
<i>ḫal-lu-wa-iš</i>	<i>ḫal-lu-wa-in;</i> <i>ḫal-lu-u-wa-a-in</i>	<i>ḫal-lu-wa-ya-</i> <i>za</i>	<i>ḫal-lu-u-wa-</i> <i>a-uš</i>
KUB 33.96 iv 10' (MH/NS) and KUB 36.7a iv 47' (MH/NS)	KUB 33.113 i 19 (MH/NS); KUB 13.4 iii 38 (MH/NS)	KUB 13.4 iii 43 (MH/NS)	KBo 24.56/B 8' (?/NS)

**Stem formation and inflection:** *ḫ* is of unclear stem formation, with uncertain etymology.

**Discussion:** *ḫ* is first attested in MH/NS. It forms a base to *halluwai-* 'to resort to violence; to quarrel'. It is not attested in other Anatolian languages, nor are there any cognate Hattic or Hurrian forms.

Puhvel (HED 3: 51) discusses the possible phonetic significance of the geminate *-ll-*; this rules out the previously suggested connection with Greek *άλύω*. In his opinion, there is an inner-Hittite cognate *hallaniya-* 'lay waste, ravage', as both words might be derived from a single verb *\*ḫalla-/ḫallu-* 'lay waste, ravage'.

The connection with *hallaniya-* is not acceptable on semantic grounds, see Kloekhorst (EDHIL: 272). The meaning of the verb, as convincingly shown from its context, is rather 'to trample down'. If *ḫ.* is derived from a verb *\*ḫall-*, no cognates or other connections are presently known. An IE origin remains uncertain.

EDHIL: 271; GrHL: 92; HEG 1: 137; HED 3: 49; HW<sup>2</sup> 3/1: 87; Rössle (2002: 95)

*ḫarāi-* c. '?'

<b>acc.sg.</b>
<i>ḫa-ra-in</i>
KBo 10.16 i 11(pre-NH/NS)

**Stem formation and inflection:** The stem formation (as well as the meaning) remains uncertain. Rössle (2002: 23) is inclined to acknowledge a deverbative origin from an unattested base \**ḫar(ai/iya)-*.

**Discussion:** The word is a hapax, used in the last (broken) line of a tablet fragment, possibly a ritual. The line contains a single phrase *ḫa-ra-in i-e-er* 'they made a ḫ.' Rössle, supposing the accentuation on the *-āi-* syllable, expects *ḫarāi-* to be the regular form.

HW<sup>2</sup> 3/1: 265; Rössle (2002: 23)

*ḫar/ḫurnāi-* c. 'non-solid arboreal substance'

nom.sg.	acc.sg.
<i>ḫar/ḫur-na-iš,</i> <i>ḫar/ḫur-na-a-iš,</i> <i>ḫar/ḫur-na-a-i-iš, ḫar/ḫur-na-a-ú-uš</i>	<i>ḫar/ḫur-na-in,</i> <i>ḫar/ḫur-na-a-in,</i> <i> ḫar/ḫur -na-a-i-in</i>
KUB 15.1 i 27 (NH); KUB 7.39 5' (MH/NS); KBo 17.73 ii 8' (MH/NS); KUB 9.22 ii 40 (MH/MS)	KUB 18.58 iii 36' (NH); KUB 10.91 ii 10 (pre-NH/NS); KUB 9.22 ii 28 (MH/MS)

**Stem formation and inflection:** The word is attested only in the nominative and accusative, which precludes identification of the ablaut pattern. Deverbal, without a consensus on the original verb (to *ḫarnāi-* 'to spray; to sprinkle' or *ḫarna-* 'to cause to ferment').

**Discussion:** The word is attested only in the nominative and accusative singular. In the nominative, we come across both non-plene and plene writing in the last syllable, the latter featuring *-a-*, *-a-i-* and *-a-u-*, and *-a-* and *-a-i-* in the accusative. Of interest is the final *-ú + uš* in the MH birth ritual KUB 9.22. The regular use of *ú* (never *u*) in such instances, found exclusively in OH (/NS) and MH compositions, according to Melchert (2019: 270) confirms its use as spelling a hiatus-filler.

From the context, there cannot be a confusion with *ḫarnau-* c. 'birthing stool', as the text reads '*ḫ.*, which is poured into a vessel *k.*'. There is no connection to hapax acc.sg. *ḫar-na-a-in*, an (erroneous?) form of 'birthing stool' at ABoT 17 II 15.

The reading of the root syllable *ḫar/ḫur* could be secured in case of the connection to the verb *ḫarnā(i)-* 'to sprinkle, drip, pour' (which is once attested with *ḫa-ar-* anlaut); however, this form of the verbal stem is not confirmed. Kloekhorst (EDHIL: 308) lists the base verb of *ḫ.* (translated 'tree-sap, resin (?); translation suggested by Puhvel (HED 3: 405)) as *ḫarna-* / *ḫarn-*, with later development to *ḫarniye/a-* (< PIE *\*h<sub>2</sub>ǵ-ne-h<sub>2</sub>/3-ti*, without cognates in other IE languages). Friedrich, Kammenhuber (HW<sup>2</sup> 3/1: 316) consider it deverbal to *ḫarna-* 'cause to

ferment', comparing *waštāi-* 'sin' and *wašta-* 'to sin'. Not so Puhvel (HED 3: 404), who identifies the stem as *ḫarnāi-* 'to pour' (with reading *ḫurnāi-*).

*ḫ.* could be either of IE origin, though without secure cognates, or an areal word.

EDHIL: 308; GrHL: 102; HEG 1: 306; HED 3: 404; HW<sup>2</sup> 3/1: 316; Rössle (2002: 203); A. Mouton (ed.), [hethiter.net/](http://hethiter.net/): CTH 477 (Expl. A, 07.11.2016)

*ḫar/ḫurnāi*-<sup>SAR</sup>

See this entry under neuters. Although occasionally considered commune, there is no justification for assuming a commune stem. (Even if the forms in *-ni-eš* were followed by SAR, which is arguable, there are still other neuters in *-eš* or *-iš*.)



*ḫukmāi*- c. 'conjunction, spell'

nom.sg.	acc.sg.	collective pl.	gen.sg.	acc.pl.
<i>ḫu-uk-ma-iš</i> ; <sup>58</sup> <i>ḫu-u-uk-ma-iš</i>	<i>ḫu-uk-ma-in</i> ; <i>ḫu-u-uk-ma-in</i> ; <i>ḫu-uk-ma-a-in</i> ; <i>ḫu-u-uk-ma-a-in</i>	<i>ḫu-uk-ma-i</i> ; <i>ḫu-uk-ma-a-i</i>	<i>ḫu-uk-mi-ya-aš</i> ; <i>ḫu-u-uk-mi-ya-aš</i>	<i>ḫu-uk-ma-iš</i> ; <i>ḫu-uk-ma-uš</i> ; <i>ḫu-uk-ma-a-uš</i> ; <i>ḫu-u-uk-ma-a-uš</i>
KUB 30.42+ i 18 (NH) and KUB 35.103 iii 10 (MH/MS); KBo 14.70 Vs. i 7' (NH)	KBo 15.1 iv 40' (NH); KBo 27.134 i 19-20 (pre- NH/MS) and KBo 11.14 ii 27', 34' (OH/NS); KBo 31.4+ vi 7 (NH); KBo 42.3 8 (pre- NH/MS)	KUB 9.34 iii 6 (NH) = KUB 9.4 ii 22 (MH/NS) and KBo 27.134 iv 7'(MH/MS); KBo 21.18 Vs.? 20 (MH)	KBo 17.62+63 i 13 (MS?); KUB 17.28 i 28 (NH)	KUB 7.53 ii 6 (NH); KUB 27.29 i 7 (MH/NS); VBoT 58 iv 37 (OH/NS); KUB 14.4 iii 8 (NH)

**Stem formation and inflection:** *ḫ*. reflects a synchronically derived non-primary *āi*-stem. There is a broad consensus that *ḫ*. reflects a stem in *\*-mo-/-mā-* from the verbal root of *ḫuek-* / *ḫuk* - 'to conjure, incant'. Hrozný (SH: 23) suggests a derivation of *ḫu-uk-ma-uš* from *\*ḫuk-* with an *m*-suffix, parallel to IE *\*-mo-*. Kronasser (EHS 1962-66): 176, 206) derives *ḫukmattalla-* from the unattested stem *\*ḫukma-* (followed by Tischler (HEG: 257) and Friedrich, Kammenhuber (HW<sup>2</sup> 3/2: 685). Yates (2019: 210, note 12) argues for a secondary (deadjectival) derivation of an *\*-oi-* stem from an *\*-o-* stem. He uses the example of *ḫ*. to support the hypothesis of the use of PIE *\*-oi-* in Hittite to derive denominal nouns. The example given beside *\*ḫukma-* > *ḫukmāi-* is that of *ḫullant-* 'defeated' > *ḫullanzāi-*

<sup>58</sup> In KUB 35.103 iii 10, *ḫu-uk-ma-iš* is preceded by a numeral 2. Though the form is listed by Rössle (2002: 108) as nom.pl., it may well be accounted for as nom.sg.

'defeat' (assuming that the affrication of the stem-final *-t-* derives from the weak cases, Yates (2019: 209)).

**Discussion:** The word appears in OH/NS and MH/MS texts onwards. It is attested with and without plene vowels in the suffix. In the strong cases, out of the eight different writings of nominative and accusative in singular, three MS singular examples have *-a-* in the suffix, and so do two of the four acc.pl. examples.

Rössle also lists examples of nom.pl. *ḫu-uk-ma-iš*. As the spelling is identical to the nom.sg. and both attestations (KUB 35.103 Rs. iii 10 and KUB 35.102 Rs. 10) are preceded by the numeral 2, one can wonder whether this form is not also formally singular. Per Rössle (2002: 111), the neuter form is used as collective; the alternation is therefore not arbitrary, but correlates with overt sg./pl. (commune) vs. collective (neuter).

While one finds reflexes of *\*-mo-* adjectives in other IE languages (e.g. *\*g<sup>wh</sup>er-mo-* adj. 'warm'; *\*k<sup>yeh</sup>l<sub>1</sub>-mó-* 'dark blue, black'; Brugmann, Gr. II.1 246), no such stem is attested for Anatolian. An ablauting *āi-*-stem secondary to an *\*o-*-stem is also not credible. Yates (2019: 209) explains the ablaut as analogical to the *āi-*-stems that he regards as reflecting PIE primary *\*oi-*-stems (see *ḫurtāi-* and *šagāi-* below). In his opinion, the secondary denominal type is modelled on the primary type (already in PIE), except that the root grade follows the original nominal base.

As to the PIE *\*-mo-* suffix, it has become productive in Hittite as *-e/ima-*; for detailed analysis see Oettinger (2001: 456) with references. It is attested mainly as deverbal (e.g. *weritema-* 'fear' to *werite-*) and rarely as denominal (e.g. *ḫaḫlimma-c.* 'yellow colour' to *\*ḫaḫla-* 'yellow', verb *ḫaḫlah-* 'to colour in yellow'); see Kronasser (EHS: 177-179).

The consistent spelling with non-geminate *-k-*, most likely an inherited PIE voiced stop, is the basis for several different etymologies of the verb *ḫuek-/ḫuk-*. The one favoured by Puhvel (HED 3: 327) is *\*h<sub>1</sub>wég<sup>wh</sup>-ti*, which can be compared with Gr. εὔχομαι 'to pray'. This proposal is rejected by Kloekhorst (EDHIL: 347), who stands in favour of the suggestion of Oettinger (1979: 103), a comparison with Gr.

αὐχέω 'to boast, to brag', PIE *\*h<sub>2</sub>weg<sup>h</sup>-*, though he admits the semantic weakness of the proposal. The main objection to Puhvel's opinion is the fact that the PIE word begins with *\*h<sub>1</sub>*, a laryngeal which would normally be lost in Hittite and that the velar must in fact be either *\*g* or *\*g<sup>h</sup>* (or *\*ǵ<sup>h</sup>*). Therefore, Kloekhorst (EDHIL: 347) reconstructs *\*h<sub>2</sub>ueg<sup>h</sup>-* or *\*h<sub>2</sub>ueǵ<sup>h</sup>-*.<sup>59</sup>

To conclude, it remains uncertain whether we are dealing with an *\*oi*-stem noun made to an *\*o*-stem adjectival base or whether a *\*-mo-* nominal stem was reshaped into an *\*oi*-stem. Both scenarios point to secondary development.

EDHIL: 347; GrHL: 67; HEG 1: 257; HED 3: 326; HW<sup>2</sup> 3/2: 683, 619; Rössle (2002: 108); Yates (2019: 209); Oettinger (1979: 103); Oettinger (2001: 456-477), EHS: 177-179.

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<sup>59</sup> Rössle's alternative (2002: 112) of a loanword from Hurrian may be excluded by the ablaut in the attested paradigm. The ablauting forms are attested in OH and NH, with the spread of the zero grade in NH.

*hullanzāi-* c. 'fight; defeat'

nom.sg.	acc.sg.
<i>ḫu-ul-la-an-[za]-iš, ḫul-la-an-za-iš</i>	<i>[ḫu-u]l-la-an-za-an, ḫu-ul-la-an-za-in; ḫu-ul-la-an-zi-in</i>
KBo 3.1+ ii 19' (OH/NS), also KUB 12.39 5-6 (?/NS); KBo 4.14 iii 29 (NH)	KBo 3.22 Vs. 11 (OH/OS); KUB 23.16 ii 15' (MH/NS); VSFN 12.26 Rs. 9' (?/NS)

**Stem formation and inflection:** *ḫ.* is attested only in the singular of the strong cases. Once we find an *a*-stem, once an *i*-stem, and an *āi*-stem in other instances. There is no agreement on the status of *ḫ.*, which seems rather unclear. It is more likely denominal than deverbal; if denominal, it could either be an adaptation of an *a*-stem, derived from the participle *ḫullant-*, or a back-formation from *hullanzatar*.

**Discussion:** The word is attested once in OH/OS and later in MH and NH, as well as in NS copies of older texts. Because of the occurrence of the *a*-stem form in OH, the existence of two lexemes or a development from *a*- to *āi*-stem are the options. The existence of both is presupposed by Kloekhorst (EDHIL: 359), who lists the lexeme *hullanza-* c. 'defeat' beside *hullanzāi-* c. 'infliction, defeat'. So also Rössle (2002: 98), who splits the lexeme with regard to period (OH versus MH+NH) and also with regard to semantic shift: 'Kampf, Aufstand' for *hullanza-* and 'Gesetzesbruch, Gesetzesverstoss, interne, verderbliche Situation, Aufruhr, Konspiration' for *hullanzāi-*. Puhvel (HED 3: 366) also splits it into two lexemes with a difference in meaning, 'defeat' versus 'infliction, defeat'. Friedrich, Kammenhuber (HW<sup>2</sup> 3/2: 696) understand it as one lexeme which underwent a development from *a*- to *āi*-stem on analogical grounds (following Oettinger 1980: 56-). The development *a*- > *āi*- is taken as a possibility by Oettinger (460), comparing *hullanzan* to the (OH) ablative *wantiwantaz* KUB 17.10 ii 33 of the otherwise *āi*-stem *wantiwantāi-* 'lightning'.

*ḫ* is attested only once v; the OH attestation comes from the Anitta text, KBo 3.22. The NH duplicates of the Anitta text, rather fragmentary, do not contain line 11 of

the OH tablet. Although presented as *ḫu-ul-la-an-za-an* in StBot 18: 10 (followed by Friedrich, Kammenhuber (HW<sup>2</sup> 3/2: 696); Kloekhorst (EDHIL: 359) even without fragmentation, as *ḫu-ul-la-an-za-an*), the preserved signs are only *-la-an-za-an* and only the last wedges of *ul* are seen at best (so also correctly Rössle (2002: 98)). However, the figura etymologica makes the restoration entirely certain:



Source: [hethiter.net/:fotarch BoFN01407](http://hethiter.net/:fotarch BoFN01407)

The form *ḫu-ul-la-an-[za]-iš* comes from a NH copy of an OH Telipinu text; another nominative NH form is rendered with the *ḫul* sign: *ḫul-la-an-za-iš* (so Rössle, not so Friedrich, Kammenhuber (HW<sup>2</sup> 3/2: 696), who mistakenly transliterate *ḫu-ul-* in anlaut). The form *ḫu-ul-la-an-za-in* is attested on the right column of a tablet, rather ii than iii (as stated in HW<sup>2</sup>).

The acc.sg. *ḫu-ul-la-an-zi-in*, used in the late-NH text, is highlighted by Harry Hoffner (and in no other source), GrHL: 92, with reference in note 66. He compares the form to *zahḫain / zahḫin* 'battle' and *šaklain / šaklin* 'custom; right' (all acc. sg.), as an example of use of *-i-* in the strong cases as a result of influence from the oblique. In the context (VSN 12.26 Rs. 9'), the word is preceded only by a broken sign and followed by GU<sub>4</sub>.HI.A-*aš* (DBH 6.50). Because the Hittite genitive can also express "for", the connection of 'cattle' and 'fight' is not semantically impossible (C. Melchert, p.c.).

As straightforward as it may seem to view the development from the OH *a*-stem to NH *āi*-stem (or to view the formations as two distinct lexemes, with distinct meaning), one must take into consideration the number of attestations. In OH, the word is attested only once.

Tischler (HEG 1: 279) understands the word as a verbal abstract to *hulla-/i-* 'to fight' with the possibility of backformation to *hullanzatar* n. (r./n. stem) 'upheaval', analogously to (foreign) *alwanzatar* 'sorcery' < \**alwanza-*. In this account, the *-anz-* formant does not represent the PIE participial *-nt-* suffix (Neu StBot 18: 77, note 139). The source of the putative model \**alwanz(a)-* remains unclear.

Rössle understands *h.* as a late, secondary denominal *āi*-stem by backformation either also to *hullanzatar* (from *hullanza-*) or directly from *hullanza-* itself. It cannot be considered derived from the verbal base, as in such a case the *āi-* suffix would immediately follow the verbal stem. Without suggesting IE cognates, Rössle (following Oettinger 1979: 265) agrees with its PIE origin.

Yates (2019: 210: note 12) supports another source of denominal derivation, a development from *hullant-* 'defeated' (participial from *hulle/a-* 'fight', assuming, just as in the case of \**hukma-* > *hukmai-* (see above under *hukmai-*) that the affrication of the stem-final *-t-* derives from the weak cases. In the absence of any attested weak cases, this suggestion can be neither affirmed nor refuted.<sup>60</sup>

Puhvel (HED 3: 366) derives *h.* from *hulla-*, *hulliya-* 'smash, defeat' (also favouring the possible analogy with *alwanzatar* and *alwanzeššar*). Puhvel reconstructs PIE \**h<sub>1</sub>wel-A<sup>w</sup><sub>1</sub>*, with cognates such as ON *valr* 'carnage', Lat. *vellō* 'pluck, tear' etc., and as closest cognate gives Gr. ἀναλίσκω 'waste; spend'. Puhvel's derivation depends on his idiosyncratic system of six laryngeals; the preservation of \**h<sub>1</sub>* > Hitt. *h* word-initially cannot be accepted.

*h.* is considered deverbal to *hulle-/hull-* 'to smash, to defeat' < PIE \**h<sub>2</sub>uelh<sub>1</sub>-*: \**h<sub>2</sub>ul-né-h<sub>1</sub>-ti*, \**h<sub>2</sub>ul-n-h<sub>1</sub>-énti* by Kloekhorst (EDHIL: 358-359), with the possible cognates OIr. *follnadar* 'to rule', Lat. *valeō* 'to be powerful', and further cognates with extension \**-d<sup>h</sup>e-* such as Goth. *waldan*. These (possible) cognates are connected to the root \**welH-* 'be strong' by Kümmel (LIV<sup>2</sup>: 676). Kümmel is

<sup>60</sup> If the *i*-stem variant were original, a denominal substantive \**hullant-i-* to the participle would be phonologically and morphologically impeccable, but the chronology of the attestations argues against this.

reserved about assigning Hitt. *hulle-* to any PIE stem; with reservation, he considers *\*welh<sub>3-</sub>* with metathesis of the laryngeal (LIV<sup>2</sup>: 679). While formally it is only the Hittite evidence that redefines *\*uelH/h<sub>1-</sub>* to *\*h<sub>2</sub>uelh<sub>1-</sub>*,<sup>61</sup> the overview of the attestations by Melchert (2021) make it obvious that semantically, the connection to PIE *\*h<sub>2</sub>uelh<sub>1-</sub>* 'to be strong' is quite possible and for now, the most plausible (ibid. 16).

EDHIL: 359; GrHL: 63, 92, 248; HEG 1: 279; HED 3: 366; HW<sup>2</sup> 3/2: 696; Rössle (2002: 98); Yates (2019: 209); LIV<sup>2</sup>: 679

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<sup>61</sup> For the possible Tocharian evidence, see Melchert (2021).

*hur-tāi-* c. 'curse'

nom.sg.	acc.sg.	gen.sg.	dat.loc.sg.
<i>hur-ta-iš, hu-u-ur-ta-iš, hu]r-da-a-iš, hur-ta-aš, hu-ur-ta-iš; hur-ta-aš<sup>62</sup></i>	<i>hu-ur-ta-in, hur-ta-in, hur-da-a-in; hu-u-ur-ta-in; hur-ta-an</i>	<i>hur-ti-ya-aš, hu-ur-di-ya-aš, hu-u-ur-di-ya-aš, hu-u-ur-ti-ya-aš</i>	<i>hur-ta-a-i, hur-da-i, hur-ti-ya</i>
KBo 1.42 ii 25 (pre-NH/NS); KUB 43.58 ii 49 (MH/MS) (MH/MS); KBo 12.70 rs. 11' (?/NS), KUB 29.1 i 45 (OH/NS); KUB 29.7 + KBo 21.41 Vs. 65 (MH/MS); KUB 29.1 i 45 (OH/NS);	KBo 19.145 iii 8 (MH/MS); KUB 41.8 ii 14-15 (MH/NS); KBo 10.45 iv 14 (MH/NS); KBo 32.14 Rs. 46 (MH/MS); KUB 41.23 ii 16' (OH/NS)	KBo 10.45+ iv 10 (MH/NS); KUB 29.7 Vs. 53 (MH/MS); KUB 29.7 Vs. 2 (MH/MS); KUB 17.18 ii 30 (MH/MS)	KBo 11.1 vs. 45 (NH); KBo 12.70 Rs. 7 (?/NS); KUB 41.8 iv 25 (MH/MS)
nom.pl.	acc.pl.	ablative	dat./loc.pl.
<i>hu-ur-ta-uš, hu-ur-ta-a-uš=ša, hur-da-a-e-eš</i>	<i>hu]-u-ur-ta-a-uš,<sup>63</sup> hu-u-ur-ta-uš, hur-da-a-uš, hur-ta-uš, hur-ta-a-uš, hur-da-uš</i>	<i>hur-ti-ya-zi=ya, hu-u-ur-di-ya-az, hu-ur-di-ya-az, hu-ur-ti-ya-az</i>	<i>h]ur-ti-ya-aš-š=[a;</i>
KBo 39.8 ii 48 (pre-NH/MS); KBo	KBo 39.8 ii 14, 29 (pre-NH/MS); KBo	VBoT 111 iii 18 (pre-NH/NS);	KBo 2,3 i 50 (NH)

<sup>62</sup> Nom.sg. per S. Görke (ed.), hethiter.net/: CTH 414.1 (TX 11.06.2015, TRde 13.03.2015), translated as 'wenn es Verfluchung (ist)'. Friedrich, Kammenhuber (HW<sup>2</sup> 3/2: 770) transliterate *hur-ta-uš<sup>63</sup>* (text *hur-ta-aš*), as nom.pl. 'wenn es Flüche sind'.

<sup>63</sup> HW<sup>2</sup> lists as nom.pl.



39.8 iv 16 (pre-NH/MS); KBo 2.3 ii 1 (pre-NH/NS)	39.8 ii 3 (pre-NH/MS); KBo 2.3 i 42 (MH/NS); KUB 5.6 iii 17 (NH); KBo 19.108 5 (OH/NS); KBo 18.28 Vs. 9 (NH)	KUB 43.58 i 47 (MH/MS); KUB 15.42 ii 10 (MH/MS); KUB 15.42 ii 30 (MH/MS)	
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For further examples see Rössle (2002: 23-25)

**Stem formation and inflection:** Deverbal action noun from *hu(wa)rt-* 'to curse' (or primary?). Both *a-* and *āi-* stem attested in strong cases. Ablauting stem: nom.sg. *hurđāiš*, gen.sg. *hurdiyaš*.

**Discussion:** *h.* is attested in texts written in MS and NS, including NS copies of OH compositions. The *a-* and *āi-* stem are attested in the same periods; there is no reason to suspect a development from one to the other (contra Tischler (HEG 1: 311), who postulates ad hoc a primary *-ta-* abstract and its secondary development to an *āi-* stem).

The form *hur-«te-ya»-ti-ya-za* from KUB 41.22 iii 4, not included by Rössle in the list of forms, clearly shows dittography, perhaps because the scribe sought to correct the by no means unparalleled, but likely disfavored use of <te> for [ti].

It is mostly agreed (except Yates (2019: 209), see below) that *h.* is derived from *hu(wa)rt-* 'to curse'. The connection to Hitt. *weriya-* 'call' with its IE cognates Lat. *verbum* 'word', Lith. *vařdas* 'name', OPr. *wirds*, Goth. *waúrd* 'word', thus to *\*wer-*, rejected by Puhvel (HED 3: 434), is questionable as such (so e.g. Friedrich, Kammenhuber (HW<sup>2</sup> 3/2: 767); see the discussion in Kloekhorst (EDHIL: 373)). Kloekhorst eventually agrees with the connection to OPr. *wertemmai* 'we swear', PIE *\*h<sub>2</sub>uert-*, without other IE cognates.

*h.*, if deverbal, must be formed with zero-grade of the verb, *\*h<sub>2</sub>wrt-* + suffix *-oi-* (Yates (2019: 211)). While most other deverbatives are built to the strong verbal stem, it is in his opinion more likely to be of primary origin with (PIE)

hysterokinetic stress (stress on the suffix in the strong cases and on the ending in the oblique, in contrast to the amphikinetic stress pattern of the verb), thus nom.sg. *\*h<sub>2</sub>w<sub>ṛ</sub>t-ó*.* This suggestion is not isolated; Čop (1971: 46) also takes the *\*oi*-stem to be original.*

To conclude, the form of derivation is for now undecided. Both primary (PIE noun) and deverbative origins are possible.

Kloekhorst (EDHIL: 373); GrHL: 54, 92; HEG 1: 311; HED 3: 434; HW<sup>2</sup> 3/2: 767; Rössle (2002: 23); Yates (2019: 211-212)

*irḫāi-* c. (unknown substance)

<b>nom.sg.</b>
<i>ir-ḫa-[(a-i-ša)]</i>
KBo 52.26 iii 29' (pre-NH/NS) (restoration from KBo 21.8 iii 7' (pre-NH/MS))

**Stem formation and inflection:** This word is a hapax legomenon, of certainly common gender (nominative case is assured by the context of other nouns in the nominative, in a context with a container, where Hittite uses the nominative and not the genitive).

**Discussion:** *i.* denotes some kind of a substance kept in a glazed vessel. The meaning precludes any obvious connection with *irḫā-* 'boundary'. Though transliterated *ir-ḫa-a-it* by Tischler (HEG 1: 367), and considered a *t*-stem neuter, the actual attestation is *ir-ḫa-a-i-ša*. The word can only be restored based on two fragmentary copies of the Ritual of Alli of Arzawa, the first containing the initial signs *ir-ḫa-*, the latter the final *-a-i-ša*.

No conclusions about etymology are possible.

HEG 1: 367; hethiter.net/: CTH 402 (TX 10.11.2014, TRfr 27.02.2013)

*išhamāi*- c. 'song; specific name of a song'

acc.sg.	acc.pl.
<i>iš-ḫa-ma-in</i> ; SÌR- <i>in</i> ; <i>iš-ḫa-ma-a-in</i>	<i>iš-ḫa-m[a-]</i> ; <i>iš-ḫa-ma-a-uš</i> ; [ <i>iš</i> ]- <i>ḫa-ma-a-uš(-ša)</i> ; SÌR <sup>H.L.A.</sup> - <i>uš</i>
KUB 12.11 iii? 30'(MH/MS?); KUB 45.5 ii? 22' (MH/MS); VSFN 12.118 2' (?/NS)	KUB 10.7 14'(OH/NS); KUB 40.92 Vs.? 11 (NH); KBo 21.103 RS. 19' (MH/MS); KUB 36.95 ii 1 (pre-NH/NS)

**Stem formation and inflection:** Stem ablaut not attested. *i*. may be secondary denominal, Hittite deverbal, or a PIE deverbal noun.

**Discussion:** The word is attested in OH/NS, MH/MS, in NH and NS copies, only in the accusative of both singular and plural, as a direct object of the verbs SÌR<sup>RU</sup> 'to sing', *išhamiške*- 'to sing repeatedly', *maniyahḫ*- 'to share', *zinne*- 'to finish'.

The form found in KUB 10.7. 14', where the tablet is broken in the line where one expects a vertical wedge of the sign *ma*, therefore *iš-ḫa-m[a-*, is restored by Kloekhorst (EDHIL: 393) as *iš-ḫa-m[a-uš* and by Rössle as *iš-ḫa-m[a-a<sup>2</sup>-uš*.

Similarly to the pair *ḫukmai*-, *ḫukmatalla*-, we find an attested *išḫamatalla*- 'singer'. That opens the possibility of the existence of an original (unattested) stem *\*išḫama*-. So Kronasser (EHS 1: 178, 206), cited by Puhvel (HED 1/2: 395). Kronasser's (inner-Hittite) derivation of *\*išḫama*- from *išḫiya*- 'bind' along with *išḫimana*- (sic!) 'cord' is not acceptable with regard to the stem-vowel *a*; a *\*-mo*-deverbative to *išḫiya*- could only lead to *išḫima*-.

*\*išḫama*- from a virtual *\*sh<sub>2</sub>-ém-o-* could have been secondarily shifted to the *nomina actionis* with an *āi*-suffix (to which Puhvel, assuming an ablauting stem *išhamāi*-, *\*išḫami(ya)*-, attributes the shift of an ordinary verbal stem *\*išḫamiya*- to the *ḫi*-conjugation).

Rössle (2002: 107) rejects the previously suggested idea of such a development. Instead, he reckons that the word is most probably a secondary, inner-Hittite

deverbal formation to a well-attested verb *išhamai-/ išhami-/ išhamiya-* 'to sing' (the first two *hi*-conjugation, the last NH form *mi*-inflection); so also GrHL: 54. In his opinion, *išhamatalla-* is also deverbal to *išhamiya-*, *išhamai-*, and may be analogical to other *-talla-* deverbatives. However, such a derivation from a *hi*-verb in *-i* is not possible except by analogy; one would instead expect †*išhamiyatalla-*.

According to Kloekhorst (EDHIL: 393), *i.* is derived from Hitt. *išhamai-/ išhami-* 'to sing' and continues a PIE full *-rade* formation *\*sh<sub>2</sub>ém-ōi-*; the formation *\*sh<sub>2</sub>em-* 'to sing' (from *\*seh<sub>2</sub>-* 'to bind') must have been of PIE date, as it is also attested in Skt. *sáman-* 'song' from *\*sh<sub>2</sub>óm-en-*; he rejects the connection to Gk. οἶμη 'song'. What is difficult to reconcile in this etymological suggestion is the fact that one reconstructs two accented stems for PIE 'song', *\*sh<sub>2</sub>ém-ōi-* and *\*sh<sub>2</sub>óm-en-*, without providing other cognates or examples on the basis of which this otherwise compelling suggestion could be confirmed.

To conclude, while a root connection to Skt. *sáman-* is undeniable, there is no objection to its reconstruction as *\*séh<sub>2</sub>-m(e)n-*. So far, no satisfactory solution to the relationship of the *hi*-verb *išham(a)i-* and *i.* has been presented. Though Rössle's solution for *i.* seems to be by far the most straightforward, the verb is left unaccounted for. Also, an account of *i.* along the lines of *hukmāi-* (see above) is made problematic by the difference in the matching verb: a *hi*-verb in *-i-* cannot easily be denominative, by most accounts of the *hi*-verb class. The explanation via an "enlarged" root *\*sh<sub>2</sub>em-* is only an extrapolation of facts. So far, we are left without a plausible cognate-based reconstruction that will account for all attested forms.

EDHIL: 393; GrHL: 54; HEG 1: 378; HED 1/2: 394; Rössle (2002: 106)

(<sup>SÍG</sup>)*ištaggāi*- c. 'bowstring'

acc.sg.	dat./loc.sg.
<sup>SÍG</sup> <i>iš-tág-ga-in(-na)</i>	( <sup>SÍG</sup> ) <i>iš-tág-ga-i</i>
KUB 27.67 iii 29 (MH/NS)	KUB 27.67 i 34', ii 34', iii 15' (MH/NS)

**Stem formation and inflection:** *i*. is also attested as an *a*-stem. There is a single provable *āi*-stem attestation (beside the dative-locative sg.); the primacy of the *āi*-stem is questionable.

**Discussion:** The word is attested mainly as an *a*-stem (see Rössle (2002: 246) for attestations), in a NS copy of a MH Ritual of Ambazi (not with Rössle OH/NS) for KBo 10.37 i 43'. This text, CTH 429, is also the Ritual of Ambazi; see the treatment of this ritual, CTH 391, 429, 463 in Christiansen (StBot 48)).<sup>64</sup>

The acc.sg. <sup>SÍG</sup>*iš-tág-ga-in* is found alongside *a*-stem forms (acc.ag. <sup>SÍG</sup>*iš-tág-ga-an* i 24' and nom.sg. <sup>SÍG</sup>*iš-tág-ga-aš* ii 10) in the Ritual of Ambazi, KUB 27.67. The determinative <sup>SÍG</sup> 'wool' does not seem to support the idea of a bowstring, but the occurrence beside <sup>GIŠ</sup>PAN 'bow' leaves little doubt. The fact that the bow itself is of *ezza*- 'chaff' confirms that we are dealing with a replica, not a real bow and bowstring.<sup>65</sup>

The *āi*-stem is attested only once in the accusative. The dative-locative forms can support both options: they can be built to the *āi*-stem without ablaut (that is, not *iš-tág-gi-ya*) just as well as to the *a*-stem.

More evidence for the *a*-stem in the ritual of Ambazi has been provided by Christiansen (StBot 48: 188, note 785), who shows KBo 48.43 i 20' *iš-tág-ga-as-*

<sup>64</sup> The only attestation outside the ritual is a fragmentary word in Hurro-Hittite bilingual KBo 32.18 6' (MS).

<sup>65</sup> The sense of *ezza*- elsewhere is 'chaff'. Christiansen (SBoT 48: 93-4) valiantly but rather arbitrarily assumes 'reed' for the Ambazzi passage. Just what material is meant remains unclear, but a real bow is surely excluded.

*za-an* is acc. sg. While the spelling is quite unusual, in line 24' it is restored as [*nu iš-t*]áq-qa-aš-ša-an, matching also KBo 10.37 i 48. As a result, all the evidence for <sup>(SÍG)</sup>*ištagga-* and *ištaggai-* is MH. While Tischler (HEG 1: 421) follows Kronasser (EHS: 204) and Čop (1971: 47) in supposing the originality of the *āi*-stem<sup>66</sup>, the weight of evidence is in favor of the *a*-stem as primary.

The overall context suggests that *a-aš-tág-ga-a[n]* (attested only in the Ambazzi Ritual) is not the same word (Christiansen (StBot 48: 236)), though its use in close proximity to *ištagga-* is surely motivated in part by the phonetic resemblance.

With regard to the general typology of the Ambazzi rituals and the several Luvianisms found there, a west/southwest affinity cannot be excluded. However, of interest is the etymology suggested by Oettinger (email to Melchert 2/1/2001), who connects *i.* with *\*stok-í-* 'das steif Gespannte' (ON *stag* 'rope, cable'<sup>67</sup>) to the root *\*stek-* 'steif gespannt sein' (Pokorny 1959: 1011). However, as *i.* is not attested as an *i*-stem *\*\*ištaggi-*, reconstructing oxytone *\*stok-í-* cannot be supported by evidence; one might prefer to reconstruct *\*stók-o-*.

HEG 1: 421; HED 1/2: 451; Pokorny (1959: 1011); Rössle (2002: 246); StBot 48

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<sup>66</sup> Kronasser suggests reconstruction of the suffix *-ai-* < *\*e+laryngeal*; for the full discussion and other theories, see Kronasser (EHS: 204 – 208). He does not specifically treat *i.* on this issue.

<sup>67</sup> See e.g. <https://malid.is/leit/stag> or Johan Fritzner, *Ordbog over det gamle norske Sprog* (1867), p. 616.

*ištarningāi-* c. 'illness'

nom.sg.	acc.sg.
<i>i]š-tar-ni-in-ga-iš</i>	<i>iš-tar-ni-ka-i-in; iš-tar-ni-in-ga-in</i>
KUB 29.1 i 47 (OH/NS)	KBo 18.151 Vs. <sup>?</sup> 5' and 12'(OH/OS); KUB 29.1 ii 32 (OH/NS)

**Stem formation and inflection:** Deverbal commune noun, inner-Hittite derivative, attested only in the strong cases (therefore no information about ablaut).

**Discussion:** *i* is attested only once in the nominative and three times in the acc.sg. In the two OH/OS attestations, there is plene *-i-* in the stem syllable, contrary to the NS attestation, where in turn the nasal explicitly appears before the plosive *g*. The lack of the nasal, if not a simple mistake, is a case of "nasal reduction". The tendency to the loss of nasals before obstruents must have been present already in Hittite and become regular in the first-millennium Anatolian languages. (The absence of nasal is explained by Rössle (2002: 81) as "fakultativ und sekundär.")

The noun is derived from the verb *ištarni(n)k-* 'to make sick', which is formed with the causative nasal infix *-ni(n)-* to *ištark-* 'to get sick'.

Puhvel (HED 1/2: 476) suggests the cognates (of the verbal stem *ištark-*) OCS *sraga*, Toch A *särk*, OIr. *serg* 'illness', Lith. *sergù* 'to be ill' < PIE *\*sterg-* (see there for further etymological suggestions). Kloekhorst (EDHIL: 416) proposes a connection with Lith. *teršiù* 'to befoul', Lat. *stercus* 'excrement' from *\*sterk-* 'to befoul, to pollute', on the basis of efforts to explain the geminate *-kk-* which is frequently found in the verbal stem; its *n*-infix cognates, e.g. Welsh *trwnc* 'urine', also seem comparable to *ištarni(n)k-*. Although the etymology of *i* may remain undecided, there is certainly agreement on its PIE origin.

EDHIL: 416; GrHL: 54; HEG 1: 434; HED 1/2: 476; Rössle (2002: 81); Yates (2019: 209)



*kurkurāi-* c. 'scaring, intimidation'

<b>acc.sg.</b>
<i>kur-ku-ra-in</i>
KUB 7.41 Rs. iv 20 (MH/MS?) and KBo 10.45 ii 51 (MH/NS)

**Stem formation and inflection:** Secondary, (possibly) deverbal action noun of common gender. No other information available.

**Discussion:** *k.* is a hapax (with a duplicate text), attested in the acc.sg. This confirms the gender, which must be commune.

Though *k.* appears as a deverbative, the underlying verb is not known from surviving Hittite texts. Tischler (HEG 1: 652) thinks of *kuer-/kur-* with reduplication; this etymology seems to be based only on the formal resemblance of the two words, and no further reasoning is presented. He expects it to be a base for the (denominal) verb *kurkuriye/a-* 'to scare' and its derivative *kurkurima-*, synonymous with *k.* (as attested in copies). Puhvel (HED 4: 269) adduces *kurkura-* 'clew, ball; bogey' and claims it is neither connected to *kuer-* nor can it be related to the Hurrian homophonous word (nonexistent, see below).

As *k.* is used in the same text as *kurkurim(m)a-*, Oettinger (1999: 459) argues for an analogical formation to *hurtāi-* and *lingāi-* that precede *k.* in lists, which means *k.* would be an ad hoc "nonce" formation.

The explanation via Hurrian is also taken up (among other suggestions) by Rössle (2002: 148), who translates *k.* as "Zorn, Wut, Wortbruch', fraglich 'Angst' etc." Rössle (cit.loc.) argues also on a semantic basis for a loanword based on Hurrian *kurkure/ima-*. However, the Hurrian word is *kūri*, reduplicated *kūkurē* (NB, the first syllable is open in Hurrian) with a following connective *ma* (Giorgieri 1998: 73 [non uidi], translating 'anger'; his basis for assigning 'anger' to the Hurrian (Rössle 2002: 149) is that the Hittite has *kardi*[ ], clearly showing that the Hittite

equivalent was *kardimiyatt-*). The meaning 'anger' for Hittite is certainly false, as is the meaning 'be angry' for *kurkuriye-*.<sup>68</sup>

The clearest passages where *k.* is used suggest 'threat(en)' rather than 'scare', since in the prayer context the target is not frightened. For now, the etymology of *kurkuriye-* must be left open.

GrHL: 54; HEG 1: 652; HED 4: 269; Rössle (2002: 141, 260)

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<sup>68</sup> The sense 'kept intimidating' of *kurkuriškir* in KUB 21.19 iii 29-31 is quite clear; see Singer (2002: 100 with note 7) against the reading *\*\*šarrišker* by Rieken et al. (ed.), [hethiter.net/](http://hethiter.net/): CTH 383.1 (INTR 2016-01-18). Likewise in the description of the same episode in KUB 21.27 i 44 one restores [*kurk*]urešker with Singer (2002: 102) against Rieken et al. (see also Puhvel HED 4:268). This example also proves that *kurkuriye-* is transitive.

While Rieken et al. and Puhvel restore Telipinu KUB 17.10 i 2' *le-e-wa kur-ku-ri-iš-ke*[ as medial Pres2PI 'do not be scared!', given the preceding *penništen=wa* in KBo 55.8 i 12', it is more likely that with Hoffner (1990: 15f), one should restore an active verb: "Drive off! Do not make threats!"

*lakšāi-* c. (object of silver)

nom.sg.	acc.sg.	nom.pl.
<i>la-ak-ša-iš</i>	<i>la-ak-ši-na-an, la-ak-ši-i-na-an</i>	<i>la-ak-še-ni-iš</i>
KBo 17.65 Rs. 55 (MH/MS)	KBo 32.47c iii 4-5; KBo 32.47c iii 8	KBo 23.52 iii 3-6

**Stem formation and inflection:** *l.* may either be an *s*-stem neuter<sup>69</sup> or an *āi*-stem commune. Attested only once in the nom.sg., without plene vowels.

**Discussion:** The word with the stem *lakšai-* is hapax, attested only in the nominative singular. Its stem cannot be determined. The similar *a*-stem *lakši/ena-*, denoting a bronze object and known only in the acc.sg. and nom.pl., could be connected. (Puhvel (HED 5: 39) compares the derivation of *lakši/ena-* from *l.* to that of *arahzena-* from *arahziya-*, but *arahzena-* is derived directly from the adverb *arahz(a)-*, so the derivation is unlikely as given.)

Tischler (HEG 2: 19) also mentions a fragmentary attestation Bo 6976 iv 8', where *i.* is found in connection with wool; unfortunately, this fragment has not been made accessible to the public.

No etymology.

CHD L-N: 20; HEG 2: 19; HED 5: 39; Rössle (2002: 290)

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<sup>69</sup> Stems in *-aiš* cannot be excluded in potential loanwords; otherwise, Hittite has no neuter *s*-stems with such a shape.

<sup>KUŠ</sup>*laplāi*- c. (body part)

nom.sg. or pl.	nom.pl.	incomplete
(2) <sup>KUŠ</sup> <i>la-ap-la-iš</i> , [ <sup>KUŠ?</sup> ] <i>la-a[p-l]a-a-iš</i>	<i>la-ap-li-eš</i> <sup>70</sup>	<sup>KUŠ</sup> <i>la-a[p-li-eš]</i>
KUB 28.102 iii <sup>1</sup> 7 (OH/NS); KUB 41.7 ii <sup>1</sup> 3+28.102 ii <sup>1</sup> 8 (OH/NS)	IBoT 2.134 17' (?/NS)	IBoT 2.134 2' (?/NS)

**Stem formation and inflection:** *l.* could either be an *āi*-stem commune or an *i*-stem.<sup>71</sup> Ablaut is possible but not certain.

**Discussion:** *l.* is attested from OH/NS. (The OH attestation emended by Rössle (2002: 260) as <sup>KUŠ?</sup>*la-ap-li-t(a-a[t-ká]n* in KBo 17.17 i 8 is better emended per Giorgieri to *la-ap-li-<pi>-t=a-a[t=k]án* (as 'eyebrow' immediately precedes). Furthermore, any connection of a body part determined by KUŠ with 'eyelash' is not credible.)

Though nom.pl. †*laplāeš* is expected, the attested form is *laplieš*. But since the nom. sg. forms are at least OH/NS, one could assume a genuine ablauting stem influenced by the *i*-stem nouns, based on the match in the weak cases. If the word was a non-ablauting *āi*- stem, it is less easy to motivate the variant.

The omission of the determinative KUŠ 'skin, fur' in the nom.pl. must be taken as accidental, as the determinative is present in line 2'.

Since *l.* is found in connection with the number "two", some think of a paired body part. However, the word is also used in rituals, where it may denote a substance that is either eaten or used for some specific purpose (CHD L-N: 45).

No etymology.

CHD L-N: 45; HEG 2: 43; HED 5: 63; Rössle (2002: 260)

<sup>70</sup> This example is preceded by numeral "2".

<sup>71</sup> This stem cannot be even potentially understood as an *s*-stem neuter. While a stem in *-aiš-* might be theoretically possible in a loanword, it is not acceptable for an ablauting paradigm.

<sup>GIŠ/GI</sup>*lazzāi*- c. (kind of tree or wood)

nom.sg.	other
<i>la-az-za-iš</i> ; <sup>GIŠ</sup> <i>la-az-za-iš</i> ; <sup>GIŠ</sup> <i>la-az</i> [-	<sup>GIŠ</sup> <i>la-az</i> [-; 20 <sup>GI</sup> <i>la-az-za-iš</i>
KUB 17.10 ii 31' (OH/MS); KBo 37.23 iv 2' (OH/MH) KBo13.86 Rs. 3 (OH/NS)	KBo 17.75 i 35 (OH/MS); KUB 53.15 v 8 (pre-NH/NS)

**Stem formation and inflection:** The word is found with certainty only in the nom.sg.; the stem is uncertain. Its derivational base could be the adjective *lazzi*- 'good, fine', attested in an OH text (CHD L-N: 50), or it could be from the Hattic lexicon.

**Discussion:** The stem form of *l.* cannot be assured. Besides an *āi*-stem commune (in the nominative singular), it could also be an *s*-stem neuter in the same case. (Contra CHD, the reference KBo 13.86 RS. 3' contains only the first three signs of *l.*, not the complete nominative singular.)

Since *l.* is used (in KBo 37.23) in a context with other plant names, some of them Hattic, Rössle thinks of a Hattic origin. The fact that Hattic plant names could be embedded in the Hittite lexicon is exemplified by Hatt. *sa-a-hi-is*, found in Hittite as the commune noun <sup>GIŠ</sup>*šahi(š)*- (ABoT 1 i 22 ff.).

In the example from KUB 17.10, *l.* is preceded by *GI-az*. In this phrase, *l.* appears to act as an adjective modifying 'reed'. But Hittite has adjectives only in *-iš*, and a Luvian-inflected adjective in this OH context is suspect, and so are two nouns in apposition. An error in writing *GI-az* cannot be excluded (given other errors in KUB 17.10), and one should probably read *GI* as a determinative to *l.*, as also attested in KUB 53.15 v 8.<sup>72</sup>

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<sup>72</sup> Since the CHD doubts that *GI&GIŠ* can be used interchangeably. Rössle cites von Schuller (2002: 293, note 1055) that one does find <sup>GIŠ</sup>*GI.DÜG.GA*. Another example of its use is also <sup>(GI/GIŠ)</sup>*PISAN*.

Rössle opposes the derivation of *l.* from adj. *lazzi-* (saying that if it were so, one should expect the deadjectival noun †<sup>GIŠ</sup>*lazzi-* instead of the attested <sup>GIŠ</sup>*lazzāi-*, analogously to <sup>DUG</sup>*palḫi-* derived of *palḫi-* 'wide'). A connection with *lazzi-*, an adjective attested only in an OH text, is found possible by others, among them Kloekhorst (EDHIL: 522) and Puhvel (HED 5: 68). Puhvel lists the adjective as *lazzāi-*, *lazzi-*, but provides only examples of the stem *lazzi-*; he presupposes the existence of *lazzāi-* based on the alleged nominalization to <sup>GIŠ</sup>*lazzāi-*. The CHD remains cautious about the connection (CHD L-N: 50). An important hint to connecting *lazzāi-* and *lazzi-* could be its equation to Sumerian GI.DÛG.GA and Akkadian *qanū tābu* 'sweet (lit. 'good') flag'. However, there is no consensus on the matter (more by Kloekhorst (EDHIL: 522)).

To conclude, one cannot prove that *l.* is Hattic, but the problems with establishing the connection between *l.* and *lazzi-* point in that direction. While the Hittites may have reanalyzed *l.* as an *āi-*stem, analogous to *šahī-*, even in this case the word would still have its origins in a loanword.

No etymological connection is possible for now.

CHD L-N: 49; Kloekhorst (EDHIL: 522); HEG 2: 48; HED 5: 68; Rössle (2002: 291)

<sup>DUG</sup>*le/ilḫuntāi-* c. 'vessel to receive liquid' (?)

<b>acc.sg.</b>
<sup>DUG</sup> <i>le-el-ḫu-u-un-da-in</i> ; <sup>DUG</sup> <i>le]-el-ḫu-un-ta-al-li-in</i>
KUB 30.19 iv 18 (OH/NS); KUB 39.8 iv 10 (OH/NS)

**Stem formation and inflection:** The stem is uncertain; the two attestations differ in the last syllables of the stem, *-tain* vs. *-tallin*.

**Discussion:** The attestations come from OH funeral ritual preserved in NS. The duplicate offers a different rendering of *l.* in the same text and only there do we find the verb *leḫundāi-* meaning 'to pour (into the *l.* vessel)'. On both semantic and formal grounds, the noun may be derived with syncope from *\*lilḫuwant-*<sup>73</sup> part. 'poured out' of *li/elḫu(wai)-* 'to pour out', via the verb *le/ilḫundāi-*. Tischler's proposal (HEG 2: 58) of *l.* as denominative to a verbal abstract *\*leḫund-* of *leḫu(wai)-* 'to pour out' is not acceptable (such a stem as a verbal abstract is impossible).

For several possibilities of mutual relationship and development of the two attested formations, <sup>DUG</sup>*le/ilḫuntāi-* and <sup>DUG</sup>*le/ilḫuntalli-*, see the extensive discussion in Rössle (2002: 266-272).

The derivation poses a semantic problem. Since the participle means 'poured out', it is hard to see how a derived noun could refer to a vessel with/from which one pours something. Rössle also objects to the CHD's interpretation of the verb as 'to pour(?) (from a *l.*-vessel)'. The mismatch may be resolved by acknowledging that the two vessel names refer to a vessel *into which* one pours something, presumably, a special one used only in the royal funeral rites (see the passage KUB 30.19 iv 10-12 translated in CHD L-N: 60, where liquid is poured into the *l.*-

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<sup>73</sup> The original vocalism of the verb *le/ilḫu(wa)-* was *-i-*; therefore the participle, though unattested, is rendered here with this vowel.

vessel). The hesitation as to which *l*. form to use could also indicate that both nouns are "nonce" formations.<sup>74</sup>

There is no reason to doubt that *l*. is derived from the verb *leḫu(wai)*, reduplicated descendant of the PIE root *\*leh<sub>3</sub>(u)-* (> Hitt. *laḫu-* 'to pour out'). The opinion on the etymology of *laḫ(h)u-* 'to pour (a liquid)' has undergone important changes in the last two decades, following the paper of Melchert (2011), whose analysis justifies the laryngeal *\*h<sub>3</sub>*. *\*leh<sub>3</sub>(u)-* would have had a zero grade before consonant of *\*luh<sub>3</sub>-*, whence with metathesis a new full grade *\*leuh<sub>3</sub>-*. Accepted by Kümmel (2015, entry *\*leh<sub>3</sub>w-*), the PIE stem is now considered to contain *h<sub>3</sub>* instead of *h<sub>2</sub>*, with an aorist *\*léh<sub>3</sub>u-/luh<sub>3</sub>-* with lenis *h<sup>w</sup>* < *\*h<sub>3</sub>u* as source of *laḫu-*, and present *\*li-lh<sub>3</sub>u-e-* as source of Hitt *lilḫu(a)-* 'to pour (repeatedly)'. Besides the PIE origin of *lilḫu(a)-*, Kümmel (note 8) does not exclude the possibility of a newly formed inner-Anatolian iterative. Kloekhorst, who originally proposed the PIE preform *\*lóh<sub>2</sub>u-ei* (EDHIL: 526), also accepts Melchert's arguments for *\*leh<sub>3</sub>u-*, though he sees the *\*h<sub>3</sub>* as a fortis consonant (Kloekhorst 2018: 86).

*\*leh<sub>3</sub>w-* is the source of Lat. *lauō, -ere* 'to wash (yourself)', Gr. *λοέσαι* 'to wash' (Sturtevant (1927:122), see also Puhvel (HED 5: 24)).

CHD L-N: 60; EDHIL: 526; HEG 2: 58; HED 5: 82; Rössle (2002: 266); hethiter.net/: CTH 450.1.1.4 (2011)

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<sup>74</sup> „Nonce" formations are real words created „on the spot" and are not part of the general lexicon shared by all speakers. But there are cases where such creations eventually become part of the lexicon.



*lingāi-* c./n. 'oath; oath deity; perjury'

nom.sg.	acc.sg.	nom./acc.sg.	gen.sg.	dat./loc.sg.	erg.sg. <sup>75</sup>
<i>li-in-ga-iš</i>	<i>li-in-ga-in,</i> <i>li-in-ga-en,</i> <i>li-in-qa-en,</i> <i>li-in-qa-in</i>	<i>li-in-g[a-]e</i>	<i>li-in-ki-ia-aš,</i> <i>le-en-ki-ia-aš,</i> <i>li-in-ki-aš,</i> <i>le-en-ki-aš,</i> <i>li-in-ga-ya-aš</i>	<i>li-in-ki-ya,</i> <i>le-en-ki-ya,</i> <i>li-in-ki-i-ya,</i> <i>li-in-ga-i,</i> <i>le-en-ga-i,</i> <i>le-en-qa-i,</i> <i>le-en-qa-a-i,</i> <i>li-in-ga-e</i>	<i>li-in-ki-ya-an-za,</i> <i>li-in-ki-ya-az</i>
KUB 35.148 iv 18 (OH/NS) and also e.g. KUB 29.9 i 7 (pre-NH/NS)	KUB 30.10 Vs. 12 (pre-NH/MS); KUB 36.108 Vs. 10 (OH/OS); KUB 40.79 2 (pre-NH/NS); KBo 24.47 iii 22 (pre-NH/NS)	KUB 29.7 Rs. 41 (MH/MS)	KBo 15.10 iii 63 (MH/MS); KUB 36.89 Rs. 18 (NH); KBo 8.35 ii 10 (MH/MS); KBo 6.34 iv 11 (MH/NS); KBo 4.4 iv 60 (NH)	KBo 8.35 ii 13 (MH/MS); KBo 6.34 iv 18 (MH/NS); KUB 14.14 Vs. 4 (NH); KUB 9.31 ii 4 (MH/NS); HT 1 i 57 (MH/NS); KUB 4.3 Vs. 10 (NH); KUB 43.72 ii 7 (?/NS); KUB 43.58 i 55 (MH/MS)	KBo 11.72 ii 40 (MH/MS?); KUB 30.34 iv 7 (MH/NS)

<sup>75</sup> For the unusual formation of ergative to common gender noun, see GrHL: 92 note 67.

acc.pl.	erg.pl.	ablative
<i>li-in-ga-a-uš, li-in-ga-uš, le-en-ga-uš</i>	<i>li-in-ki-ya-an-te-eš</i>	<i>li-in-ki-az, li-in-ki-ya-az, le-en-ki-az, li-in-ki-ya-za, le-en-ki-ya-za</i>
KUB 17.21 iv 16 (MH/MS); KBo 6.34 iii 40 (MH/NS); KUB 14.3 ii 52 (NH)	(KUB 36.106 Rs. 6 (OH/OS).	KBo 16.47 23 (MH/MS); KBo 16.47 14 (MH/MS); KBo 9.146 Rs. 18 (?/NS); KUB 12.61 iii! 10 (?/NS); KBo 13.131 iii 9 (MH?/NS)

**Stem formation and inflection:** Deverbal action noun to the base *ling-* 'to swear'. Stem ablaut attested, though the full grade of the stem is occasionally found also in the oblique cases.

**Discussion:** *l.* is attested from OH. The strong ablaut stem of *l.* has in some instances influenced the oblique stem (thus *-ai-/ae-/ay-* in the oblique cases instead of the "expected" *-i-/iy-*), as seen in gen. *lingayaš*, dat.-loc. *lengai* etc., but the weak stem forms still prevail in most instances. The OH/OS attestation of the erg.pl. (listed as nom.pl. by Puhvel (HED 5: 88)) contains the weak stem *-iy-*. The full ablaut grade in the oblique is found exclusively in (some) NH or NS texts.

The initial sign has both readings */li/* and */le/*; these syllables cannot be differentiated in Hittite cuneiform script. Where the syllabogram is followed by the sign *in*, it is conventionally transcribed *lin-\**. It remains uncertain whether the NH/NS spellings with the second sign *en* are merely meaningless variants or reflect genuine variation in NH. One may also expect the influence of Luvian speakers for whom Hittite was a second language, since Luvian had no contrast of */i/* and */e/*.

*l.* was also rendered as a Sumerogram NAM.ERÍM.ĪI.A (KUB 15.1 ii 34) or Akkadogram *MĀMĪĒTU* (frequently).

There is no convincing etymology; a connection to Lat. *ligāre* is dismissed by Kloekhorst (EDHIL: 527) on the grounds of the behaviour of the nasal infix elsewhere, where with a root-final velar one would expect *-ni(n)-* in Hittite, that is, †*lini(n)k-*. Kloekhorst (EDHIL: 527) prefers a connection to Gk. ἐλέγχω 'to disgrace, to question' from PIE *\*h<sub>1</sub>lengʰ-*. Tischler (HEG 2: 62) sees this suggestion (first proposed by Sturtevant, see Puhvel (HED 5: 61) as "formal besser, aber semantisch schwächer." What can be considered with regard to semantics is Christiansen's account of the "Soldiers' Oath" (StBoT 53: 350). Swearing an oath in Hittite meant placing a curse on oneself, and per Christiansen, also on the others swearing an oath. This may unify *l.* with a PIE root that bore a meaning similar to 'to blame' or the like.

CHD L-N: 64; EDHIL: 527; GrHL: 72, 92; HEG 2: 62; HED 5: 88; Rössle (2002: 28), StBoT 53: 347-406

<sup>GIŠ</sup>*lūlāi-* c.? (an object made of wood or a tree and its product)

nom.sg.	other
<sup>GIŠ</sup> <i>lu-u-la-iš-ša(-ma-aš-ši-x[</i>	<sup>GIŠ</sup> <i>lu-u-la[-; </i> <sup>GIŠ</sup> <i>lu-la-a-i[</i>
KBo 13.100 7' (?/NS)	KBo 20.8 Rs.? 12 (also line 13; OH/OS); KBo 14.23 2' (?/NS)

**Stem formation and inflection:** *l.* is attested only in fragmentary context, all four attestations are broken, and their case cannot be determined with certainty.

**Discussion:** The word is attested from OH. The *āi*-stem is assured only by KBo 13.100 7', which also points to common gender; the word there is continued by the signs *-ša-ma-aš-ši-x*, followed by a breach. Based on this instance, the CHD sets beside the stem <sup>GIŠ</sup>*lulāi-* a separate <sup>GIŠ</sup>*lulaišša-*. However, this option is less likely, as it would require a derived stem in *-šša-*, which hardly exists in Hittite outside names of deities derived from body parts. Also, because we are dealing with a NS copy of an OH text, there may have been a certain degree of misconception involved. The OH archetype <sup>GIŠ</sup>*lu-u-la-i-ša-aš-ši*, with OH non-geminating =*a* marking contrast, may have been geminated and fortified with NH =*ma* for the sake of the context.

For KBo 20.8 Rs? 12 Neu (StBot 25: 70) suspects a stem <sup>GIŠ</sup>*lula-* (note 263). Because of the broken context, the *āi*-stem in this case cannot be proved. But given the evidence of the two non-OH examples, economy suggests a single stem <sup>GIŠ</sup>*lūlāi-*.

The date of tablet KBo 14.23, transliterated by Beckman (StBot 29: 221), cannot so far be determined; there is no assurance that this fragment (which only has 8 broken lines with no more than one token in a line) belongs to the birth ritual, for the obvious reason of its fragmentary condition. *l.* on this tablet follows the numeral “1”, and although it is not made obvious by Beckmann’s transliteration, there is a break right after the sign *i*, so the form could well have been longer. Therefore, it has no consequences for determining the gender of the noun.

Etymology unknown; Rössle (2002: 297) thinks of a Hattic substrate.

CHD L-N: 80; HEG 2: 71; Rössle (2002: 296); StBot 25, 1980: 69-71; StBot 29, 1983: 221.

*maniyahhāi*- c. 'administrative district; administration, government, rule'

nom.sg.	acc.sg.	gen.sg.	dat./loc.sg.	abl.	acc.pl.
<i>ma-ni-ya-ah-ḫa-iš</i> , [ <i>ma-a-ni</i> ]- <i>ya-ah-ḫa-a-iš</i> , <i>ma-ni-ya-ah-ḫa-aš</i>	<i>ma-ni-ya-ah-ḫa-en</i> , <i>ma-ni-ya-ah-ḫa-i-i[n]</i> , <i>ma-ni-ya-ah-ḫa-in</i>	<i>ma-ni-ya-[ah]-ḫa-ya-aš</i> , <i>ma-ni-ya-ah-ḫi-ya-aš</i>	<i>ma-ni-ya-ah-ḫi-ya</i> , <i>ma-a-ni-ya-ah-ḫi-ya</i> , <i>ma-ni-ya-ḫi-ya</i>	<i>ma-ni-ya-ah-ḫi-ya</i> , <i>az</i>	<i>ma-ni-ya-ah-ḫa-uš</i>
KBo 11.72 iii 23 (MH/MS?); KBo 63.9 6' (NH); KBo 13.13 Rs. 4' (OH/NS)	KUB 29.1 i 23 (OH/NS); KBo 19.60 23 (OH?/NS); KBo 19.60 22 (?/NS) (also duplicate VSFN 12: 126 10' (?/NS))	KUB 31.127 i 20 (OH/NS); HKM 31.14' (MH/MS)	KUB 13.2 i 22' (MH/NS); KBo 63.9 9' (NH); KUB 13.2 ii 24 (MH/NS)	HKM 5 8 (MH/MS)	KBo 14.45 3' (NH)

**Stem formation and inflection:** Deverbal action noun with stem ablaut, from *maniyahh-*'to administer'; inner-Hittite formation.

**Discussion:** *m.* is attested in an OH text recorded in NS. The root syllable is mostly recorded without plene *-a-*. Kloekhorst (EDHIL: 553) concedes that the verb occurs as *ma-a-ni-ya-ah-ḫi*. in KBo 17.74 ii 31, which is OH/MS, but argues that this is innovative, since it occurs twice in OH/OS as just *ma-ni-ya-ah-* (for the attestation, see CHD L-N: 163).

Nom.sg. *m.* in the NH fragmentary text KBo 63.9 6' is restored by Rössle (2002: 86) and the CHD as [*ma-a-ni*]-*ya-ah-ḫa-a-iš*. The restoration is based on the dative-locative, which appears with plene *-a-* in line 9' (KBo 63.9 9'). Since the text is a court protocol of NH date, the plene spelling may be interpreted just as in the verb.

Plene spelling is not found in the other two complete attestations of the nom.sg. of *m*. However, it is preserved in the dative-locative (KBo 63.9 9'); this attestation provides evidence for the ablauting root.

In the acc.sg. attestation of KBo 19.60 23, the final sign is only marginally broken and thus reliable; the other, complete attestation (line 22) is assured by the duplicate VSFN 12: 126.

In the dative-locative, the final *-iya-* is an example of the use of the *a*-ending denoting location.

Beside *m*., there exists an *a*-stem *maniyahḫa-* (e.g. Kloekhorst (EDHIL: 553)). The relation between the two is understood by Tischler (HEG 2: 121) as a development from *a*-stem to *āi*-stem, and thereof the verb *maniyahḫāi-*. Tischler does not provide a reason for such a development and in light of similar deverbative formations with the *āi*-suffix, it is more likely that the two words have functioned alongside one another. While Tischler expects a similar meaning to *m*., the CHD L-N: 167 suggests that *maniyahḫa-* must be a living being (and as such, very unlikely a district) and so an entirely different word from *m*. The argument is based on the attestation in the NS Ritual of Zuwi KUB 35.148 iii 11. The passage describes a puppy which is held towards the Sun(-god). As the puppy speaks to the Sun-god, it is taken as an anthropomorphic personification, 'trusted one, confidant, deputy'. According to the CHD, it may be a base for the derivation of *maniyahḫai-* 'to govern, to administer', but the latter is more likely deverbative.

The unexplained issue resulting from the reasoning presented above is how a deverbative action/result noun from 'to allot, to entrust' has come to refer to a person; analogously to other such derivations, it should mean 'allotment' or 'trust' (e.g. *alwanzahḫa-* 'bewitchment', not 'bewitched' or 'witch').<sup>76</sup> Pace Rössle et al., deverbative *āi*-stem nouns are action or result nouns, not abstracts (cf. *lingāi-*, *hurtāi-*, *sāgāi-*; see also the discussion of the same problem under the agent noun

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<sup>76</sup> This discussion does not resolve the question of the *a*-stem vs. *āi*-stem as it applies to any action noun.

*wagāi-* 'meal-worm'). As shown by English, action nouns can through a collective sense refer to groups or even individuals (e.g., 'deputation' does not mean the act of making someone a deputy, but a group of persons or one such person). The stem *maniyahḫa-* is probably merely a secondary "thematization" of a stem in *-ahḫ-* matching the verb, for which one may compare *manninkuwahḫa-* 'vicinity', for which see the CHD L-N: 171.

To conclude, while *maniyahḫa-* is derived from the verb in its sense 'to allot, hand over, entrust', and *maniyahḫāi-* in its sense 'to handle', thus 'to administer', there is no evidence for the latter in the sense 'deputation' or 'entrusting'. This prevents us from uniting the two and for now, the matter must remain open.

It is generally agreed that the verb *maniyahḫ-* is connected to Lat. *manus* 'hand', with several proposals for the form of its PIE ancestor: differently Kloekhorst (EDHIL: 554) *\*mn-i-eh<sub>2</sub>-*, HEG *\*mə-r/\*mə-n-és*; Rössle (also) *\*mneh<sub>1</sub>-* > Luv. *m(a)nā-* 'to see' (this proposal is unacceptable on semantic and also morphological grounds, as it cannot account for the *-iyahḫ-* suffix).

CHD L-N: 167; EDHIL: 553; GrHL: 54; HEG 2: 121; HED 6: 49; Rössle (2002: 86); Yates (2019: 9); KBo 11: 72: hethiter.net/: CTH 447 (INTR 2015-07-20); KUB 29.1: hethiter.net/: CTH 414.1; KUB 31. 127 i 20: hethiter.net/: CTH 372



*muhlāi-* c. '?'

<b>nom.sg.</b>
<i>mu-uh-la-iš</i>
KUB 43.74 Vs. 7

**Stem formation and inflection:** The stem of *m.* is uncertain. Either, it can be an *āi*-stem commune, or in the case of a loanword possibly an *s*-stem neuter.

**Discussion:** The origin of this word is unknown. It denotes a material used for glass production, as it is found in the phrase [ x GÍ]N<sup>?</sup> *muhlaiš* 'x shekels of *muhlai(š)*'. It is attested only as a hapax nom.sg.; the stem cannot be determined with certainty, and therefore nor can the gender. If an *āi*-stem, then obviously commune, therefore (provisionally) listed here as such.

No etymology.

CHD L-N: 319; HEG 2: 225; Rössle (2002: 297)

<sup>UZU</sup>*mu/aḫrāi-* c. 'a part of the upper leg of mammals'

nom.sg. (or pl.)	acc.sg.	acc.sg. (incomplete examples)	dat./loc.sg.?
<sup>UZU</sup> <i>mu- uḫ-ra-iš</i>	<sup>UZU</sup> <i>mu-uḫ-ra-in</i> ; <sup>UZU</sup> <i>mu-u- uḫ-ra-in</i> , [ <sup>UZU</sup> <i>mu-uḫ</i> ]- <i>ra-a- in</i> , <sup>UZU</sup> <i>mu-uḫ-ḫa-ra-[i]n</i> , <sup>UZU</sup> <i>ma-aḫ-ra-en</i> , ] <i>mu-uḫ- ra-an</i>	<sup>UZU</sup> <i>mu-uḫ-ri-i[- in</i> ; <sup>UZU</sup> <i>mu-uḫ- ri-iš-š[a-an</i>	] <i>mu-uḫ-ra-i</i> ; <sup>78</sup> [ <i>mu</i> ]- <i>uḫ-ra-i</i> <sup>79</sup>
KUB 20.10 Vs. iii? 15 (OH/NS)	KBo 21.37 Vs.? 11 (MH/MS); KBo 23.34+33.120 i 27 (MH/MS); KUB 45.51 ii 21 (?/NS); KBo 2.14 iv 2 (OH/NS); KBo 17.30 ii 2 (OH/OS); KBo 22.146 Rs.? 7 (OH/NS)	broken: KBo 20.16 Vs.? 15' (OS); KUB 9.37 1' + KBo 22.172 6' (OH/MS)	KUB 45.37 ii 2 (MH/MS?); KUB 42.85 2

gen.sg. (or pl.)	acc.pl.	other
<sup>UZU</sup> <i>mu-uḫ-ri-aš</i>	<sup>UZU</sup> <i>mu-uḫ-ḫa-ra-uš</i> , <sup>UZU</sup> <i>mu-uḫ- ra-a-uš</i> , <sup>UZU</sup> <i>mu-uḫ-ra-u[š</i>	<sup>UZU</sup> <i>mu-uḫ-ri[-in?</i>
KBo 30.61 Vs.? 18' (pre-NH/MS)	KUB 10.62 Rs. v? 7 (OH/NS); KBo 17.15 Rs 5 (OH/OS); KUB 10.62 Rs. V? 10 (NS)	KUB 9.37 5' (OH/MS)

<sup>77</sup> Reading and restoration of noun as implied by Neu (StBoT 25: 43, note 144). Contextually acc.sg. (thus <sup>UZU</sup>*mu-uh-ri-y[a-* hardly possible).

<sup>78</sup> *m.* in this example precedes *dāi-*. It is very likely to be translated as 'places on the *m.*', though Rössle understands the phrase as '*m.* is put onto st.' and *m.* as nom.-acc.sg. neuter. In the absence of other nom.-acc. neuter forms of *m.*, this is less likely than the former interpretation.

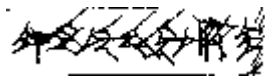
<sup>79</sup> Rössle (2002: 173, note 603) dismisses this attestation as uncertain. However, this word is possible in a festival text. It precedes ZAG-*az*, assuring the dat./loc. 'to the right of the *m.*'

**Stem formation and inflection:** Unknown origin of derivation, attested  $-\bar{a}i-/i-$  stem ablaut. There is one example of plene root vowel  $-u-$  (KBo 23.34 i 27) and two attestations of plene  $-a-$  in the suffix (KUB 45.51 ii 21 (?/NS) and KBo 17.15 Rs 5 (OH/OS)).

**Discussion:** *m.* is attested from OH. It is established as an  $\bar{a}i$ -stem through a number of attestations in the strong cases, the nom.sg. (or pl.), acc.sg. and acc.pl. (Only a sample of acc.sg. attestations is given here; for others see Rössle (2002: 171) and CHD L-N: 317.)

As to the incomplete forms (listed above in the table as 'other'), they are of interest as examples of *i*-inflection. Beside them, we find  $-i-$  in the stem only in the gen.sg./pl. <sup>UZU</sup>*mu-uh-ri-aš*. The broken forms do not provide enough context to determine their case; however, solutions are suggested below.

The first accusative example is found on a broken tablet KBo 20.16 Vs? 15' (OS).



Per Neu (StBot 25: 43 plus note 144 + StBot 26: 122), one can read either  $-i[ ]$  or  $-y[a-]$ . As the preceding and following lines argue for an accusative (the preceding text on the line is 1 NINDA.GUR<sub>4</sub>.RA GAL. *m.*, which should most probably be followed by the verb *da-a-i*, analogously to the following line (16')), it is incompatible with either a stem in  $-\bar{a}i-$  or one in  $-i-$ . The implication of Neu's view (followed by Tischler (HEG 2: 226)) is the reading <sup>UZU</sup>*mu-uh-ri-i[-in]* with the plene spelling of an  $-i$ -stem (which is also attested both in KBo 22.172 6'+KUB 9.37:1' and in the incomplete example in 9.37:5'). CHD L-N: 317 emends *mu-uh-ri-m[a?]*, which must be rejected.

The second example is contained on the recently joined tablets KBo 22.172 6' + KUB 9.37 1', which allows for more complete reading of the word and also for context. *m.* precedes *wallašnaš hašta*[(lines 8'/ 3')], which supports the understanding of *m.* as part of the upper leg. (*m.* is also used in connection with *wallaš haštai* 'thigh bone' in e.g. KBo 13.167 ii 2'-7'). The form contained there,

<sup>UZU</sup>*mu-uh-ri-iš-š[a-an]*, can only be acc. sg. comm. The assimilation of *mu-uh-ri-in=ša-an* to *mu-uh-ri-iš=ša-an* provides further evidence for the *i*-stem being already OH. (A nom.sg. must be excluded, as the possessive could only be =*ši-iš* in that case, while for the acc.sg. one finds both =*ši-in* and =*ša-an*.)

The last broken example is preceded by *w]a-ša*, without additional context.

The CHD separates the stems *mahurāi-*, *mahhuri-* as separate lemmata, as they are not used with UZU and it is not confirmed whether they express a body part.

Though there is a consensus on the meaning of *m.* as the meaty, edible part of an animal, the specific context in which it is used allows for more precision.

The etymology of *m.* is uncertain. Rössle considers an IE etymology unlikely. Not so Kloekhorst (EDHIL: 540 (following Weitenberg 1979: 303),<sup>80</sup> who thinks of the possible IE cognate Gr. μηρός 'thigh(bone)' from PIE *\*méh<sub>2</sub>r-oi-*, *\*mh<sub>2</sub>r-i-* (?). It has been proved by Nussbaum (2018: 232) that μηρός has the meaning 'thigh' while μηρα, until now considered its variant plural, has the meaning 'thigh bones'. Nussbaum lists among cognates to μηρός Lat. *membrum* 'limb, body part', OIr. *mír* 'piece, portion', Czech *mázrda* 'membrane', reflecting variants of a PIE noun for 'flesh' *\*mems-ro-/mēs-ro-*, since previous evidence did not link the Hittite word specifically with 'thigh bone' (cf. note 27). The distinction of 'thigh' and 'thigh bones' has implications for the semantics of the Hittite word.

The etymology of *m.* is based on the expected ablaut *\*mé/óh<sub>2</sub>r-* / *\*mh<sub>2</sub>r-*, reconstructed on the presumption that the acc. <sup>UZU</sup>*ma-ah-ra-en* belongs to the paradigm and the other forms with root *mu-uh-* have developed from the PIE zero grade. However, the affiliation of <sup>UZU</sup>*ma-ah-ra-en* does not threaten the proposed etymology.

CHD L-N: 317; EDHIL: 540; HEG 2: 225; HED 6: 74; Rössle (2002: 171)

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<sup>80</sup> Weitenberg (1979: 303) equates *m.* to Akk. *kuridu* 'shin-bone'. Because *m.* usually precedes *wallaš haštai* and in the cited passage *kuridu* follows it, *m.* should not be taken as a translation of the latter.

*šagāi-* c.(/n.?) 'omen, sign'

nom.sg.	acc.sg.	gen.sg.	ablative
<i>ša-ga-i-[i]š; ša-ga-a-iš; ša-ga-iš; ša-ka-i-ša; ša-ka-eš-ša</i>	<i>ša-ga-[in]; ša-[ga]-a-[in]; ša-ga-in; ša-a-ga-a-in</i>	<i>ša-ki-ya-aš; ša-ki-aš</i>	<i>ša-a-ki-[ya]-az-z(i-ya); ša-ki-ya-za</i>
KBo 17.1 iv 9 (OH/OS); KBo 5.1 i 17 (MH/NS); KUB 31.64 iii 3 (OH/NS); KBo 2.19 Vs. 14 + KUB 43.16 4 (OH/NS); KBo 2.19 Vs. 12 + KUB 43.16 2 (OH/NS)	VBoT 58 i 7 (OH/NS); KUB36.51 Rs. iv 5 (OH/NS); KUB 33.63 Rs. 2' (OH/NS); KUB 33.17 + KBo 14.86 Rs. 7 (NH)	KBo 10.6 i 11 (NH); KBo 13.31 iii 10 (OH/MS)	KBo 16.97 Rs. 2 (MH?/MS); KUB 56.39 Vs. i 18' (NH)

acc.pl.	nom./acc.n. (or collective) <sup>81</sup>
<i>ša-ga-a-uš</i>	<i>ša-ga-e; ša-ga-a-e; š[a-g]a-a-e</i>
KUB 34.70 i 13 (pre-NH/NS)	KBo 23.55 i 13', 17' (pre-NH/MS); KBo 16.46 Vs.? 10' (MH/MS); KBo 16.46 Vs.? 8' (MH/MS);

**Stem formation and inflection:** Pre-Hittite deradical derivative. Ablauting stem *-āi--/i-*. The attestations ending in *-e* point to a (post-OH) shift in gender, from commune to neuter.

**Discussion:** *š.* is attested from OH. The word is common gender; there are four (syllabographic) *ša-ga-(a)-e* attestations, formally neuter nom./acc.sg./pl. Further attestations of the possible collective or neuter, assured by the surrounding modifiers, are rendered as logograms, e.g. GISKIM.HI.A is found in KUB 5.1 iii 17 (MH/NS) (for all logographic attestations, see CHD Š: 32). Rössle's argument

<sup>81</sup> Melchert (2000: 64) with reference to Eichner (1985) suggests collective rather than neuter nom./acc. The CHD has with question mark "collective (?) (or neut.?)".

(2002: 42) that this is not due to collective usage but rather due to indifference for number must be rejected. Tischler (HEG 2: 714) supposes that the gender alternation was a diachronic shift: *š.* is "spät auch neuter". As at least the example KBo 16.46 Vs.? 8' can only be neuter singular, this argument must be evaluated. Beginning in MH, there may have been competing commune and neuter forms (whether the former was replaced cannot be determined based on the limited evidence). One scenario which reckons with an old collective (accidentally unattested in OH texts) could be that the neuter was backformed in MH. Also, with growing Luvian influence from MH onwards, the CLuvian word for 'oath' *hīrūn*, a neuter, could have influenced the gender shift of *š.*

In the strong cases, we witness both the stem without plene vowels and with plene *-i-* and *-a-*. The OH nom.sg. example is partly damaged; the last sign may not be only *iš*, as only the last two vertical wedges are preserved. Therefore, the sign is presented in brackets as [*iš*] in hethiter.net/: CTH 416 (TX 08.02.2017, TRit 24.07.2015). However, the context [*k*]u-*iš* *ša-ga-i-[iš]* *ki-i-ša-ri* speaks clearly in favour of the nom.sg. Also, the end of the sign *-iš-* is visible. The acc.sg. ending VBoT 58 i 7 is assured by the preceding *kuin* with which it must agree (see hethiter.net/: CTH 323.1 (TX 2009-08-26, TRde 2009-08-26).

As stated by Tischler (HEG 2: 714), although *š.* had since Weidner, *AfO* 1 (1923: 6f.)<sup>82</sup> been considered a verbal noun to *šak(k)-* 'to know', the lenis-fortis contrast *-k-* versus *-kk-* in the root syllable makes this analysis implausible (see Melchert (1994: 69) against the development of *\*-h<sub>2</sub>g- > -gg-*.)

LIV<sup>2</sup> (2001: 520) connects *šākiye-* 'to reveal' to the PIE root *\*seh<sub>2</sub>g-*<sup>83</sup> (specifically, the present *\*seh<sub>2</sub>g-ye-*), citing Melchert (1994: 69) for the long (plene) vowel in the root (which prevents the derivation of the verb from a zero-

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<sup>82</sup> The reference needs a slight correction: in 1923, Weidner wrote for *Archiv für Keilschriftforschung*; the journal was renamed to *AfO* in 1926. Weidner's etymological proposal is found on page 7.

<sup>83</sup>This reconstruction was previously proposed by Oettinger, *MSS* 34 (1976: 105), who suggests the root *\*seh<sub>2</sub>g-(+ōi/oi)*.

grade root; cf. CHD Š: 41 for attestations), and Lat. *sāgīre* 'to have a good nose, to perceive keenly', Goth *sokjan* 'to search', with uncertainty Gr. ἡγέομαι 'to lead the way; to command, to believe'. Kloekhorst (EDHIL: 697), on the contrary, sees *š.* as the base (not a derivative) for the (inner-Hittite denominal) verb *šakiya/e-*. He lists the word as *šāgāi-* / *šāki-* (so already Kimball (1999: 85, 227, 228, 419), arguing for the long root vowel on two grounds: first, following Weitenberg (1979) for a diphthong stem of the structure *\*séh<sub>2</sub>g-ōi-s*, *\*sh<sub>2</sub>g-oi-m*, *\*sh<sub>2</sub>g-i-ós*, he expects generalization of the *e*-grade in the root: *\*séh<sub>2</sub>g-ōi-s*, *\*seh<sub>2</sub>g-oi-m*, *\*seh<sub>2</sub>g-i-ós*; second, he supports the assumption of plene root *-a-*.

Against Kloekhorst's reasoning, the (only) two (post-OH) spellings with plene of the root vowel may be ascribed to influence of the transparently related verb. Also, the spellings with long vowels in the suffix, especially the OH/OS example, argue that the noun had suffixal accent as is usual in this type.

The discrepancy between the suffixal accent of the OH noun and the root accent of the verb (also likely correlating with zero-grade and full-grade root respectively) argues that the noun is deradical. This fact is compatible with the arguments of Yates (2019)<sup>84</sup> that PIE *\*-ōi-* stems had suffixal accent, but the validity of his new analysis must await critical review of all of his argumentation by the field. The noun then should be reconstructed as *\*sh<sub>2</sub>g-ōi-* (with ablaut of the stem), a case of a primary *oi*-stem, whether the root zero-grade was originally fixed (Yates 2019: 214) or part of a paradigm with both root and suffixal ablaut (Kloekhorst).

CHD Š: 32; EDHIL: 697; GrHL: 54; HEG 2: 714; Rössle (2002: 37)

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<sup>84</sup> Yates (2019: 209) wrongly takes *š.* as a non-primary denominal formation, with an unknown derivational base.

*šāklāi-* c. 'custom, habit, rite, ceremony, privilege'

nom.sg.	acc.sg.	gen.sg.	dat./loc.sg.
<i>ša-ak-la-a-iš</i> , <i>ša-a-ak-la-iš</i> , <i>ša-ak-la-iš</i> <sup>85</sup>	<i>ša-ak-la-in</i> , <i>ša-ak-li-in</i> , <sup>86</sup> <i>š]a-fak]-la-a-in</i> ; <i>ša-ak-la-i-</i> <i>e-ma-an</i> ( <i>šaklain=man</i> ); <i>ša-</i> <i>a-a[k-l]i-ma-an</i>	<i>š]a-fak]-</i> <i>la-a-ya-aš</i>	<i>ša-ak-la-i</i> , <i>ša-</i> <i>ak-la-a-i</i> , <i>ša-ak-</i> <i>li-ya</i>
KUB 13.4 iii 21 (MH/NS); KBo 5.3 iii 28 (MH/NS); <sup>87</sup> KBo 41.128 23 (MH/MS)	KUB 31.127 i 16 (OH/NS); KUB 9.27 Vs. 28 (MH/NS); KBo 11.1 Vs. 23 (NH); KUB 31.127 iii 16 (OH/NS); KUB 30.10 Rs. 24 (OH/MS)	KBo 11.1 Vs. 22 (NH)	KUB 5.6 i 44 (NH); KBo 11.1 Vs. 20 (NH); KUB 13.20 i 31 (MH/NS)

ablative	nom.pl.	acc.pl.
<i>ša-ak-la-ya-za</i>	<i>ša-ak-la-uš</i> ; <i>ša-ak-l[a-a-eš]</i>	<i>ša-ak-la-uš</i>
KUB 26.69 vi? 8 (MH/NS)	Bo 86/299 (NH); KBo 4.4 i 8 (NH)	KUB 6.45 iii 62 (NH)

**Stem formation and inflection:** *š.* is a common gender noun with ablauting stem *-āi-* / *-i-* and an *i*-stem found in the acc.sg. in addition to the weak cases.

**Discussion:** The oldest attestation of *š.* is from MH, one of them being OH/MS text. Also, several NS variants are copies of OH texts.

The (weak) *i*-stem inflection is found in the strong cases in *š.*, see both acc. sg. *šaklain* and *šaklin* (GrHL: 93).

<sup>85</sup> Not with the CHD 2007/u (=KBo 41.128) 13 but instead, line 23'.

<sup>86</sup> Not with the CHD KUB 31.129 obv. 5 – on this fragmentary tablet, the word ends with first part of the *li* ? sign.

<sup>87</sup> Not with the CHD: 44 *ša-a-ak-la-a-iš*.



GrHL: 54 lists *š*. as a deverbal action noun of unclear derivation. Rössle hesitates to confirm any etymology and recalls the proposal of Kronasser (1966: 206), who posits *\*sak-* 'to sanctify' + abstract suffix *lā-/li-*, cf. OLat. *sākros*, Lat. *sacer* 'sacred' (so already Sturtevant (1933: 87), also Kimball (1983: 145) and Tischler (HEG 2: 724)). Kloekhorst (EDHIL: 700) suggests PIE *\*seh<sub>2</sub>k-lōi-s* as the ancestor of *š*. Unfortunately for this hypothesis, a suffix *-lōi-* is unparalleled elsewhere; furthermore the division of the suffix into *-l-ōi-*, as presented in EDHIL: 895 in comparison with the etymology of *tuh<sub>2</sub>uwāi-* < *\*dhuéh<sub>2</sub>-u-ōi-s* cannot be supported. A non-primary denominal origin (though formed from an unattested base) is favoured by Yates (2019: 209, contra Kloekhorst (EDHIL: 701)).

However, the connection to *sacer* < *sacros* must be questioned. The *i*-stem adjective *sācer* is understood as an adjective to substantivized form *sacrum* < *sacer*. The Hittite situation is the opposite: *šākli-* is a noun, *\*šak-lo-* an adjective. Because in Hittite, *\*eh<sub>2</sub>* does not result in long *ā*, the Hittite noun cannot be from *\*šéh<sub>2</sub>-li-*. As a result, the Hittite and Latin stems are not a match.

CHD Š: 44; EDHIL: 700; GrHL: 54; HEG 2: 724; Rössle (2002: 20)

*šalwāi*-(MUŠEN) c. (oracle bird)

nom.sg.	acc.sg.
[ <i>šal</i> ]- <i>u-wa-iš</i> <sup>MUŠEN</sup> , <i>šal-u-wa-iš(-ma-kán)</i> , <i>šal-wa-i-eš</i> , <i>šal-u-wa-ya-aš</i> ; <i>šal-wa-ya-aš</i>	<i>šal-u-wa-in</i> , <i>šal-u-wa-ya-an</i> , <i>šal-wa-ya-an-(na)</i> ; <i>šal-wa-ya-an</i>
KUB 5.11 i 42 and i 67(NH).; KUB 5.11 i 50 (NH); KUB 18.26 iii 9 (NH); KUB 5.25 iv 40 (NH); KUB 5.22 24	KUB 5.11 iv 34 (NH); KUB 49.21 i 5 (NH) and KUB 5.17 ii 15' <sup>88</sup> , KUB 5. 22 26 (NH); KUB 52.75 Vs. 7 and KUB 16.60 iii 11

For further references, see CHD Š: 108

**Stem formation and inflection:** *š.* is a noun of unclear origin without attested stem ablaut. The word is known only from strong cases in the sg.; the attestation *šal-wa-a-it* in KUB 33.114 Vs. I 8', suspected of belonging to this lemma, must rather be a verbal form (preceded by *anda*), see Rössle (2002: 218 note 772). The stem *šalwāi-* is interchangeable with *šalwaya-*.

**Discussion:** All attestations of *š.* are NH and only in oracle texts (CTH 573 (Bird oracles), 582 (Oracle fragments), 577, 579, 580 (Combined oracles I, III and IV: SU, KIN, MUŠEN)).

The form *šal-wa-i-eš* is found in a context with singular verb; therefore, one assumes it is nom.sg. It is the only formation with plene stem vowel.

The stem variation *-ai-/ -aya-* suggests that the word could have been adapted from Luvian, and the existence of a variant *šaluwa-* (see below) also points in that direction. The allomorphy *-āi- / -aya-* would be caused by Luvian *i*-mutation of the stem *-aya-*. The more frequent stem in *-āi- / -aya-* stem may have been an

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<sup>88</sup> Erroneously Rössle *šal-wa-ya-an*. The CHD, on p. 108, lists among acc.sg. *šal-u-wa-ya-an* (so correct, as the photo of the tablet tells us) and two lines lower *šal-wa-ya-an* with the same attestation.

adjective from the *a*-stem that was then substantivized. (This must be taken with reservation, however, as it is impossible to tell whether these words refer to the same bird.)

Rössle thinks of onomatopoeic origin or of a connection to *šalwini-*, a designation for another oracle bird. Tischler (HEG 2: 784) connects it to an *a*-stem *šaluwa-* (also 'oracle bird'; uncertain whether it is the same bird). So also tentatively CHD Š: 107a, noting also a possible connection to the reduplicated *šal(u)wašalwa-* (a bird) (CHD Š: 109).

š. has no known IE relatives.

CHD Š: 108; HEG 2: 784; Rössle (2002: 218)

LÚ.MEŠ *šari(ku)wāi-* c./adjective? (type of troops)

<b>acc.sg.</b>
LÚ.MEŠ <i>ša-ri-ku-wa-in</i> , LÚ.MEŠ <i>ša-a-ri-wa-in</i> , [ <i>ša-ri-w</i> ]a-i-in
KUB 7.42 3' (NH); HT 6 i 20; KUB 9.34 iv 17' (NH) (copy of KUB 7.42 3')

**Stem formation and inflection:** *š.* is attested only in the acc. sg. beside attestations of the *a*-stem (c./n.) (see Tischler (HEG 2: 898) and CHD Š: 260), also in the same case: *ša-ri-ku-wa-an* (KUB 34.127 ii 1 (NH)).

**Discussion:** *š.* is attested only in NH. CHD Š: 262 lists *š.* as an adjective with the meaning 'of *šarikuwa*-troops', formed with the PIE adjective suffix *\*-iyo-*. As the Luvian counterpart is *šariwa-*, the CHD concludes that *šarikuwain* (instead of *\*šarikuwayan*) is due to Luvian influence. The *a*-stem nouns LÚ.MEŠ *šari(ku)wa-* and ÉRIN.MEŠ *šari(ku)wa-* (a kind of troops) are treated in CHD Š: 260.

Although Rössle (2002: 255) considers *š.* an erroneous attestation (and also thinks of a collective with case ending), this is contradicted by the CHD; in view of the three attestations and one plene spelling, this is unlikely to be a mere mistake.

The suggestion of gen. pl. (Tischler (HEG 2: 899)) in KUB 9.34 iv 17' must be rejected. As the Ritual of Tunnawiya is certainly late MH or younger, the gen.pl. ending could not have formally ended in *-in*.

Possession is what the relation of this word seems to be to the direct object, as also translated by the CHD 'of *šarikuwa*-troops'. Although it gives no detail, the possessive relation seems to be the reason for the CHD to postulate an adjective – as such, the two consecutive forms with *-n* ending can be explained as congruence of the adjective to its head.

NB: One cannot consider a double accusative for *š.*, as the word order is the opposite, not whole-part. For the possibility see Luraghi (2020: 188-191 who shows that in Hittite, the double cases are not restricted to inalienable possession

and also that the double case construction is a Hittite innovation, thus not unlikely to appear in a NH text.

The *\*-iyo-* adjective ending, proposed by the CHD, is so far the only plausible etymology for the *āi*-stem found in *š*.

Besides Luvian *šariwa*, there are no other IE cognates.

CHD *Š*: 262; HEG 2: 897; Rössle (2002: 255)

*šulāi-* c. 'lead; ingot of lead'

nom.sg.	acc.sg.	gen.sg.
<i>šu-la-a-iš</i> <sup>89</sup>	<i>šu-la-in, šu-la-a- /i/[-in?]</i>	<i>šu-li-i-aš, šu-ú-li-ya-aš</i>
KUB 3.103 Rs. 11 (NH)	KUB 41.7 vi 1 (OH?/NS); KUB 17.34 iv 4 (NS)	KBo 17.3 iv 32 (OS); IBoT 3.98 9 (OH?/NS)

**Stem formation and inflection:** *š.* is assured as an *āi*-stem through its strong case attestations (one assured of the acc.sg. and one of the nom.sg.). The gen.sg. forms confirm the stem ablaut *-āi/-i-*.

**Discussion:** Sumerogram A.GAR<sub>5</sub> (for logographic attestation see CHD Š: 573). *š.* is attested from OH onwards. Plene stem vowel is found in both the strong and weak cases, which points to stable accentuation on the stem. This fact is not contradicted by the plene *ú* in IBoT 3.98 9' (for discussion see Rössle (2002: 230)); the *ú* is considered rather an affirmation of the pronounced /u/ in the first syllable, as also in e.g. *hu-u-*, where it does not denote a long vowel.

Etymology unknown. For a list of suggestions, see Tischler (HEG 2: 1144); both the comparison with Gk. *σόλος* and, on the other hand, Neumann's proposal of connection to *\*slī-* (*\*sliH-*) 'blue' > OCS *sliva* 'plum' etc.) face serious phonological obstacles. One cannot assume an anaptyctic *u* in an initial *\*slV-* sequence (that in *šummitant-* 'axe' < *\*smit-* is tied specifically to the labial *\*m*). A metathesis of *\*sliHwo-* to *\*suliHo-* strains credulity. While foreign origin is not impossible with regard to the semantics, the stem ablaut points to IE ancestry. A convincing etymon remains to be found.

CHD Š: 573; HEG 2: 1142; Rössle (2002: 228)

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<sup>89</sup> Fragmentary tablet, with only this word on line 11.

*šuwāi-* c. 'rejection, abandonment'

<b>nom.sg.</b>
<i>šu-wa-iš</i>
KBo 26.34 Vs. I 15 (NH)

**Stem formation and inflection:** *š.* is likely an action noun derived from the verb *šuwe/a-* / *šuwai-* 'to push (away); to reject; to abandon'.

**Discussion:** The word is attested only once, in a vocabulary list. This fact has led to major confusion about its meaning. Originally, the meaning assigned to *š.* was 'bird' (so also Rössle (2002: 275), Tischler (HEG 2: 1215)). This was based on its equation with the Sumerogram HU in the Boğazköy S<sup>a</sup> Vocabulary,<sup>90</sup> which in turn may also have other meanings besides 'bird' (apud Cohen (2010: 31)). The meaning of the Hittite verb, now considered its base, has been instrumental in establishing the nominal semantics, e.g. *šu-wa-a-iz-zi* 'divorces' as attested in the Laws of the Hittites (Hoffner 1997: 35), the meaning is assured by the parallel in the Middle Assyrian Laws (Cohen 2010: 36). For extended argumentation, see Cohen (2010).

The underlying verb *šuwe-* / *šuwai-* is of PIE origin, for which the root etymology is *\*seuh<sub>1</sub>-* (though the Hittite verb cannot continue an accented root per LIV<sup>2</sup>: 538) with cognates in Ved. *suvāti* 'impels, sets in motion', OIr. *im:soí* 'turns around'. As for the stem, it is suggested by Melchert (p.c., apud Oettinger 1979; contra Melchert 1984: 16, 29, 90) from *\*suh<sub>1</sub>-é/ó-*. Kloekhorst (EDHIL: 795) reconstructs *\*sHu-ye/o-* with the same cognates as LIV<sup>2</sup>, but without the metathesis of *\*CHu/iC* to *\*Cu/iHC*.

EDHIL: 795; HEG 2:1215; LIV<sup>2</sup>: 538; Rössle (2002: 275)

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<sup>90</sup> The vocabulary comprises a list of cuneiform signs with Akkadian translations and a column of Hittite forms. It is found on two tablets, HT 42 and KBo 26.34, with only the Hittite column preserved.

*taḫalāi-* c. 'liver' or 'raw' (?)

<b>acc.sg.</b>
<i>ta-ḫa-la-a-i[n]</i>
KUB25.36 Rs v 38 (OH/MS)

**Stem formation and inflection:** The word is a hapax, based on the context restored as an acc.sg., with plene *-a-* in the stem. Either a Hittitized Hattic word or a real loanword from Hattic.

**Discussion:** *t.* may have been a proto-Hattic expression (Rössle (2002: 156), Tischler (HEG 3: 11)), either a noun of Hattic origin meaning 'raw liver' or an attribute of <sup>UZU</sup>NÍG.GIG 'liver', which precedes *t.* in the text (Soysal, HWHT 310 and 728, tentatively assumes the latter). With regard to the preceding sentences, it could have alternated with the Hittite *ḫu-i-šu* 'raw'. Rössle assumes that the word may not have been a part of the active lexicon of the Hittites (also p. 312). An *-a-i* ending is also possible for Hattic (see Soysal, HWHT 300, for a noun *paštae* with variants *pšatae* and *pšattai*).

HEG 3: 11; Rössle (2002: 156, 312)



*taharāi-* c. '?'

<b>acc.pl. (or nom.?)</b>
]x(-)ta-ḫa-ra-a-uš
KBo 54.61 7' (NH)

**Stem formation and inflection:** The acc.pl. in *-ra-a-uš* must undoubtedly denote an *āi*-stem nominal.

**Discussion:** The hapax *t.* is attested on a broken tablet which belongs to a set of NH ritual fragments, listed as CTH 470.

Given the difference in stem form and the single *-ḫ-* (which has to be taken with caution, with regard to the fact that a hapax could be an error by itself), until there is further evidence, one should not assume with Tischler (HEG 3: 14) that it necessarily belongs with Luvian *tahḫara/ā-*.

HEG 3: 14

<sup>sig</sup>taḥ(a)p(i)šā(i)- c. 'object of wool'

acc.sg.	dat.sg.	abl.
[ <sup>sig</sup> ta-ḥa-p]i- ša-in	<sup>sig</sup> ta-ḥa-pí-ša-i; <sup>s]ig</sup> ta-ḥa-pí-ša-a-i; <sup>sig</sup> ta-ḥa-p]í-ša-a-i;]x ta-ḥa-pí-ša-a-i	<sup>sig</sup> ta-ḥa-pí-ša-a-az
Bo 4992 i 6'	KBo 41.35 ii 6 (NH); KBo 41.36 Vs. 4 (NH); KBo 41.37 Vs. <sup>?</sup> 1; KBo 22.236 5' (NH)	Bo 4992 i 3' (NH)

**Stem formation and inflection:** *t.* is an *āi*-stem, attested once as an *a*-stem. As the dat.sg. forms are not decisive in assignment to the *āi*-stems, the acc.sg. attestation is of great importance.

**Discussion:** *t.* is attested only in NH, in fragmentary contexts, three times with plene *a* in the stem-final vowel. Formerly considered a neuter (Rössle (2002: 157)), this word is now clearly shown to be common gender by the unpublished fragment Bo 4992. There we find an accusative commune, and also an *a*-stem ablative. The forms previously considered nom./acc.sg. must then be dat.sg. The attestations ending in *-i* are found in KBo 41.35 and its two duplicates, KBo 41.36 and 41.37 (see Rössle (2002: 157) for references). The fragment Bo 4992 has been added as a join to KUB 58.52 (see <https://www.hethport.uni-wuerzburg.de/hetkonk>), which is a NH text.

One may assume the existence of both an *āi*- and an *a*-stem. Unfortunately, more cannot be said about their mutual relationship.

The etymology of *t.* is not known; foreign origin is a possibility (Hurrian or Hattic), though there are no reliable indications (Rössle (2002: 162-3) discusses such possibilities in detail).

Rössle (2002: 157)

*tuhhuwāi-* c. 'smoke'

nom.sg.	acc.sg.	instr.
<i>túh-ḫu-u-wa-iš</i> ; <i>túh-ḫu-iš</i> ; <i>túh-ḫu-u-iš</i> ; <i>túh-ḫu-i-iš</i>	<i>túh-ḫu-wa-i[n]=ma</i> , <i>túh-ḫu-u-wa-in</i> ; <i>túh-ḫu-in</i> ; <i>túh-ḫu-i-in</i>	<i>túh-ḫu-it</i> [
KUB 5.24 ii 16 (NH); KUB 17.10 iv 21 (OH/MS); KBo 34.32 3'; KBo 12.89 iii 16'(MH/MS)	KBo 10.2 iii 40 (OH/NS); KUB 24.5 Vs. 14' (?/NS); KBo 8.35 iii 6 (MH/MS); KBo 12.89 iii 17' (MH/MS?)	KUB 2.4 ii 2, 4 (OH/NS)

**Stem formation and inflection:** Both an *i*-stem *tuhhui-* and an *āi*-stem are attested.

**Discussion:** The word is attested from OH/MS onwards. The *āi*-stem variants are either NH texts or NS copies of older compositions. Both readings *túh-ḫu-wa-ix* and *taḫ-ḫu-wa-ix* are always possible.

*t.* illustrates the development of an *i*-stem to an *āi*-stem (Tischler (HEG 3: 418); GrHL: 92; Rössle (2002: 115)) within the recorded history of Hittite. Alternatively, there is a proposal of an original diphthong-stem (Kloekhorst (EDHIL: 895)). Kloekhorst's argument that "diphthong-stems are rare and unproductive" is highly debatable (see the overall discussion of the class below) and, in the present case, does not take into account the chronology of the attestations.

MS has only *i*-stem forms, with plene *-i-* attested in both the nominative and accusative. (If the reading *túh-ḫu-i*[*t* of KUB 2.4 ii 4 (OH/NS) is correct, this would support both the ablauting stem theory and the *i-* to *āi--*theory. As seen in the picture of the tablet below (followed by the KUB rendering), the final sign is preserved in great part and so is fairly reliable.



Picture: hethiter.net/fotarch B2011 and KUB 2: 19.

The argument of Tischler (HEG 3: 417) that the plene vowels both in the stem *tuhhu-u-* and in the ending *i-in* confirm the postulation of two stems, not just one ablauting lexeme, is not reliable. There are analogical cases of *āi*-stems with plene vowels with no reason to suppose a stem split, e.g. *hal-lu-wa-in* and *hal-lu-u-wa-a-in*, *hu-uk-ma-iš* and *hu-u-uk-ma-iš* etc. In MS and NS, the sequence *hu-u* is not a reliable indicator of vowel length; see Melchert (2020: 25), citing Kloekhorst on medial spellings marking the preceding glide of the *e* vowel and Kimball on *hu-u* being equivalent to *hu-* from MH onwards.

Despite his own skeptical conclusion, Rössle (2002: 117-118) pointed the way to a plausible account: the MS plene spellings argue for an original oxytone *i*-stem *\*d<sup>h</sup>uh<sub>2</sub>-wī-* (< *\*d<sup>h</sup>eu<sub>h</sub>₂-* / *\*d<sup>h</sup>uh<sub>2</sub>-* 'to smoke, to produce smoke') derived from an unattested *\*d<sup>h</sup>uh<sub>2</sub>-wó-* 'smoky' (or sim.) parallel to *\*d<sup>h</sup>uh<sub>2</sub>-mó-*, a PIE form attested in other IE languages. A parallel for such a derivation may be seen in Hitt. *dannatti-* 'desolation' < *dannatta-* 'desolate'. Due to the overlap with the weak cases of the *āi*-type, it was absorbed into the *āi*-class beginning in MH. This account is supported by the fact that there are no attested oxytone *i*-stem nouns in Hittite. Kloekhorst (EDHIL: 895) reconstructs *t.* as an original ablauting diphthong-stem *tuhhuwāi-/tuhhui-*, but as he himself observes, Hittite would be the only IE language where a noun is derived from the full-grade form of the verb 'to smoke'. He assumes a full-grade nom.sg. *\*d<sup>h</sup>ue<sub>h</sub>₂-u-ōi-s* and zero-grade acc.sg. *\*d<sup>h</sup>uh<sub>2</sub>-u-ōi-m*, where the oblique case forms were generalized throughout the paradigm. Kloekhorst implausibly sees a parallel for insertion of the *-u-* suffix

between *\*d<sup>h</sup>uh<sub>2</sub>-* and *\*-oi-* in *šaklāi-* < *\*sé<sub>h</sub>₂k-l-ōi-*. For Melchert's alternative to this derivation, see under *šaklāi-*.

EDHIL: 895; GrHL: 92; HEG 3: 417; Rössle (2002: 115)

*wāi-* c. 'woe'

see *āi-* *wāi-* (p. 98)

*wagāi-* c. 'seizer of flour; weevil, flour worm'

nom.sg.	abl.	nom.pl.
<i>wa-ga-a-iš</i>	<i>wa-qa-ya-za</i>	<i>wa-qa-a-uš, wa-qa-uš(-ma); wa-qa-a-uš</i>
KUB 4.3 ii 5' (?/NS)	KUB 46.42 iv 11 (NH)	KUB 46.42 iii 1 (NH); KUB 46.38 i 6' (NH); KUB 46.38 i 4' (NH)

**Stem formation and inflection:** *w.* is a deverbal noun to *wag-* 'bite', with the derivation dated to pre-Hittite times (Rössle (2002: 104)). No stem ablaut attested.

**Discussion:** *w.* refers to an insect that eats flour. The meaning is confirmed by an Akkadian parallel text (Cohen (2013: 92-93)), where the Akkadian-Hittite bilingual is transliterated and translated and where *wagāiš* ((attested in KBo 12.70 obv. ii 12'–16' + KUB 4.3 ii 3'–5')) corresponds to Akk. *lāpit qēmi*.<sup>91</sup>

What remains unexplained is the fact that deverbative nouns with an *āi*-suffix are different types of nouns: they denote the result of an action ('curse', 'illness'), not the agent (\*'he who curses', '\*patient'), GrHL: 54.

One possible interpretation is a deverbative noun *wāga-* 'biting, bite' from PIE *\*wóh<sub>2</sub>g-o-*, from which *w.* would be a genuine secondary derivative (as pointed to me by C. Melchert, p.c., *wāga-* is attested in KBo 4.14 ii 28 *wa-a-ga e-ep*, against Tischler (HEG 4: 212), who understands it as 2.sg.imp. *w]a-a-g=a ēp*; the form here is probably a frozen allative, rather than collective plural). Such a development would account for the lack of allomorphy of *w.* and exclude the necessity for an *i*-stem reshaped into an *āi*-stem.

Based on its connection to *wag-*, Kloekhorst (EDHIL: 941) reconstructs *\*uéh<sub>2</sub>g-oi-*. The verb *wāk-* is derived by Kloekhorst (EDHIL: 939) from an amphikinetic stem *\*wóh<sub>2</sub>g-ei/\*uh<sub>2</sub>g-énti-* with cognates in Gr. ἄγνυμι 'to break (following

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<sup>91</sup> Per Cohen (2015: 45), not *kalmatum laptum* 'flour seized by a parasite' in CAD/K: 86-87 but *lapit qemi*, 'the seizer of flour', reading the Sumerian sign TAG, not UH – from the context of the proverb, a poetic expression for the flour weevil or a flour worm.

Kammenhuber (1961: 47)), TochAB *wāk-* 'to split, to burst'. However, the verb *wāk-* does not ablaut (instead of 3.pl.pres *wa-ak-kán-zi* IBoT 1.36 i 20 read *wa-ak-aš-ši-zi* 'is lacking'), see Güterbock and van den Hout (1991: 4) and Miller (2013: 104-5, with notes 108 +109, with a different meaning '(the servant) gives (it)'). If it reflected a strong stem preform *\*wóh<sub>2</sub>ǵ-ei*, that would yield regular *wāk-*; the weak stem would have been eliminated by leveling. Therefore, all derivatives, including also *wageššar* and *wagāta-*, are based on the attested verbal stem.

Kümmel (LIV<sub>2</sub>: 664) reconstructs for Hittite 3.sg.pres. *wāki* iterative (?) *\*woh<sub>2</sub>ǵ-éye*, which must be rejected based on the fact, that there are no *hi*-conjugation verbs in Hittite continuing the PIE stem type *\*R(o)-éye/o-*.

EDHIL: 941; GrHL: 54; HEG 3: 217; Rössle (2002: 102)



? \**waggarāi*- ? 'revolt'

<b>oblique</b>
<i>wa-ak-ka-ri-y[a</i>
KUB 36.106 Vs. 7 (OH/OS)

**Stem formation and inflection:** *w.* is attested only once, in a form of an oblique stem, broken at the end, which excludes the possibility of recognizing its case ending. Besides an *āi*-stem, an *a*-stem *waggariya-* is also possible.

**Discussion:** There is a possibility that the form *wa-ak-ka-ri-y[a*, which, if a verb, could only be completed as *wa-ak-ka-ri-ya-(az)-zi*, is in fact an *āi*-stem noun 'revolt'. Kloekhorst (EDHIL: 941) lists it as a broken form of the verbal paradigm of *wakkariye/a-* 'to revolt against, to rebel against' without details. Tischler (HEG 4: 218) translates ' (die Truppen von Hatti) abtrünnig' 'the troops of Hatti revolting'. So also Giorgieri (1995: 73) ' (le truppe di Hatti) infedelmente ...'. The basis for the analysis as a noun is not discussed in any of the above-mentioned sources. Per Melchert (p.c.), in OS one would expect 3.sg. present *wa-ak-ka-ri-e-ez-zi*; a present in *-ya-(az)-zi* is unparalleled in OS.

EDHIL: 941; Giorgieri (1995: 69-85); HEG 4: 218

LÚ<sup>waqqarunāi</sup>- c. 'absentee, missing person'

<b>nom.pl.</b>
LU.MEŠ <sup>wa-aq-qa-ru-na-e-[eš?]</sup>
KUB 31.86 i 12 (MH/NS)

**Stem formation and inflection:** *w.* is a hapax, attested in the nom.pl. A deverbal formation to *waggariya*- 'to be absent' is possible. *w.* could also be a *waši-/wešāi*-type of an ablauting *i*-stem noun.

**Discussion:** The stem form, which itself can be erroneous, is not instrumental in deciding about the verbal stem from which it could have been derived. The stem *waggar*- from *waggariya*- 'to be absent' is a candidate. However, the formant *-un*- remains unexplained. (For different verbal stems, see Tischler (HEG 4: 222).)<sup>92</sup> The formal derivation is problematic also on semantic grounds. The use of the *-āi*-suffix to derive a noun referring to a person would be unusual.

The meaning of the word, translated by Miller (2015: 221) simply '*wakkaruna*-people', could be 'absentee, missing person', based on the verb and also on the context, where it would fit well.

Tischler (HEG 4: 223) denies the existence of this form and considers it a 3.sg.imp. *wa-aq-qa-ru* with preceding noun LÚ<sup>MEŠ</sup> and (probably) adjacent particles. Such a reading is not acceptable.

For the verbal etymology, Tischler (HEG 4: 221, apud Oettinger MSS 34: 140)) connects *wakk*- 'to be missing' + *ariya* and recalls the analogy with *šuppariya*- 'dream, sleep' to *šup*- 'to sleep' (*sic*, with non-geminate in *šup*-). The verb is considered of PIE origin, from the root *\*wak*- (*sic*, with geminate in Hittite).

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<sup>92</sup> On purely formal grounds, one could suppose a substantivized Luvian adjective *\*wakkarunaiya*- derived from an infinitive *\*wakkaruna*, but there are no grounds for assuming that Luvian had a cognate of the Hittite verb.

To conclude, as there are discrepancies in connection to the verb, one cannot be certain of the path of derivation. Foreign affinity may also be considered, whereby *w.* could be a loanword denoting special rank in provinces of the Hittite Middle Kingdom.

HEG 4: 223; Miller (2015: 220-221)

*waštāi-* c. 'sin'

nom.sg.	acc.sg.	acc.pl.
<i>wa-aš-ta-iš, wa-aš-ta-i-iš, wa-aš-ta-a-iš</i>	<i>wa-aš-ta-in</i>	<i>(ta-)wa-aš-ta-uš</i>
KBo 6.26 iv 7 (OH/NS); KBo 4.3 i 33 (NH); KUB 30.16 i 1 (?/NS)	KUB 7.41 Vs. 19 (MH/NS?)	KBo 3.34 ii 24 (OH/NS)

**Stem formation and inflection:** *w.* is a deverbal formation from *wašta-* 'to sin'. It is attested only in strong cases, without information about the possible stem ablaut. Both *-a-* and *-i-* are attested as plene in the stem.

**Discussion:** *w.* is attested only in NS, some of the attestations being copies of OH and MH texts. It is used interchangeably with *waštul-* 'sin' (for examples, see Tischler (HEG: 417) and Rössle (2002: 46)).

The time of derivation is hard to determine because of the limited morphological evidence, but it was certainly pre-OH (not so Rössle (2002: 51)).

Tischler (HEG: 411) parallels the derivation of *zah-* > *zahhāi-*, from *wašt-* + the PIE suffix *\*-ōi-* (for previous etymological accounts, see Tischler (HEG: 411)).

Kloekhorst (EDHIL: 931) considers the parallel neuter *waštul-/uštul-* 'sin' a cognate of the verb *wašta-*, with zero grade and (consequently) an accented stem *-ul-*. Why does he not count it a deverbal abstract, just like *waštāi-*, is not explained.<sup>93</sup>

For suggested PIE reconstructions without cognates, see Kloekhorst (EDHIL: 986). He opposes the connection with Gr. *ἄρτη* 'error, sin', which is translated in LSJ as 'bewilderment, infatuation', also 'sin' if active. LSJ derives the word from *ἄάω* 'hurt, damage'.

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<sup>93</sup> However, under the lemma *wašt-*, he states that it is a derivative (p. 985).

w. has an Anatolian cognate in CLuv. *wašta-* 'sin'. No cognates outside the Anatolian branch.

EDHIL: 985; GrHL: 54, 93; HEG 4: 410; Rössle (2002: 45)

[?wattāi- c. 'bird' (?)]

<b>nom.sg.</b>
<i>wa-at-ta-e-eš</i>
KBo 4.2 ii 32 (OH/NS)

**Stem formation and inflection:** *w.* may be an ablauting *i*-stem or an *āi*-stem commune noun, attested only in the nom. pl.

**Discussion:** *w.* is a hapax attested in the OH Ritual of the Augurs Ḫuwarlu, preserved in a NS copy in the phrase *ḫa-tu-ga-e-eš wa-at-ta-e-eš*. Its meaning is made probable by a parallel from KBo 4.2 i 16 and 18, where *ḫa-tu-ga-e-eš* is followed by the Sumerogram MUŠEN<sup>HLA</sup>, and so *w.* could be its syllabographic equivalent.

*w.* is etymologically unclear. As an *āi*-stem, one might like to think of an inherited lexeme. However, a loanword cannot be excluded (compare the Hattic ending -*āi*).

Lines 32 and 33 of KBo 4.2 are translated by Bawanypeck (hethiter.net/: CTH 398) as 'Die schrecklichen Vögel, die (vorhanden waren), nun [...] haben wir (sie) den Pferden als Futtermischung und den Hunden als Biss[en] gebracht' (similarly Rössle (2002: 283)). As it is obvious that horses do not eat birds, neither whole nor mixed, the translation of the passage is in need of correction. As Hittite preposed relative clauses often have a loose connection to the following clause (Thomas Motter, forthcoming), so one might better understand '(As for) the frightful birds, we have brought mixed fodder for the horses and a bite for the dogs.' Such a translation contextually separates the birds and the other animals, and the action of feeding can be understood as a reaction to appeasement of the divine.

For an extended discussion of the etymological connection of *w.*, see Nikolaev (MSS 69/2, 2015). In his article "Hittite *wattaēš* 'birds'", he suggests that the word may be an *i*-stem inherited from PIE (verbal) root *\*wet-*, with a cognate in MĪr. *fethid*<sup>2</sup> 'goes, makes his way'. In this case, the word would be an ablauting *i*-stem,

not an *āi*-stem, which would better fit the agentive sense. Following Rössle (2004: 551), he also recalls the word *šuwāi-*, another designation for bird not used in this ritual. However, for the correct meaning of *š.*, which is also a hapax known only from a lexical text, see the entry *šuwāi-* above.

EDHIL: 987; Bawatypeck (2016, [hethiter.net/](http://hethiter.net/): CTH 398); HEG 4: 422; Nikolaev (2015: 257-267); Rössle (2002: 283)

*zahhāi*- c. 'battle'

nom.sg.	acc.sg.	gen.sg.	dat./loc.sg.
<i>za-aḥ-ḥa-iš</i> ; <i>za-aḥ-ḥa-a-iš-</i> <i>mi-iš</i>	<i>za-aḥ-ḥa-in</i> ; <i>za-aḥ-ḥi-</i> <i>in</i> ; <i>za-aḥ-ḥa-en</i>	<i>za-a-aḥ-ḥi-ya-</i> <i>aš</i> <sup>94</sup>	<i>za-aḥ-ḥi-ya</i> ; <i>za-</i> <i>aḥ-ḥi-i</i>
KBo 2.5 Rs. iii 31' (NH); KUB 7.58 i 7 (MH/NS) <sup>95</sup>	KBo 3.7 iii 23' (OH/NS) and also KUB 33.120 i 13 (MH?/NS); KUB 4.1 iii 14 (MH/NS); KBo 3.9 Vs. 3' (OH/NS)	KBo 3.60 iii 2' (OH/NS)	KBo 7.14 Vs. 7 (OH/OS) and also KUB 23.72 Rs. 31 (MH/MS); HFAC 12 11 (NH)

abl.	instr.	acc.pl.
<i>za-aḥ-ḥi-ya-[za]</i> , <i>za-aḥ-ḥi-ya-</i> <i>az</i>	<i>za-aḥ-ḥa-it</i>	<i>za-aḥ-ḥa-u[š]</i> ; <i>za-aḥ-</i> <i>ḥa-a-u[š]</i>
KBo 3.4 Rs. iv 40' (NH); KBo 4.4 Rs. iv 12, 28 (NH)	KUB 11.1 Rs. iv 10' (OH/NS)	KUB 36.7b RS. iv 16 (NH); Rs. iii 3' (NH)

**Stem formation and inflection:** *z.* is a deverbal ablauting action noun from the verb *zāḥ/zahḥ-* 'to strike', with occasionally attested plene *-a-* in the stem. Late inner-Anatolian (pre-Hittite) derivation.

**Discussion:** The ablaut of *z.* is assured by the genitive, dat./loc. and ablative case forms. The acc.sg. *za-aḥ-ḥi-in* shows the influence of the non-ablauting *i*-stem inflection. Also, the tendency to generalize the strong *āi*-stem is obvious in the instrumental OH/NS form *za-aḥ-ḥa-it* (GrHL: 92).

<sup>94</sup> The first two signs are only partly readable, but the use of *z.* is also supported by the context.

<sup>95</sup> Not with Rössle (2002: 53) line 1.



Based on the plene *-i-* of one of the attestations of the dat./loc., Rössle (2002: 58) thinks of a fixed accent on the stem syllable.

There is a broad consensus on the derivation of *z.* from *zah(h)-* + (Hitt.) suffix *-āi-* (so Tischler (HEG: 605), GrHL: 54, Yates (2011) etc.).

Kloekhorst (EDHIL: 1021) reconstructs *\*tiéh<sub>2</sub>-oi-*, without IE cognates. The verb *zāh-* / *zahh-* is also reconstructed by Kloekhorst (EDHIL: 1020) as *\*tieh<sub>2</sub>-*, with IE cognates (following Janda 2005) in Gr. *σημα* 'sign, mark', *σῶμα* 'corpse', *σίτος* 'grain, food'. While these three words are nouns from alleged but unattested Greek verbs, the underlying 'to strike' is not intuitively connected to all three; e.g., *σῶμα* is a standard word for '(living) body'; although in Epic it can mean 'dead body', it still denotes 'a person', so derivation from 'the stricken one, the killed one' requires additional support. The whole connection requires further investigation.

For another (rejected) etymological proposal, see Rössle (2002: 59).

To conclude, there are no assured etymological affinities, nor cognate words within the Anatolian branch. Still, the IE origin and pre-OH derivation of *z.* are highly likely based on the stem ablaut pattern and existence of the base verb.

EDHIL: 1021; GrHL: 54; HEG 4: 605; Rössle (2002: 53)

<sup>GIŠ</sup>*zahṛāi-* c. (object for sitting)

<b>acc.sg.</b>
<sup>GIŠ</sup> <i>za-aḥ-ra-in; za-a[ḥ-ra-in]</i>
KBo 6.10 ii 11 and KUB 29.28 i 4 and KBo 6.19 8; KUB 29.27 6+ 29.26 9) (all OH/NS)

**Stem formation and inflection:** *z. s* attested only in acc.sg., of unknown origin.

**Discussion:** *z.* is a hapax acc.sg., attested only in four parallel texts of the Laws; the texts are NS copies of OH compositions. It is used in the context 'If anyone steals (a) *z.* in the gate of the palace, he shall pay 6 shekels of silver.' The fourth copy of *z.* is complemented on the basis of the other three and contains *z.* without determinative.

*z.* must have denoted an object for sitting, as in the duplicate Bo 8202 (NH) to the above listed acc.sg. attestations one finds <sup>GIŠ</sup>*zahṛti-* (Hoffner (1997: 114-115)). Because <sup>GIŠ</sup>*zahṛti-* appears as a copy of *z.*, Rössle thinks (2002: 238) of its use as a contemporary equivalent to the already fossilized *z.* The only evidence for such a conclusion is the fact that *z.* is a hapax.

As for its etymology, Rössle (2002: 238) considers a foreign origin more likely (e.g., Hattic, with regard to the dating of the original text). However, since there is no known foreign, e.g. Hattic, parallel word, and *z.* belongs to the commune *āi-* stems, a largely inherited group, an IE origin cannot be excluded for a word used in OH times which fell out of use together with the object it denoted. However, an opposing argument is the initial *za-*, which is difficult to explain etymologically from PIE. One might as well think of a prehistoric Luvian word, where *za-* would be more readily explainable.

EDHIL: 1023; HEG 4: 614; Rössle (2002: 233)

*zašhāi-* c. 'dream'

acc.sg.	dat./loc.sg.	instr.	abl.	acc.pl.
<i>za-aš-ḫa-</i> <i>in; za-aš-</i> <i>ḫi-in</i>	<i>za-aš-ḫi-ya; za-aš-</i> <i>ḫé-ya; za-az-ḫi-i</i> [ ], <sup>96</sup> <i>za-aš-aḫ-ya-</i>	<i>za-aš-ḫé-it;</i> <i>za-aš-ḫi-it</i>	<i>za<sup>l</sup>-aš-ḫi-ya-za;</i> <i>za-aš-ḫé-az; za-</i> <i>aš-ḫi-ya-az</i> <sup>97</sup>	<i>za-aš-ḫi-</i> <i>mu-uš</i>
KUB 17.1 ii 9, 11 (NH); KUB 50.1 Rs. iii 4'(MH/MS)	KBo 32.176 Vs. 2 (MH/MS); KUB 30.10 Vs. 25'(MH/MS); KBo 4.2 iii 46 (NH); KUB 57.109 9'	KUT 50 Vs. 8 (MH/MS); KBo 5.1 i 43 (NH)	KUB 43.55 ii 1 (MH?/NS); KUB 24.4 i 12 (MH'/MS); KUB 24.3 ii 22' (NH)	KUB 7.5 iv 6 (MH/NS)

**Stem formation and inflection:** *z.* is a stem-ablauting commune noun which also shows *i*-stem forms in the strong cases (acc.sg., acc.pl; the nominative of both numbers is unattested). It is a pre-Hittite form, probably an original oxytone *i*-stem.

**Discussion:** *z.* is attested from MH onwards. It is listed by GrHL: 54 as a deverbal action noun of unclear derivation. It is interchangeable with *tešḫa-*, which is surely its cognate. The *āi*-stem in the strong cases is attested in the one acc.sg. example. The acc.pl., attested in MH/NS, is of an unusual shape: *za-aš-ḫi-mu-uš* for the expected †*za-aš-ḫi-(ú)-uš*. One can speculate that dissimilation of a somehow created (non-attested) *za-aš-ḫi-wu-uš* has taken place, although one must admit this would be a unique example of such a treatment, as the

<sup>96</sup> Final *-i-*, not *-ya-*, is assured by the duplicate IBoT 2.112 8, which features the final syllables *-az-ḫi-i*.

<sup>97</sup> This form is a duplicate of the previous. See E. Rieken et al. (ed.), *hethiter.net/*: CTH 376.1 (TX 2017-12-02, TRde 2017-10-04).

dissimilation rule applied in earlier Hittite and by the time of writing of the texts was no longer productive.

The alternation of *-aš-* and *-az-* seen in the dat.-loc.sg. shows that the sequence was to be read /tsh-/ (GrHL: 47, so also Kloekhorst (EDHIL: 875) and Byrd (2011: 97)).

For an overview of earlier etymological suggestions (including foreign origin) with references, see Tischler (HEG 4: 678). Foreign origin is also one of the suggestions of Rössle (2002: 119), who following Laroche (1947: 213) derives *z.* from a hypothetical proto-Hattic *tašha-*. Though *z.* has uncertain cognates, it is not only the stem ablaut that points in the direction of PIE ancestry. Of high significance is the root ablaut of the two synonymous forms: the full grade is continued by *tešha-* and the weak grade by *z.* With Byrd (2011: 98) against Rössle (2002: 129), the stem variant *-a-*, *-āi-*, *-i-* does not follow the typical path of embedding a word from foreign sources in the grammar of the language.

Kloekhorst (EDHIL: 875) assumes the suffix *-šha-* for *tešha-*, enlarged in *z.* by a suffix *-i-*, therefore assuming an ablauting root *\*d<sup>h</sup>eh<sub>1</sub>- + sh<sub>2</sub>o- > /te-/ + šha-* and */t-/ + šha+i*. Then *z. < \*d<sup>h</sup>h<sub>1</sub>-sh<sub>2</sub>oi-*, with generalization of the zero grade.

While there is general agreement on the PIE root *\*d<sup>h</sup>eh<sub>1</sub>- / \*d<sup>h</sup>h<sub>1</sub>- 'put, place'* as the base for *z.* (Oettinger (1979: 124)), ideas diverge for the suffix. An *i*-stem collective *\*-sh<sub>2</sub>-ōi-* to the *\*-sh<sub>2</sub>o-* in *tešha-*, was proposed by Oettinger (1979: 124, 129) but if so, one would expect neuter gender for *t./z.* Oettinger (p.c. by email) no longer holds that the commune noun *zašhāi-* reflects a collective to *tešha-*.

Because *t.* and *z.* appear to be almost synonymous, there is no *a priori* reason for deriving *z.* from *t.* (though it is likely the case). Therefore, the competing theory assumes syncope instead of a zero-grade of the same PIE root (per Byrd 2011: 98-99). The initial sequence /tsx-/ and the combined evidence of acc. sg. *zašhin* (MH/MS), inst. *za-aš-ḫé/i-it* (MH/MS), and the quite unusual dat./loc.sg. *za-aš-ḫi-i* (NH) could argue that the original stem was oxytone *\*tshí-*, which secondarily

developed into an *āi*-stem like *tuh̄h(u)wi-* and *muh̄ri-* (thus correctly Rössle (2002: 124-125), despite his own unjustified doubts).

Byrd (2011: 101) attempts to circumvent the problem of deriving *zašhāi-* from *tešha-* by assuming that both are derived from an adjective *\*d<sup>h</sup>h<sub>1s</sub>-h<sub>2</sub>-ó-* 'possessing the divine', ultimately to an *s*-stem noun *\*d<sup>h</sup>eh<sub>1</sub>-s* 'the divine', by separate but well-paralleled derivational processes. This account is not necessarily incompatible with that from the root *\*d<sup>h</sup>eh<sub>1</sub>-* 'to put, place', since *\*d<sup>h</sup>eh<sub>1</sub>-s* has been analyzed as 'ritual act' from *\*d<sup>h</sup>eh<sub>1</sub>-* (see the references to Sturtevant and Meier-Brügger in Byrd 2011: 100). However, the direct support cited by Byrd, loc. cit., for *s*-stem derivatives in Anatolian with a religious sense has been refuted. Palaic *tašūra-* means a pen for animals, specifically a kennel for dogs (Sasseville, Yakubovich, *HS* 131 (2018) [2021] 53), and the various reflexes of *\*d<sup>h</sup>h<sub>1s</sub>-h<sub>2</sub>-ó-* in Luvian, Lycian, and Lydian for things dedicated do *not* inherently refer to sacred objects (see Schürr, *IF* 121 (2016) 123-130). Changing the sense of *\*d<sup>h</sup>h<sub>1s</sub>-h<sub>2</sub>-ó-* to 'put, uttered' (cp. Byrd 2011: 98 on the standard derivation of 'dream' from 'to put') faces the serious obstacle that all known stems in *-(a)šha-* are *substantives*. Assuming an adjective just to explain *tešha-* and *z(a)šh(ā)i-* seems ad hoc.

To conclude, why one derived a commune (*ā*)*i*-stem from the *a*-stem remains an open question the likely solution of which is the slight difference in semantics.

Byrd (2011: 96-105); EDHIL: 874; GrHL: 54; HEG 4: 676; Rössle (2002: 119)

2.2.2 *āi*-stem nouns of neuter gender

<sup>NINDA</sup>*ašhumāi*- n. (bread type)

<b>acc.sg.</b>
<sup>NINDA</sup> <i>aš-ḫu-ma-a-i</i>
KBo 23.93 i 13 (NH)

**Stem formation and inflection:** *a.* is a noun attested only in its stem form, in the function of an accusative.

**Discussion:** *a.* is an endingless hapax preceded by the numeral 2. It is used with other bread types in the following context of a Kizzuwatna cleansing ritual, CTH 495:

2 <sup>NINDA</sup>*aš-ḫu-ma-a-i* I-N[A ] 'É' DINGIR-LIM *pé-e-da-an-zi*

"and they bring 2 *a.* into the temple"<sup>98</sup>

Rössle (2002: 182) calls attention to an *a*-stem noun which could likely be connected, the form *aš-ḫu-[-]-uš* of IBoT 2.131 Vs. 10', preceded by NINDA.GUR<sub>4</sub>.RA 'a thick bread', where there is a slight possibility of a scribal error resulting in a missing *-ma-*. No other item in the lists of foods overlaps, but the determinative is not identical, so the possibility of a co-existing *a*-stem should not be taken into account until there is more textual evidence.

The occurrence of a stem-form neuter following a numeral (that is, not expressing the morphological plural) is not rare in Hittite (see GrHL: 159).

The evidence for *a.* is insufficient to determine its etymology.

HW<sup>2</sup> 1: 399; Rössle (2002: 182)

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<sup>98</sup> For more context, cf. S. Görke (ed.), [hethiter.net/](http://hethiter.net/): CTH 495.2 (TX 07.06.2016, TRde 30.05.2016).

*ḫar/ḫurnāi*-<sup>SAR</sup> n. (plant)

nom. and acc.sg.	gen.sg.
<i>ḫar-na-i</i> <sup>SAR</sup> ; <i>ḫar-n[a]-a-i</i> <sup>SAR</sup> , <i>ḫar-ni-eš</i> <sup>SAR</sup> ; <i>ḫar-ni-(e)-eš</i> <sup>SAR</sup> ; <i>ḫar-na-i</i> <sup>SAR</sup> ; <i>ḫar-na-a-i</i> <sup>SAR</sup>	<i>ḫar-na-ya-«ya-»-aš</i> <sup>SAR99</sup>
KBo 17.15 Rs. 16' (OH/OS); KBo 17.15 Rs. 15' (OH/OS); KBo 23.79 ii 5 (NH); IBoT 3.1 Vs. 29', 31' (late NH); KBo 56.89 i 8 (OH/NS) and KUB 58.50 iii 8. (OH/NS); KUB 58.50 iii 11 (OH/NS)	KUB 38.12 Vs. i 21 (NH)

**Stem formation and inflection:** The derivational basis for the stem is unclear. For the gender and possible affinities with *ḫar/ḫurnāi*- 1. c. 'non-solid arboreal substance', see the discussion below.

**Discussion:** There is some confusion whether to include *ḫ*. under *ḫar/ḫurnāi*- 1. Tischler (HEG 1: 306) lists a separate entry *ḫur/ḫar-na-ya-ya-aš*<sup>SAR</sup> – (plant), KUB 38.12 i 21. Puhvel (HED 3: 405) lists it under the entry *ḫurnāi*-, c., without specifying any connection to the latter. Friedrich, Kammenhuber (HW<sup>2</sup> 3/1: 317) present the forms as a neuter *r*-stem *ḫarnaišar*, (later) *ḫarneššar* (an object for sprinkling), rejecting the reading of Neu, StBot 25: 73 n. 272. Based on the genitive in KUB 38.12 Vs. i 21, Neu reads *ḫur/ḫar-na-a-i*<sup>SAR</sup>. However, on the basis of the text parallel of IBoT 3.1 29'-32' and KBo 56.89 i 8, he concludes that one cannot rule out *ḫur/ḫar-na-i-šar*. A substantial reason against the reading *ḫarnaišar* (instead of *ḫarnai*-<sup>SAR</sup>) is that this presupposes an existence of a stem *-aišar*, and such a formation would be unprecedented in Hittite.<sup>100</sup>

Kloekhorst (EDHIL: 308) lists forms of *ḫ*. found in IBoT 3.1 and KUB 58.50 as verbal nouns of the verb *ḫarna-/ḫarn-* (see also the discussion under *ḫar/ḫurnāi*- above). He excludes both the OH/OS examples in KBo 17.5 and the genitive

<sup>99</sup> Emendation Neu (StBot 25: 73 n. 272).

<sup>100</sup> Rieken (StBot 44: 407) claims that the stem *-aišar* is a variant of *-eššar* and reads *HARNaišar*.

attestation from his list. The reason for this is not apparent, as the OH/OS examples belong under the same CTH 645.

As to KBo 17.15 Rs. 16, the form is syntactically in the accusative case, preceded by the numeral 6: 6 *ḫar-na-i*<sup>SAR</sup>. Because of the collocation with a numeral, the attestation cannot confirm the gender. Although this OS example strictly speaking is indeterminate as to gender, the NS spellings suggest that the copyists understood the OS form as a neuter. While there are other commune lexemes that appear in an endingless form after a numeral (GrHL §16.3), the form in KBo 23.79 ii 5 ('... gives to the cleansed priest *ḫar/ḫur-ni-eš*<sup>SAR</sup>) must have been meant as a singular (also as there is no evidence for ablaut in the commune noun).

In KUB 38.12, the cult inventory list, the form is preceded by EZEN<sub>4</sub> 'festival'.

Due to the paucity of evidence, the etymology is uncertain. We might be dealing with a deverbative noun of IE ancestry or with an areal plant designation. One of the possibilities is the unification of both *ḫarnāi-* and *ḫarnāi-*<sup>SAR</sup>. Although the first is supposed to denote a liquid, which would make the etymological connection to a plant less likely, one must admit that the meaning of *ḫarnāi-* is not fully established. It cannot be ruled out that it was a solid (herbal) substance that needed to be immersed in water before the solution could have been sprinkled. This, unfortunately, is not explicitly specified in the texts and so remains provisional, as does any derivation from *ḫarnāi-* 'to sprinkle'.

One also cannot rule out (Melchert, p.c.) that the NH copyist misread the OH spelling and reanalysed *ḫ.* as the verbal noun, as understood by Kloekhorst (EDHIL: 308), who includes only the NH examples. In that case, only the scribe of KBo 56.89 would have preserved the original. As stated above, this suggestion too must at present be regarded as preliminary.

EDHIL: 308; GrHL: 159; HEG 1: 306; HED 3: 405; HW<sup>2</sup> 3/1: 317; StBot 25: 73 n. 272; StBot 44: 407



*ḫaštāi-* n. 'bone(s); (metaphorically) strength; a measure of length (GÌR.PAD.DU)'

<b>nom./acc.sg.*</b>	<b>gen.sg.</b>	<b>dat./loc .sg.</b>	<b>erg.sg. 101</b>	<b>instr.</b>
<i>ḫa-aš-ta-i-i, ḫa-aš-ta-a-i, ḫa-aš-ta-i, ḫa-aš-da-i, ḫa-aš-da-a-i</i>	<i>ḫa-aš-ti-ya-aš, ḫa-aš-ti- i -aš</i>	<i>ḫa-aš-ta-i</i>	<i>ḫa-aš-ti-an-za</i>	<i>ḫa-aš-ti-i-it, ḫa-aš-ti- i (-t[a])</i>
KUB 5.1 i 75 (NH); KUB 5.1 ii 64 (NH); KBo 25.24 VS. ? 9' (OH/OS) and KBo 21.21 Rs. 12'(MH/MS) and KUB 7.13 Rs. 16 (NH); KBo 11.72 Rs. iii 15 (NH) (or pl??); KUB 20.48 i 12' (or pl.?)	KBo 17.54 i 11' (MH/MS); KBo 20.8 iv 7' (OH/OS)	KUB 9.4 i 15 (MH/N S)	KUB 9.34 ii 38	KUB 13.27 Rs. 23' (MH/MS); KUB 19.37 ii 6 (NH/NS)

<b>abl.</b>	<b>nom./acc.pl.*</b>
<i>ḫa-aš-ta-y]a-az</i>	<i>ḫa-aš-ta-i, ḫa-aš-ta-a-i, ḫa-aš-ta-e(-ma), ḫa-aš-da-a-i, ḫa-a-aš-ta-i, ḫa-aš-ta-a-i, ḫa-aš-ta-a-e</i>
KBo 1.142 iii 26	KUB 30.65 ii 12 (NH); KBo 11.10 Rs. iii 29 (MH/NS); KUB 17.28 i 23 (MH/NS); KBo 11.10 Rs. iii 26 (MH/NS); KBo 12.70 Vs. 11'(NH); KBo 15.25 Rs. 18 (MH/NS)

\*From the context, it is not always possible to tell the number of nom./acc. tokens.

<sup>101</sup> Nom.sg.c. per Kammenhuber (HW<sup>2</sup>: 425), Whether one uses the former or the latter case label, *ḫ*. here functions as the agentive subject of a transitive verb: "the bone will remove the illness of the bone."

**Stem formation and inflection:** *h*. is a denominal pre-OH formation with stem ablaut in strong/weak cases and occasionally plene stem vowel *a* or *i* and one attestation of plene *-a-* in the root. Originally collective.

**Discussion:** *h* is attested in both strong and weak cases and in the ergative, where *-anza* is added to the weak stem (GrHL: 72).

Besides the derivatives of *h*. (Kloekhorst (EDHIL: 325), the stem *\*hašt-* is seen in <sup>UZU</sup>*danhašti-* 'double-bone(?)' and *\*haštali-* (=UR.SAG) 'hero' (Rössle (2002: 61)). The latter is understood as a substantivized adjective to *h*. by Tischler (HEG 1: 203). The former could either be formed from the weak ablaut stem, or it could reflect the *i*-stem *\*h<sub>2</sub>ésth<sub>2</sub>-i* of the heteroclitite seen elsewhere, preserved in the compound vs. the derived diphthong *āi*-stem.

*h*. has cognates in Skt. *ásthi*, *asthnás*, Gr. ὀστέον 'bone', Lat. *os*, *ossis* 'bone, leg', Toch. B *āy*, pl. *āsta*; OIr. *asna* 'rib', Welsh *eis* 'ribs', Luv. *haš-* (without *-t-*; Melchert CLL 1993: 62). Not with Slav. *kost* (HEG 1: 202); see also HED 3: 237.

Kloekhorst (EDHIL: 325) reconstructs as an inherited diphthong stem supported mainly by Gr. ὀστέον 'bone' < *\*h<sub>3</sub>ésth<sub>1</sub>-ei*, PIE *\*h<sub>3</sub>ésth<sub>1</sub>-ōi*, *\*h<sub>3</sub>esth<sub>1</sub>-i-*. However, compare Beekes (2010: 1119), who reconstructs ὀστέον from PIE *\*h<sub>3</sub>ésth<sub>1</sub>-i* and an original root neuter noun (supported by Av. *ast-* etc.). The origin of the Gr. ending *-έον* is not assured; per Beekes, it is a thematized full grade *\*-ei-o-* of the IE suffix *\*-i-*, and the word was originally a root noun. Unfortunately, Beekes does not provide reasons for the *i*-stem.

Although in his previous work Oettinger (1999: 207) derived Hittite *haštāi-* via an *\*-ēi-* collective *\*h<sub>2/3</sub>ósth<sub>2</sub>-ēi* from the root consonantal stem *\*h<sub>2/3</sub>ésth<sub>2</sub>- / \*h<sub>2/3</sub>ósth<sub>2</sub>-*, Oettinger (2016: 323) now derives a collective *\*h<sub>2</sub>est(h<sub>2</sub>)-ōi* directly from the *i*-stem in the *-i / -n-* heteroclitite attested in Vedic *ásthi*, gen. sg. *asth-n-ás*. Compare below the entry on Hittite *šakuttāi*.

The cognates in other IE languages (Toch. B *āy*, pl. *āsta*; OIr. *asna* 'rib' < *\*astn-*, Welsh *eis* 'ribs' < *\*astōn*) speak in favour of initial *\*h<sub>2</sub>*. Also, as only *\*h<sub>2</sub>* could cause aspiration of a preceding stop in Vedic, the second laryngeal must have been *\*h<sub>2</sub>* as well. We thus have PIE *\*h<sub>2</sub>óst(h<sub>2</sub>)- / \*h<sub>2</sub>ést(h<sub>2</sub>)-*. Since *\*-ei-o-* is a

productive suffix forming "material" adjectives in Greek, ὀστέον provides no probative evidence for the quality of the root-final laryngeal.

Beekes (2010: 1119); EDHIL: 325; HED 3: 233; HEG 1: 202; HW<sup>2</sup> 3: 425;  
Rössle (2002: 61)

*hašuwāi*<sup>SAR</sup> n. (plant)

nom./acc.sg.	gen.sg.
<i>ḥa-a-šu-wa-a-i</i> <sup>SAR</sup> ; <i>ḥa-šu-wa-a-i</i> <sup>SAR</sup>	<i>ḥa-a-šu-wa-a-ya-aš</i> ; <i>ḥa-a-šu[-wa-a-y]a-aš-i</i> <sup>SAR</sup>
KUB 29.7 Rs. 19', 21', 24' (MH/MS); KUB 29.7 Rs. 22' (MH/MS)	KUB 29.7 RS. 17' (MH/MS); KBo 21.41 Rs. 27 + KUB 29.7. RS. 18' (MH/MS)

**Stem formation and inflection:** *ḥ*. has only singular attestations of nom./acc. and gen. Except for one instance, it is written with plene root vowel and always with plene *āi*-stem. No ablaut.

**Discussion:** *ḥ*. is attested only in CTH 480, the MH text of the Ritual of Šamuḫa. It is a cultural word of foreign origin per Tischler (HEG 1: 211). Rössle (2002: 212) assumes an Asia Minor substrate. If connected to *ḥaš(š)*- 'ash, soap', one would need to account for the plene root *-a-* (HW<sup>2</sup> 3: 469).

Because of the scarcity of attestations, any attempt at an IE connection can hardly be convincing. No known cognates.

HEG 1: 211; HW<sup>2</sup>3: 469; Rössle (2002: 212)

MUNUS.MEŠ *ḥazkarāi-*/MUNUS.MEŠ *ḥaz(i)kara-* n. 'group of ladies (in temple duty)'

nom./acc.sg.	nom.pl.
MUNUS.MEŠ <i>ḥa-zi-qa-ra-za</i> , MUNUS.MEŠ <i>ḥa-zi-qa-ra-za</i> , MUNUS.MEŠ <i>ḥa-zi-qa-ra-a[z]</i> , MUNUS.MEŠ <i>ḥa-az-zi-qa-ra-za</i> , MUNUS].MEŠ <i>ḥa-az?-ga-ra-ya-za</i> ; MUNUS.MEŠ <i>ḥa-az]-qa-ra-</i> <i>a-ya-za</i> , MUNUS.MEŠ <i>ḥa-az-qa-ra-i-ya-za</i> , MUNUS.MEŠ <i>ḥa-</i> <i>az-ga-ra-i-ya-za</i> , MUNUS.MEŠ <i>ḥa-az-qa-ra-ya-az</i> , MUNUS.MEŠ <i>ḥa-az-ḥa-&lt;ra&gt;-ya-za</i> , MUNUS.MEŠ <i>ḥa-az-ka-ra-</i> <i>ri</i>	MUNUS.MEŠ <i>ḥa-az-ga-</i> <i>ra-a-iš</i> , <i>ḥa-az-ga-ra-</i> <i>i-iš-š=a</i>
KUB 17.35 i 33'; KUB 17.35 iv 35; KUB 17.35 ii 17'; KUB 46.27 Vs. 13'; KBo 2.13 Vs. 10; KUB 44.42 Vs. 18', KBo 2.13 Vs. 19; KBo 2.13 Vs. 11; KUB 15.24 iv 5'; KUB 12.2 i 4' (all NH); KBo 53.134 Vs. 2 (NH)	KBo 24.95 Rs. 18'; KBo 55. 250 i 14 (all NH)

nom./acc.pl.	dat./loc.pl.
<i>ḥa-az-qa-ra-a-i</i> , MUNUS.MEŠ <i>ḥa-az-qa-ra-i</i> , MUNUS.MEŠ <i>ḥa-</i> <i>az-qa-ra-ya</i> , [MUNUS.MEŠ <i>ḥa</i> ]-[ <i>a</i> ]z-qa-ra-a, MUNUS.MEŠ <i>ḥa-</i> <i>az-qa-[r]a</i> , MUNUS.MEŠ <i>ḥa-zi-qa-ra- i </i> , MUNUS.MEŠ <i>ḥa-zi-</i> <i>qa-ra</i> , MUNUS.MEŠ <i>ḥa-zi-qa-ra-ya</i> , MUNUS].MEŠ <i>ḥa-az-zi-qa-</i> <i>ra-a</i> ; <i>ḥa-az]-qa-ra</i> <sup>H1.A</sup> , MUNUS.MEŠ <i>ḥa-az-ga-ra-i</i> , [MUNUS.MEŠ] <i>ḥa-az-ga-ra-a-i</i> , MUNUS.MEŠ <i>ḥa-az-ga-ra-i-ya</i> , MUNUS.MEŠ] <i>ḥa-az-ga-ra-i=</i> , MUNUS.MEŠ] <i>ḥa-az-ga-ra-ya</i>	<i>ḥa-az-qa-ra-ya-aš</i>
KUB 58.65 4; KUB 10.78+20 i 13; KBo 2.8 iii 12; KUB 44.42 Vs. 7; KBo 2.8 iii 23; KUB 17.35 ii 17; KUB 17.35 i 29; KUB 17.35 i 25; KUB 44.21 iii 15; KUB 46.27 Vs. 4; KUB 60.122 Vs. 2; VSNF 12.11 iii 2; KBo 26.189 9; KUB 51.40 iv 10; KUB 57.95 Vs. Iii 16 (all NH)	KUB 25.36 ii 10 (MH/MS)

**Stem formation and inflection:** *ḥ*. shows major differences in spelling. For a detailed treatment of inflection, see Hoffner (JCS 50: 37). Also attested as stem *ḥazḥara-*.

**Discussion:** *h.* is attested post-OH only in texts connected with festivals and cults, some of which are OH in origin (CTH 526, 528, 590, 599, 647, 651, 670, 678, 683). Alternations in the stem suggest an original *āi*-stem, and the *a*-stem is from case contractions in *-aya-*. *h.* is semantically animate but as a collective grammatically neuter (GrHL: 65, 67). The neuter is confirmed by the existence of the ergative ending *-anza* when used in transitive sentences (for the list of forms, see the first column in the table above; cf. HW<sup>23</sup>: 549). The unusual form <sup>MUNUS.MEŠ</sup>*ha-az-ka-ra-ri* is explained by Rieken (2004: 535, with Puhvel) as an insertion of hiatus *r*.

A connection to *hazzikke-* 'play a musical instrument' must be rejected on the basis that although *h.* is attested with different verbs (see the list in Rössle 2002: 133), it never occurs in connection with *hazzikke-* or any other verb denoting playing of an instrument; the role of *h.*-ladies was not predominantly connected to music. Derivation of a nominal stem in *-ra-* (in PIE terms *\*-ro-*) from a verbal stem in *-ške/a-* is also problematic. Also, as the texts do not comment on the ladies' age, we cannot assume (young) 'girls' as previously thought.

No IE etymology. Kammenhuber (HW<sup>23</sup>: 553) chooses a Hattic connection as the most likely etymological source. Foreign origin also per Tischler (HEG 1: 234), who bases this presumption on the many different spellings of the forms. Since no Hattic cognate word is known nor do the authors provide morphological similarities, this suggestion, just like others, remains provisional. The argument in favour of Hattic is the time of some of the compositions (OH) and the fact that some of the texts contain other Hattic words.

GrHL: 65, 67; HEG 1: 234; HW<sup>23</sup>: 549; Rössle (2002: 130)

<sup>DUG</sup>*hupuwāi*- n. (container)

nom./acc.sg. <sup>102</sup>	dat./loc.sg.	abl.	nom./acc.pl.
<sup>DUG</sup> <i>hu-u-p[u-wa-]a-i</i> , <sup>DUG</sup> <i>hu-u-pu-wa-a-i</i> , <sup>DUG</sup> <i>hu-pu-wa-a-i</i> , <sup>DUG</sup> <i>hu-pu-wa-i</i> , <sup>h</sup> <i>u-u-pu-wa-i</i> , <sup>DUG</sup> <i>ha-a-pu-wa-a-i</i> , <sup>DUG</sup> <i>ha-pu-wa-a-i</i>	<sup>DUG</sup> <i>hu-p[u-wa-]a-ya</i>	<sup>hu-]</sup> <i>u-pu-wa-ya-az</i>	<sup>DUG</sup> <i>hu-pu-wa-a-ya</i> , <sup>DUG</sup> <i>hu-pu-wa-ya</i> , <sup>DUG</sup> <i>hu-u-pu-wa-ya</i> , <sup>hu-u-pu-wa-a-ya,  <sup>DUG</sup><i>hu-pu-u-wa-a-ya</i>, <sup>h</sup><i>u-pu-u-wa-a-i-ya</i>,  <sup>DUG</sup><i>h[u]-u-pu-wa-i-ya</i>, <sup>DUG</sup><i>hu-pu-wa-i</i> </sup>
KBo 19.145 Vs. 1 (MH); KUB 17.26 i 7 (NH); KUB 32.45+ RS.? 18 (MH); KBo 39.8 ii 55 (MH/MS); KUB 45, 6 iv? 4 (MH); KBo 45.202 3; KUB 58.52 ii 17(MH/NS); KBo 37.29 Vs. iii 8 (pre-NH/NS)	KUB 45.47+ i 15	KUB 44.45+ i 7	KUB 47.36 Vs. 14 (MH); KBo 39.8 iii 32 (MH/MS); KBo 2.3+ ii 41 (MH/NS?); KBo 9.106(+) ii 47 (MH/NS); KBo 9.106(+) ii 50 (MH/NS); KBo 9.106(+) ii 49 (MH/NS); KBo 47.136 4; KUB 12.58+ ii 30 (NH); KBo 53.27 ii 54 (NH)

**Stem formation and inflection:** *h* is a secondary *āi*-stem attested in both strong and weak cases and showing no ablaut. The sequence *hu-u* with plene *-u-* in the root alternates with *-pu-u-*. There is also an occasional plene *-a-* in the stem, and once plene *-i-*. Originally a Hurrian *a*-stem, *h* appears in Hittite as a neuter *āi*-stem. For alternative accounts, see below.

<sup>102</sup> In this list of attestations, I follow HW<sup>23</sup>: 749. Another list is provided by Rössle (2002: 185). The difference between the two is mainly in assignation to case and number.

**Discussion:** *ḫ*. is attested mainly in MH and NS copies of MH compositions. It denotes a smallish vessel suitable for both liquid and solid substances (Kammenhuber, HW<sup>23</sup>: 750).

The sequence *ḫu-u* of MH/NS and NH must be considered a graphic device, phonetically equivalent to <ḫu> (Kimball (1999: 67)). This however does not apply to *-pu-u-*, which retains its distinction from *-pu-* alone.

Rössle (2002: 194-195) explains the Hittite *āi*-stem as resulting from addition of a collective ending *-i* to the Hurrian *a*-stem, but Hittite had no such collective ending before NH (see Rieken, *HS* 125 (2012) 285-294), and Rössle's arguments for the word as a "hypernym" are weak. Despite his doubts, Hurrian *ḫapuwa* could have been reshaped to an *āi*-stem, joining the class of <sup>(DUG)</sup>*ḫakkunnāi-*, <sup>DUG</sup>*tallāi-*, <sup>(DUG)</sup>*zalḫāi-*, not surprising in view of other examples of alternation between *a-* and *āi*-stems. Nevertheless, as he argues, the high number of Hittite vessel names in *-a-* leaves room for doubt. The almost exclusive attestation in the rituals of Ammiḫatna, Maštigga, Tunnawiya and that for Ḫamrišḫara suggests a likelier alternative: that the Hittite stem was adapted from the Luvian stem <sup>DUG</sup>*ḫupuwāya-* attested in KUB 35.65 iii 19. Compare the entry above for *šalwāi-* (<sup>MUŠEN</sup>). The likely Luvian plural *ḫupuwāya* could easily have been reanalyzed as the plural of a Hittite neuter *ḫupuwāi-*.

For different views on the inflection, see Rieken (DBH 10: 539).

*ḫ*. is of foreign origin. According to Puhvel (HED 3: 396), Hurrian origin is assured by the form in KUB 45.6 11 *ḫu-u-bu-wa-aš-ši*. Tischler (HEG 1: 299) supports the claim with Hurrian *ḫupuwa* in *ḫupuwa-šše-ni-nna* (*ḫu-ú-pu-[wa-aš]-še-ni-en-na*) KBo 19.145 Vs. 2 and recalls other originally Hurrian vessel names beginning with *ḫup*. Per Richter (2012: 165), the Hurrian form underlying *ḫ*. is *ḫubuwa*, attested only in Hattuša tablets.

DBH 10: 533–543; HED 3: 396; HEG 1: 299; HW<sup>23</sup>: 749; Richter (2012: 165); Rössle (2002: 185)



<sup>GIŠ</sup>*kargarāi*- n. (a basket? made of reed)

<b>nom.sg. (dat.loc.sg.?)</b> per Rössle 2002: 287)	<b>unclear</b>
<sup>GIŠ</sup> <i>kar-ga-ra-i</i>	[ <sup>GIŠ</sup> <i>kar</i> ]- <i>ga-ra-i</i>
KUB 7.3 15 (OH/NS)	KBo 13.164 iv 5 (OH/NS)

**Stem formation and inflection:** *k.* is attested only twice in the same form. There exist other variant stem forms. No attested plene vowels or ablaut. The forms point to neuter gender.

**Discussion:** The meaning of *k.* is uncertain; it may denote a type of basket. See Rössle (2002: 287) for semantic analysis, mainly following Rieken (1999: 74), who considers *k.* a basket for fruit, being an enlargement to the stem *karkar-*. The semantic relation of *k.* to <sup>GIŠ</sup>*karkar* (a basket for fruit), listed as a variant in Puhvel (HED 4: 88, together with *karkan-*, *karkaraim(m)a-*), cannot be fully established.

The origin of *k.* is uncertain. Per Puhvel (HED 4: 88), as a reduplicated form, *karkar-* may be a cognate of Gk *καῖρος* 'thrums, ravel' (from *\*k̑r-yo-*) as a technical term for basket-weaving. However, according to Beekes (2010: 617), *καῖρος* is a technical expression of unclear meaning, and therefore etymologically difficult. Though it is certainly connected to loom and texture, its IE origin (and therefore PIE form) cannot be proved.

Rieken (1999: 74) derives the word from *\*kar-* 'to cover' < PIE *\*g<sup>h</sup>er-* 'to grab', seen in Hittite *kariya-* 'to cover' and other related words (not in LIV<sup>2</sup>: 177); not so Kloekhorst (EDHIL: 449), who opposes the suggested semantic development.

Beekes (2010: 617); HED 4: 88; HEG: 510; Rössle (2002: 287)

<sup>NINDA</sup>*gatāi*- n. (?) (bread type)

<b>nom./acc.sg.</b>
<sup>NINDA</sup> <i>ka-a-ta-i</i> ; <sup>NINDA</sup> <i>ga-ta-a-i</i> ; <sup>NINDA</sup> <i>ga-ta-</i> [
KUB 35.82 1' (NH); KBo 33.123 Vs i 21' (NH); KBo 13.248 i 22' (MH/NS)

**Stem formation and inflection:** *g.* is attested only following a numeral. Therefore, one may assume a stem form of indeterminate gender or a nom./acc.sg.n. The plene *-a-* is found in the root and stem.

**Discussion:** The word is attested in a NS copy of a MH text and in NH texts. The plene *-a-* of the root is attested once, compared to four attestations of the stem plene (all attestations in Rössle 2002: 195).

Similar forms to *g.* are found in Akkadian and Hurrian. Based on the similarity, one may assume an areal expression for a type of barley bread. The Hurrian form *kade* 'barley', attested from Hattuša and Nuzi, is found in the Sumerian-Hurrian Vocabulary Hh ii 123 ii 10 (Richter 2012: 197); the phonetically similar Akkadian form *kātu(m)* also has the meaning 'barley'.

For comparison of Hittite bread types, see Hoffner (1974: 205).

Hoffner (1974: 168); HEG 4: 542; Rössle (2002: 195)

*ki-ši-ip-zu-wa-a-i-* n. (a plant used for making incense)

nom./acc.sg. (or stem form)	uncertain case, Hurrian
<i>ki-ši-<u>ip</u>-zu-wa-a-i(=ya)</i>	<i>ki-ši-ip-zu-u-wa-a-e; ki-ši-ip-zu-wa-a-i; k]i-ši-ip-zu-wa-a-e</i>
KBo 27.85 Rs. 17' (MH/NS)	KBo 20.129 iii 8 (MH/MS); KBo 2.21 8; KUB 32.26 iii 11 (MH?/MS)

**Stem formation and inflection:** *k.* is attested only once in a Hittite context, as a nom./acc.sg. followed by an enclitic additive connector *-ya-*.

**Discussion:** *k.* is attested in a Hittite context in a cultic post-OH text (CTH 777). The other three attestations are from a Hurrian context; all four are on tablets excavated in Hattuša. Based on these findings, the word can be considered of Hurrian origin, either a loanword into Hittite or an areal word. Its likely onset /kši-/ is unparalleled in Hittite.

HEG 1: 591; Richter (2012: 215); Rössle (2002: 200)

<sup>GIŠ</sup>*luttāi*- n. 'window'

nom./acc.coll.pl.	gen.sg.	dat./loc.sg.	abl.
<sup>GIŠ</sup> ]lu-ut-ta-i, lu-ud-da-a-i	lu-ut-ti-ya-aš; lu-ut-ti-aš	lu-ut-ti-ya, <sup>GIŠ</sup> lu-ut-ti-ya	<sup>GIŠ</sup> lu-ut-ti-ya-az, lu-ut-ti-ya-az, <sup>GIŠ</sup> lu-ti-ya-az, lu-ut-ti-ya-za, <sup>GIŠ</sup> ]lu-ut-ta-an-za, <sup>GIŠ</sup> lu-ut-ta-an[-(za), <sup>GIŠ</sup> lu-ut-ti-an-za; <sup>G]IŠ</sup> lu-ut-ta-an-za
KUB 17.10 iv 21 (OH/MS); KUB 33.52 ii 10 (OH/NS)	KBo 25.88 16' (OH/OS); KBo 19.52 Vs i 8'+ KBo 17.19 8' (OH/OS) <sup>103</sup>	KBo 19.156 RS.? 8' (OH/OS); KBo 20.61 vs. ii 27 (OH/MS)	KBo 20.61 iii 46' (OH/MS); KBo 21.85 iv 12' (OH/MS); IBoT 2.131 Rs. 13 (NH); KUB 26.1 ii 60' (NH); KUB 17.5 i 24 (OH/NS); KUB 17.6 i 19 (OH/NS) (duplicate of the former); KBo 21.95 i 11 (OH/NS); KBo 8.42 Vs. 2' (OH/OS)
erg.sg.	nom.pl.	acc.pl.	dat./loc.pl.
<sup>GIŠ</sup> lu-ut-ta-an-za	<sup>GIŠ</sup> AB.MEŠ-uš; <sup>GIŠ</sup> AB.HI.A-uš	<sup>GIŠ</sup> lu-ut-ta-a-uš	<sup>GIŠ</sup> lu-ut-ti-aš, lu-ut-ti-ya-aš
KUB 17.10 iv 10 (OH/MS)	KBo 26.83 8 (NH); KUB 31.89 4 (MH/NS)	KUB 17.10 i 5' (OH/MS)	KBo 14.80 11' (NH); KBo 17.74 i 24' (OH/MS)

**Stem formation and inflection:** *l*. behaves in the singular as an ablauting neuter *āi*-stem, while the count plural is formed in accordance with the pattern for *āi*-stem commune nouns. For this analysis (not genuine gender alternation) see

<sup>103</sup> These two fragments, seen as joins by Rössle (2002: 12 apud Neu), are not joins per Konkordanz (<https://www.hethport.uni-wuerzburg.de/hetkonk>), which lists KBo 19.52 as NH.

Melchert, *TIES* 9 (2000) 65-66. The occurrence of the ergative *-anza* argues for neuter gender in the first place. In forms with *-an-za* (not only ergative, but also ablative) it is attested predominantly as an *a*-stem.

**Discussion:** *l.* is attested from OH onwards. It is often recorded as the Sumerogram AB, which is of importance mainly for the nom.pl., in which the word is never rendered syllabically. The nom.pl. <sup>GIŠ</sup>AB<sup>MEŠ/HLA</sup>-*uš* confirms the commune ending, found also in the acc.pl.

The atypical ablative in *-anza* can only be compared to the NH ablative forms *tuppi(y)anza* found in KUB 40.88 iv 5 and ABoT 1.14 iii 19v. These examples make such a case form quite unusual but not unique.

I would like to suggest that the occurrence of the *a*-stem, although conditioned by the ending, might point to an existing stem in *-a-* (countable), enlarged by *-i-* to create a collective (formally neuter sg. denoting multiple objects), as arguably seen e.g. in *šankuwāi-* and *šišāi-*.<sup>104</sup>

Rössle (2002: 16) considers it unlikely that *l.* would continue a PIE collective *\*léu(h)tōi*, *\*lu(h)-tyés* and also denies the possibility of a late inner-Anatolian collective formation; I see no basis for his denial.

Kloekhorst (EDHIL: 535) assumes that the acc.pl. commune was in OH just *luttai*, replaced in MH copy by an overtly marked form for clarity. Kloekhorst opposes the idea of a PIE collective *\*lu(h)-t-ōi* from 'to cut' and favours an original *\*lut-ōi* from PIE *\*leut-* 'to see'.<sup>105</sup> From the strong stem (with following *\*-o-*) unassibilated *-tt-* was leveled throughout the paradigm (accepted by Melchert forthcoming). The assibilation of *\*-t-* can be seen in *kattaluzzi-*,

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<sup>104</sup> Its occurrence in a broken context leaves the grammatical analysis of CLuv. <sup>GIŠ</sup>*lu-u-da-an-za* in KBo 29.49 Vo<sup>1</sup> 9 indeterminate (as to gender, case and number), and the sense is inferred, but denying its connection to the Hittite word is a null hypothesis. It tends to support the existence of a stem other than in *\*-ōi-* in Anatolian.

<sup>105</sup> See also Morpurgo Davies (1987:460-468).

connected to *luttāi-* by Kloekhorst (EDHIL: 464-5), where the weak stem *\*lut-i-* did not prevent the regular assibilation.<sup>106</sup>

The problematic part of this reconstruction is the PIE root *\*leut-*. As discussed by Nussbaum (2013: 2), such a root would account merely for one Greek (or perhaps only Arcadian) verb (see also LIV<sup>2</sup>). He provides several theoretical possibilities for its derivation, none of these being unproblematic. He considers it possible that the Greek *λεύτω* is an innovated backformed present in *-τω* to the original "sigmatic" verb *λεύσσω*.

PIE *\*luk-to-* as the origin for *l.*, supported by Puhvel (HED 5: 127), is unlikely due to the need for assimilation of *\*-kt-* to *-tt-*. For more etymological suggestions, mainly uncertain, see the overview in Tischler (HEG 2: 80).

Melchert (1984: 59) connects the word to PIE *\*leu(h)-* 'to cut, separate'. TochB *lyauto* 'hole, opening' (Adams 2013: 617) points to an original collective *\*léu(h)-tōi*, whose inflection could be of a matching type, but this is far from assured. With his account of the TochB nom.sg. in *-o*, Jasanoff (2018: 75) renews the arguments in favour of their possible connection, so that Hittite *l.* and Toch B *lyauto* become candidates for cognates. The problem still is that Toch B *lyauto* seems to require a lengthened-grade root *\*ēw*, and that its inflection with *-o*, acc. *-ai* is a very common one with probably multiple sources, one of which could but need not be *\*-ōy*.

To conclude, both semantically and formally the etymology of *l.* remains uncertain, and it can still be said that continuation of a PIE *\*oi-* collective, built to whichever verbal root, is but one possibility.

CHD L-N: 88; EDHIL: 534; GrHL: 93; HED 5: 124; HEG 2: 79; Rössle (2002: 12)

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<sup>106</sup> Note that a second member of a compound from a noun in *\*-i-* is not usual in PIE. For the exceptions, see Gerstenberger (2016: 5).

*šakuttāi-* n. 'thigh' (or similar) (part of the leg of animals and humans)

nom./acc.sg. / set plural (collective)	collective (plural tantum?)
<i>ša-ku-ta-a-e, ša-ak-ut-ta-i</i>	<i>š]a-ku-ut-ta, ša-ku-u[t-ta]</i> <sup>107</sup>
KBo 10.31 ii 18 (NS); KUB 33.57 ii 11 (OH/NS)	HHT 79.12 (NS); HHT 79: 12 (NS)

**Stem formation and inflection:** *š.* is attested in the nom./acc.sg., once as an *a*-stem and twice as an *āi*-stem (the fourth example does not show an ending). The relationship between the *a*- and *āi*-stem cannot be determined with certainty, but most probably, the collective made to a PIE *i*-stem is the original formation. The attested forms either denote only collectives, or those ending in *-a-e* and *-a-i* may stand for the regular nom./acc.sg.

**Discussion:** The word is attested only in NH, in a ritual fragment and in lines of the KILAM festival, and as a NS copy of an OH Myth of the Goddess Inara. With the CHD (Š: 81), the body part must be of the lower part of body, based on the list in HHT 79, where the body parts are listed from top to bottom; *š.* is followed by 'knee' and so must be placed around or below the waist. For some reason, *š.* is used without the determinative UZU and so could (but need not) have a more specific meaning. The CHD understands the ending *-ai/ae-* as the collective marker.

According to Tischler (HEG 2: 743), the *āi*-stem is secondary to the *a*-stem, though he considers the stem uncertain. This assumption can only be based on one's expectation of the order of derivation; it is otherwise unsupported. As the *āi*-stem is attested in an OH/NS text, even the dating cannot be taken to support such a sequence.

Skt. *sákthi-* 'thigh' is a likely cognate (see Kloekhorst (EDHIL: 703-704) for discussion and references). Kloekhorst's uncertainty with regard to the non-

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<sup>107</sup> Because the ending of this form is not clear, it could as well be considered of unknown nominal case. Only the fact that it is in the same line as the prior example encourages the given restoration.

geminate is unnecessary; his explanation that the broken spelling of *ša-ak-ut-ta-i* may in fact contain *-ku-* must be dismissed, as the other three examples have non-geminate *-k-* and here, though the writing could be ascribed to a scribal error, there are no grounds for doing so. Rather, the spelling *-ku-ut-* alternating with *-ak-ut-* confirms the presence of a labiovelar stop  $k^w$ .



(KUB 33.57 ii 11, hethiter.net/: fotarch BoFN02215)

The explanation is rather that the fortis/lenis contrast in Hittite stops was neutralized as lenis before another stop, including fortis: cp. *e-ku-ut-ta* 'drank' and *ne-ku-ut-ta* 'became twilight'.<sup>108</sup>

The connection to the Sankrit *i*-stem form rules out the possibility of an original *a*-stem. Rather, *šakuttāi-* may be a collective made to an original heteroclite *-i/-n-* noun, as seen in Vedic (Oettinger 2016: 323). The Hittite collective in *\*-ōi* was made to the strong stem of the heteroclite. While the variant *šakutta* could in principle reflect a renewed collective plural *\*sóg<sup>w</sup>t-h<sub>2</sub>* to a root noun, there is no comparative evidence for such a root noun (unlike in the case of 'bone' seen above). Therefore, *šakutta* is surely a secondary Hittite creation based on other words with both *a-* and *āi-*stems, a pattern whose existence is undeniable, whatever its origin(s) may be. See further the general discussion below.

Other cognates are OAv. *haxtiiā* (dual, gen.-loc.), YAv. *haxti* (dual nom./acc.). From PIE *\*sóg<sup>w</sup>t(h<sub>2</sub>)-i-* (see Eichner (2015: 15), Oettinger (2016: 323)).

CHD Š: 80; EDHIL: 703; Eichner (2015: 15); HEG 2: 743; Oettinger (2016); StBot 28: 102

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<sup>108</sup> If one prefers to assume that Hittite as an archaism does not show regressive voicing assimilation of a PIE voiced/lenis stop before a voiceless/fortis stop in these words, the same may be assumed for *šakuttāi-*.



*šankuwāi*- n. 'fingernail, toenail; (a unit of linear measure)'

nom.sg.	nom.pl.	nom./acc.pl.	gen.pl.	dat./loc.p l.	unclear
<i>ša-an-ku-wa-ya-aš</i>	<i>ša-an-ku-wa-i-š(a-at)</i>	<i>ša-a]n-ku-wa-a-i;</i> <sup>109</sup> <i>ša-an-ku-wa-i</i>	<i>ša-an-ku-wa-«ya»-aš</i> <sup>110</sup>	<i>ša-an-ku-wa-ya-a[š</i>	<i>ša-an-ku-i-ša(-at-ta-kán)</i> <sup>111</sup>
KUB 9.4 i 26 (NH)	KUB 33.66 ii 5' (OH/MS)	both collectives: KBo 9.127 i 5 (MH/MS); KUB 4.47 Vs. 14 (?/NS)	KUB 9.4 i 26 (NH) (nom.sg. in the same line)	KUB 33.66 ii 4' (OH/MS)	KUB 24.13 ii 19' (MH/N S)

**Stem formation and inflection:** The lexeme is attested as an *āi*- and *a*-stem (on the alleged *i*-stem form *šankuiš* see note 57) of neuter gender (see the discussion below). No stem ablaut attested.

**Discussion:** *š.* (Sum. UMBIN) is attested from OH (MS). There is a disagreement on the morphological explanation of some forms of *š.*, which precedes a disagreement over its gender. Both the CHD and Kloekhorst (EDHIL: 723) list the word as commune. However, Kloekhorst extensively discusses the problem of

<sup>109</sup> The initial sign is partly preserved on join KBo 43.223.

<sup>110</sup> See Rössle (2008: 72, note 268), where he agrees with Beckman that the absence of the *-ya*-sign is most probably a scribal error and one is to read *ša-an-ku-wa-«ya»-aš*. Likewise the CHD.

<sup>111</sup> According to CHD Š: 180, this corrupt form stands for an ablative; Kloekhorst (EDHIL: 723) lists it as an unclear case; Rössle lists it as sg./pl. nom.c.?. The context clearly supports the CHD; see the edition by Haas/Wegener, ChS I.5 (1988) 110, who fail to acknowledge the error. The entire clause is erroneous, so one cannot tell what stood in the original, but nothing argues against expected *šankuwayaz*. The example is in any case of no value in establishing the stem of the word. Note that the correct form could belong to either the *āi*- or the *a*-stem.

the gender and concludes it was more likely neuter, and the two commune forms which he acknowledges as genuine are secondary.

According to the CHD, *š.* is commune, the two endingless attestations of *š.* point to a collective, and the attested *-anza* form *ša-an-ku-wa-ya-an-za* can be either explained as a secondary ergative to the collective *ša-an-ku-wa-i-š(a)* or as derived from the commune form (CHD Š: 180).

Rössle lists the *āi*-stem as c./n. gender. (Of the two nom.sg. commune examples, he provides one for which the ending is actually not attested (*ša-an-ku-wa-a[-iš]* in KBo 13.31 iii 10 (OH/MS).) The *-anza* form is understood as an animate derivation built on the *a*-stem *šankwaya-*, supported by the fact that both forms are used on one tablet.

Melchert (p.c.) provides an alternative analysis. There is substantial evidence (Melchert (2000: 65ff.)) for the use of common gender forms to make count plurals to neuter nouns, as well as collectives to common gender nouns. The evidence for *š.* favours a neuter noun with collective sense, to which in due context were formed count plurals (forms ending in *-eš* and *-uš*). Neuter gender is confirmed for *š.* via use of the "ergative" in KUB 9.4 i 35, where the word is functioning as an agent. In comparison, the CHD's alternative of "individualizing" *-ant-* is hard to motivate. The nom.sg. *šakuwayas* KUB 9.4 i 26 shows the alternative use of a secondary common gender form in an agent role beside *-anza*. Cf. the use of *ḫatalkišnaš* in agent function for neuter *ḫatalkiš(n)-* 'acacia'. Note likewise the alternation between *kāšš=a=za* URU-*az parnanz(a)šš=a* in KUB 41.8 iv 30 vs. URU-*aš parnaš* in the duplicate KBo 10.45 iv 31 (see Otten ZA 54.138). Strictly speaking, the nouns are not in agent function in that clause, though they are in the following one.<sup>112</sup> Melchert concludes that if *šankuwāi-* were by nature common gender, there would have been no motivation to create *šankuwayanza* or *šankuwayaš*. The latter *a*-stem is clearly secondary.

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<sup>112</sup> As stated by Melchert, the competition of *-anz(a)* and a secondary common gender *a*-stem made from the oblique of *š.* also supports the view of Petra Goedegebuure that the ergative became fully grammaticalized only in NH.

Etymologically, Rössle (2002: 76-79) suggests an underlying (unattested) PANat or Hitt *\*šankwa-*, but does not fully motivate it. While it seems almost certain that (URUDU)*šankuwal(li)-* refers to some manicure implement (see CHD Š: 181), the *-a-* may belong to the suffix, so a stem *\*šankw-* from a consonant-stem (root noun) is equally possible.

That the word is related to other IE words for '(finger/toe)nail, claw' seems undeniable, but accounting for the shape and inflection of the Hittite reflex faces two major obstacles: first, the origin of the initial *s-* and second, the myriad shapes of the reflexes elsewhere, which present serious challenges for reconstruction of the PIE etymon.

As to the first point, all attempts to derive word-initial *s-* in Hittite from *\*h<sub>3</sub>-* must be rejected (see the references in Rössle 2002: 79-80). On the other hand, nothing stands in the way of assuming an "*s*-mobile" and a root *\*(s)h<sub>3</sub>neg<sup>wh</sup>-* (thus Kroonen 2013: 381 and Hock et al. 2019: 779) or *\*(s)h<sub>3</sub>neg<sup>h</sup>-w-* (for simplicity the first will be cited in what follows, but unprejudicially). The few instances of initial *išh-* in Hittite continue or may continue *\*sh<sub>2</sub>-*:<sup>113</sup> *išhaḫru-* 'tear', *išhamāi-* 'sing', *išhan-* 'blood', *išhanittar-* 'relative by marriage', *išhi-* 'to bind' (and derivatives), *išhunāu-* 'upper arm', *išhuwa(i)-* 'to scatter, pour' (see the entries in EDHIL). Positive support for *\*sh<sub>3</sub>-* > Hitt. *s-* comes from *šākw-* 'eye' < *\*sh<sub>3</sub>ók<sup>w</sup>-* (with Rieken 1999: 59; cp. Gr. acc. sg. ὤπα 'face').<sup>114</sup> Hittite *šankuwāi-* may thus be derived from a zero-grade preform *\*sh<sub>3</sub>ng<sup>wh</sup>-* (thus e.g., Oettinger 1999: 210, but with *\*-g<sup>h</sup>w-*).

As to the source of the attested *āi*-stem, at least two alternatives present themselves. First, one may suppose that Latin *unguis*, a masculine *i*-stem, reflects an *i*-stem *\*sh<sub>3</sub>ng<sup>wh</sup>-i-*, from which a collective *\*sh<sub>3</sub>(e)ng<sup>wh</sup>-ōi*, *\*sh<sub>3</sub>ng<sup>wh</sup>-i-* was

<sup>113</sup> One exception is *išhā-* 'owner, master, lord' < *\*h<sub>1</sub>esh<sub>2</sub>-ó-*, which forms a word equation with Latin *erus* (Kloekhorst, EDHIL 390 after Ribezzo). For the derivational history confirming this etymology, see Nussbaum 2014: 244-245.

<sup>114</sup> Only this preform with sibilant plus laryngeal can account for Luvian *tāw(i)-* and Lycian *tewe-* 'eye' (whatever the details of the phonetics). The latter are entirely inexplicable from a preform *\*sók<sup>w</sup>o-* to the root *\*sek<sup>w</sup>-*.

created in the same way as  $*h_2(e)sth_2-ōi$ ,  $*h_2sth_2-i-'$  <  $*h_2ó/ésth_2-i-$  'bone' (see the entry above). This account faces two issues. One is the lack of evidence for ablaut, which could be attributed to the limited and relatively late attestation of the Hittite. The other, more serious problem is that *unguis* by this analysis would be the sole evidence for a base *i*-stem. The Celtic reflexes (OIr. *ingen*, MW *ewin*, etc.) point to a stem in  $*-g^{wh}ih_2-neh_2$ , and one may rather suppose that *unguis* represents a stem  $*-g^{wh}ih_2$  (cf. Oettinger 1999: 210, note 16). The Latin word may also be taken as a consonant stem reflecting the PIE root noun reshaped after genuine *i*-stems (Hock et al., loc. cit.).

Oettinger has shown that there are *i*-collectives to thematic bases (1995: 211, 1999: 207, 2000: 183). One may thus entertain derivation of a collective in  $*-ōi$  from a putative secondary  $*sh_3ng^{wh}-o-$  (cp. the thematic stems for 'nail, claw' based on a virtual  $*h_3nog^{wh}-o-$  such as Lith. *nāgas*, secondary to the PIE root noun; see Hock et al., loc. cit.). However, the best examples adduced by Oettinger show "hysterokinetic", not "amphikinetic" inflection; see the discussion below in the entry for *šišāi*- 'tail'. Since in the present case there is not even direct evidence for the base *o*-stem, this scenario must be judged very hypothetical.

In sum, the origin of the *āi*-stem is far from clear.

CHD Š: 180; EDHIL: 723; HEG 2: 837; Rössle (2002: 72)

<sup>(UZU)</sup>*ši/ešāi-* n. 'an animal body part; tail (?)'

<b>nom./acc.sg.</b>
<i>ši-ša-i, ši-e-ša-i, <sup>UZU</sup>ši-ša-i, ši-ša-i</i>
KUB 9.31 i 8 (MH/NS); KUB 29.1 ii 42 (OH/NS); KUB 29.1 ii 43 (OH/NS), KUB 56.59 iv 6 (MH/NS)

**Stem formation and inflection:** Though attested only in the nom./acc.sg., *š.* is certainly an *āi*-stem noun. However, its formation can only be established based on how one interprets the relationship between *šišāi-* and *šēša-*. Both are attested only in NS. Per CHD Š: 449, *š.* could be a collective in *-i*, comparable to e.g. *haštāi-*.

**Discussion:** The initial sign *ši* normally contrasts with *še* in Hittite. Although it can be used in Akkadian also as *šé-*, such a use is not to be expected here. The plene *-e-* in the third example may be rather due to influence from the other word for 'tail', *še-e-ša-* (CHD Š: 445; NB however that the meaning of this word is also unassured, as it is used without the determinative UZU).

The word has received several translations. Görke (hethiter.net/: CTH 757 (TX 05.06.2014, TRde 05.06.2014) leaves *š.* in *šišai daššu hartaggaš šišai* of KUB 9.31 i 8 untranslated: "Das starke *šišai-* (ist) das *šišai-* eines Bären", with reference to Rieken (1999: 464), who translates 'Pranke, Tatze', that is, 'paw'. Rössle (2002: 272) leaves the translation open, with 'ein tierischer Körperteil'. This meaning is refuted by the occurrence in the "Bauritual" KUB 29.1 42-43, where the *šišai* of a lion and a panther are to be made one: *kinupí=ma=ššan anda ŠA UR.MAḪ šiešai paršanaš <sup>UZU</sup>šišai šumumaḫ* 'In the *k.* make the tail of a lion and the tail of a panther one!'. Only the long tails of felines make sense as a body part to be united by braiding them together. If the reason for not translating the word as 'tail' is the assumption that bears have no tails, such an assumption is wrong (and all attempts to explain away a non-problem are pointless). Bears have vestigial tails, and for the thick, fleshy stump that is their tail *daššu-* 'firm' is an entirely appropriate epithet. The stem in *-āi-* may be interpreted as a mass noun, not a collective.

The sense 'tail' is less certain for *šēša-*, but it designates a part of an ox served as food (see the CHD Š: 445), thus assuring that it is edible and includes some meat. Should one assume the derivation of the *āi*-stem from the *a*-stem, one may suppose a reduplicated stem *\*se-sh<sub>1</sub>-ōi* to PIE *\*seh<sub>1</sub>(i)*- 'long' (see Kroonen 2013: 435), where the pretonic short *\*e* would be regularly raised to *i* (Melchert 1994: 136). The alternative of *i*-reduplication is not excluded. Rieken (1999: 74) connects the word to *\*si-sh<sub>1</sub>i-* > Hitt *šai-* 'to press', but this makes little sense semantically.<sup>115</sup> Once the sense 'tail' is established, derivation from a root meaning '(be) long' is entirely plausible (despite the hesitation of Tischer HEG 2: 1010), since tails like those of the lion and panther are the norm, not that of the bear.

What is not so straightforward is the assumption of deriving a collective in *\*-ōi* from an *o*-stem base. Oettinger (1999: 213 et alibi) has argued for collectives in *-i-* from thematic bases, but the best examples show "hysterokinetic" inflection, with nom./acc.n. in *\*-ēi* (loc. cit.), such as Hittite *kulēi* 'fallow field' (\*'previously tilled field') to the *\*k<sup>w</sup>élh<sub>1</sub>-o-* seen in Lydian *qela-* 'arable land, estate' (or similar). Whether one may account for the "amphikinetic" inflection of *šišāi-* or *šankuwāi-* (see above) by analogy to *r/n-* and *l/n-*collectives (Oettinger, loc. cit.) remains *sub iudice*.

CHD Š: 449; EDHIL: 757; GrHL: 54, note 6; HEG 2: 1008; Rössle (2002: 272)

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<sup>115</sup> Any connection with the recently discovered Tocharian *si-* 'tail' is totally excluded on phonological grounds. For the Tocharian word see Itkin, Malyshev and Peyrot, *TIES* 20 (2020), 107-112.

<sup>NA4</sup>*taḥapšettāi-/taḥupaštāi-* n. (stone object)

nom/acc.sg.	dat./loc.sg. (or instr.?)	instrumental
( <sup>NA4</sup> <i>ta-ḥu-pa-aš-ta-i</i> ), <sup>NA4</sup> <i>ta-ḥa-ap-še-et-ta-a-e</i> , <sup>NA4</sup> <i>ta-ḥa-ap-zi-it-ta-a-e</i>	( <sup>NA4</sup> <i>da-ḥu-u-up-pa-aš-da-i</i> )	( <sup>NA4</sup> <i>ta-ḥu-up-pa-aš-ta-it</i> ; <i>da-ḥu-u-up-pa-aš-da-it</i> )
KBo 39.82 ii 10' (NH/NS); KBo 25.29, Vs.? ii 3' (OH); KBo 25.30 10' (NH)	IBoT iii 1 Rs. 53' (OH/NS)	KUB 41.27 iv 10 (?); IBoT 3.1 Rs. 54' (OH/NS)

**Stem formation and inflection:** *t*. is attested with plene *-a-* in the stem, with the alternate spelling of the /a:i/ diphthong with *-e* instead of *-i* (see Melchert 1984: 75 and 163). No ablaut. Likely a loanword.

**Discussion:** The precise meaning of the word is not known; it may have denoted a butcher's block (Rieken 2017: 702) or a stone object for killing a ritual sacrifice (Rössle 2002: 158).

There can be little doubt that the variants represent one word. The difference of geminate vs. non-geminate could be caused by the very nature of a loanword, with different adaptations into Hittite of a foreign word with non-Hittite phonotactics.

Rössle (2002: 158) assigns the word to Hattic based on the fact that it may have entered the language together with the Hattic cult; if so, that would correspond to its OH use, as the language contact must have happened before the 16<sup>th</sup> century. Soysal, HWHT: 247 and 300 ventures a tentative Hattic analysis, assuming a sense similar to Rössle. Rieken (2017) argues rather for an IE etymology from the root *\*deh<sub>2</sub>p-*, for which she follows LIV<sup>2</sup>: 104 in assuming a sense 'to cut up, butcher'. The variations in the stem would reflect the difficult phonotactics presented by the presumed preform *\*dh<sub>2</sub>p-s-to + -i-* (2017: 702-703).

A connection with *taḥapšu* is unlikely. While there is the attested Hurrian *taḥapšu* and also Akkadian *taḥapšu*, the Hurrian word, per Richter (2012: 425), is 'a woolen material from which horse armour was made' or 'blanket; felt'. The

Akkadian word (CAD T: 40) also has a meaning connected to textiles, namely a woollen or linen blanket or stole, also as a blanket for horses, and from that the derived *taḥapšuhuli* 'weaver'. While there is no doubt that *taḥapšu* is an areal textile word (for a possible Ugaritic cognate, see also CAD T: 41), the Hittite determinative NA<sub>4</sub> for stone ensures that the similarity with *taḥapšettāi-* is accidental (so also Richter 2012: 426).

HEG 3: 13; Rössle (2002: 158); StBot 26: 183



DUG/GIŠ *tallāi*- n. (container)

nom./acc.sg.	gen.sg.	dat./loc.sg.	ablative	nom.pl. or stem form	acc.pl.
GIŠ <i>tal-la-i; tal-la-a-i;</i> DUG <i>tal-la-a-i</i>	GIŠ <i>tal-la-</i> <i>ya-aš</i>	GIŠ <i>tal-la-i</i>	<i>tal-la-a-i-</i> <i>az</i>	<i>tal-la-a-</i> <i>i</i> <sup>116</sup>	<i>tal-li-uš;</i> GIŠ <i>tal-la-</i> <i>a-an-za</i>
KUB 29.4 iii 24' and iv 24' (MH/NS); KUB 42.42 iv 9' (NH); KUB 32.137 Vs ii 10 (MH/NS)	KUB 29.4 iv 25 (MH/NS)	KUB 29.4 iii 31 (MH/NS)	KUB 15.34 i 31 (MH/MS)	KUB 12.1 iv 28' (NH/NS)	IBoT 3.1 79' (NH); KBo 7.68 ii 3 (Luvian)

**Stem formation and inflection:** *t*. is attested in both numbers and in both strong and weak cases. It shows frequent plene stem *-a-* and no ablaut. The inflection follows that of neuter gender except the acc.pl. *talliuš*.

**Discussion:** *t*. is attested from MH, in MS and later in NS, and in NS copies of MH compositions. The acc.pl. *talliuš* shows a form that corresponds to *i*-stem common gender nouns such as *tuzziuš*, *auliuš* (GrHL: 88) or with the weak stem of a common gender *āi*-stem. In my opinion, it can only be explained as an ad hoc analogy, or even an error. Rössle (2002: 168, note 580) regards it as a separate word (it never has the DUG or GIŠ determinative).

The word is based on an Akkadian expression *tallu(m)* 'a container' (CAD T: 101; Rössle (2002: 168)), which continues a Sumerian form (for its capacity and quality in Akkadian use, which need not correspond to Hittite usage, see CAD: T 102). *t*. is also known from Luvian, which shows a neuter *a*-stem as an adaptation of the Akkadian. However, most Akkadian loanwords into Hittite appear as *i*-stems, whether commune or neuter (GrHL 53, §2.12). That might explain *talliuš*,

<sup>116</sup> The word is preceded by the numeral 2. It could also be a singular.

but then it is very hard to motivate the dominant inflection as a neuter *āi*-stem. Analogy to <sup>DUG</sup>*huppuwāi*- and <sup>(DUG)</sup>*zalhāi*- is conceivable, but ad hoc. Rössle (2002: 171) raises the possibility that we should assume an unattested Hurrian intermediary *\*talle*, comparing the set of Akkadian *kātum*, Hurrian *kade*, and Hittite <sup>NINDA</sup>*gatāi*-. While unprovable, this seems currently to be the best solution. The Luvian would then be an entirely independent borrowing.

CAD T: 101; HEG 3: 56; Rössle (2002: 168)

<sup>NINDA</sup>*tūhurāi-* n. (bread type)

nom./acc.sg. (or stem form) <sup>117</sup>	nom./acc.pl. (or stem form) <sup>118</sup>	<i>t.</i> + <i>-ya</i> (or nom./acc.pl.)
<sup>NINDA</sup> <i>tu-ḫu-ra-i</i> , <sup>NINDA</sup> <i>tu-u-ḫu-ra-i</i> , <sup>NINDA</sup> <i>tu-ḫu-u-ra-i</i>	<sup>NINDA</sup> <i>tu-u-ḫu-ra-a-i</i> , <sup>NINDA</sup> <i>tu-uḫ-ra-i</i>	<sup>NINDA</sup> <i>tu-ḫu-ra-i-ya</i> , <sup>NINDA</sup> <i>tu-ḫu-u-ra-i-ya</i>
KBo 11.40 v 2' (NH) and KBo 52.134 8; KBo 11.40 Vs. i 18' (NH); KBo 12.59 i 11' (NH),	KUB 10.21 v 23' (OH/NS); KBo 11.32 i 5 (OH?/NS)	KBo 12.59 RS. iv 1' and 6'; KBo 12.59 iv 10'

**Stem formation and inflection:** *t.* is not attested in the weak cases. The strong case examples vary in the plene vowels of both the root and the stem; besides, they only appear in singulars or stem forms. *t.* is most likely of foreign origin.

**Discussion:** The word is attested in NS copies of OH texts and in NH. Most frequently, it is preceded by a numeral indicating the number of loaves. The two examples ending in *-i-ya* cannot be explain with certainty. Either they show the neuter plural ending *-a*, or we are dealing with *tūhurāi-* followed by the conjunction *-a/ya-* 'and'. Because the word is always found in a homogenous environment, I am inclined to prefer the latter version. Also, *t.* is immediately preceded by *ḫaštāi-* in line 6, which could indicate that the two are connected by a conjunction.

To conclude, all we have to build on is the form *tūhurāi-*, for which one cannot disambiguate between stem form and nom./acc.sg. Plene vowels are found in both the stem and the root. The plene *-u-* after *ḫu-* does not indicate vowel quantity or word stress, but rather a ligature. The word is likely of foreign origin, possibly Hattic (Tischler HEG 3: 420) or less likely Hurrian (Rössle (2002: 167)) but has no known Hattic or Hurrian cognates.

HEG 3: 420; Rössle (2002: 163)

<sup>117</sup> All forms listed here as nom./acc.sg. (or stem form) are preceded by the numeral 1.

<sup>118</sup> All forms listed here as nom./acc.pl. (or stem form) are preceded by numerals higher than 1.

*uwāi-* n. 'woe'

For this word, compare the entry for the common gender *āi-* *wāi-*. The form *uwāi-* is a neuter variant of the exclamation, which is a probable loan-word from Luvian (not a continuation of the old common gender stem).

*wantiwantāi-* n. 'lightning'

nom./acc.sg.	gen.sg.	abl.
<i>wa-an-ti-ḫwa-an-da-a-</i> x[ ]; <sup>119</sup> <i>w]a-an-ti-wa-an-ta-i</i>	<i>wa-ḫan-ti-wa-an-ti-</i> <i>ya-aš</i>	<i>ú-wa-an-ti-ḫwa-an-ta-</i> <i>a[z]</i>
KBo 38.163 4' (NH); KBo 32.108 i 5' (MH/MS?)	KBo 32.108 6' (NH)	KUB 17.10 ii 33 (OH?/MS)

**Stem formation and inflection:** *w.* is a reduplicated noun with full reduplication of the stem, just like its NH cognate *wantewantemma-*, also 'lightning'. Its gender can be judged only based on KBo 32.108 i 5', with reservation, as its context is fragmentary. Common gender cannot be excluded.

**Discussion:** Except for KUB 17.10 ii 33, *w.* is attested in a fragmentary context. If we take the forms at their face value, the word seems to show ablaut (gen.sg. *-i-*) and the ablative form seems to be an *a*-stem. Oettinger (2001: 460) concludes that *w.* may not have been an original *āi*-stem, as the *a*-stem is attested in the earlier texts, in OH/MS. As both cannot be possible (the word can either show pre-Hittite ablaut or be an original *a*-stem), one can rely more on the older attestation and assume an original *a*-stem. The gen.sg. in *-i-* must then be considered due to analogy or even chance.

Tischler (HEG 4: 288) considers *w.* a reduplicated stem to *wantai-* 'be warm', with a PIE etymology *\*wend<sup>h</sup>-* 'to fade of heat' with cognates in Slavic and Old Iranian (HEG 4: 284). However, it is difficult to judge on the basis of formal resemblance whether *wantai-* can be the source of *w.*

Firstly, it is not a satisfactory semantic match (lightning is a source of light, not warmth, and there is no good parallel for such a semantic development in other IE languages; see Beekes (2010: 156) for Greek and Armenian, Derksen (2004: 43) for Slavic, de Vaan (2008: 247) for Latin).

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<sup>119</sup> Transliteration E. Rieken et al. (ed.), *hethiter.net/*: CTH 370.I.14 (TX 2009-08-31). The passage, as well as KBo 32.108, is damaged to such an extent that no translation is provided.

Secondly, reduplicated nominal stems in Hittite are not usually inherited (GrHL: 62) and so one cannot find a parallel where a stem in *-āi-* like *wantāi-* would yield an *i*-form *wanti-* as the first reduplicated member.

EDHIL: 955; GrHL: 237; HEG: 285, 287; Rössle (2002: 154)

<sup>(DUG)</sup>*zalhāi*- n. 'metal vessel'

nom./acc.sg.	gen.sg.	dat./loc.sg.	instr.	abl.	nom./acc.pl.
<i>za-al-ḫa-i</i> , <sup>DUG</sup> <i>za-al-ḫa-a-i</i>	<sup>DUG</sup> <i>za-a-</i> <i>al-ḫa-ya-</i> <i>aš(-ši)</i>	<i>za-al-ḫa-a-</i> <i>i</i>	<i>za-al-ḫa-a-</i> <i>it, za-al-ḫa-</i> <i>it</i>	<i>za-al-ḫa-</i> <i>ya-az</i>	<i>za-al-ḫa-a-</i> <i>y[a</i>
IBoT 2 14 i 4 (NH); KBo 32.114 Vs.? 7'(MH?????)	KBo 32.114 Vs.? 12'(MH)	KBo 23.59 iii 8'(NH)	KUB 20.11 ii 20' (OH/MS?); VBoT 3.6 4', 17 (NH)	KUB 27.69 iii 8' (OH/NS)	KUB 27.69 iii 12

**Stem formation and inflection:** *z.* is attested in both strong and weak cases, without ablaut, occasionally with stem plene vowel. The source of derivation is unknown; *z.* is probably a loanword.

**Discussion:** *z.* is attested from MH onwards. The root plene *-a-* is attested once in the gen.sg., only five lines below the same word in nom./acc.sg. without the plene; it can be considered a writing variant.

*z.* is of unknown origin (Rössle (2002: 238)), likely a Hurrian loanword (Tischler (HEG 4: 632)). A different etymology is proposed by Kloekhorst (EDHIL: 1027), who considers its *āi*-stem "the archaic diphthong-inflection" and connects it to *\*tleh<sub>2</sub>-* 'to carry', specifically its weak stem *\*tlh<sub>2</sub>-ōi-*, following the idea that an initial dental was assibilated before *\*l* in Hittite. Without contradicting the possibility of such a phonological development, objections to this etymology remain. Firstly, no references to the PIE root or cognates are provided. Secondly, the presence of an *āi*-stem does not ensure an archaic (that is, PIE?) origin *per se*. (The verbal cognates and examples of assibilated parallels are provided by Tischler (HEG 4: 633).)

As a word of possibly Hurrian origin, *z.* is also listed by Richter (2012: 356).

EDHIL: 1027; HEG 4: 632; Richter (2012: 356); Rössle (2002: 238)

*zammurāi*- n. 'insult, slander'

<b>nom./acc.sg.</b>
«za-<am>-mu-ra-i
KUB 40.33 Vs. 13.

**Stem formation and inflection:** Uncertain stem of unknown derivation. Could have been adopted from Luvian already as an *āi*-stem, but a Hittite creation is at least equally likely.

**Discussion:** *z.* is attested only once in a Hittite context with Glossenkeil, which indicates its Luvian provenance. It is related to the verb *zammurai*- 'to insult, to afflict, to oppress'. Per Tischler (HEG: 652), denominal to Luvian *\*zammura-*. For an etymology of the Luvian base see Nikolaev (2019: 196): from a root *\*(s)kem-* 'to be disgraced, feel shame' seen in the Germanic words for 'shame'.

EDHIL: 1030; HEG 4: 652,



[†*zapzagāi*- n. 'glass beads (?)]

akk.sg.	instr.	nom./acc.pl.	dat./loc.pl. (of derived adjective)
<i>za-ap-za-ki; za-ap-zi-ki</i>	<i>za-ap-zi-ki-it</i>	<i>za-ap-za-ga-ya; za-ap-za-ga-a-ya; za-ap-za-ag-ga-y[a; za-ap-za-ga-i-ya</i>	<i>za-ap-za-ga-aš-ša-an(-za-ya-kán)</i>
KUB 29.1 ii 14 (OH/NS); KUB 29.1 i 14 (OH/NS)	KUB 29.1 i 15 (OH/NS)	KUB 15.32 iv 2 (MH/NS); KUB 15.31 iii 4 (MH/NS); KUB 7.48 Vs.i 10'(NH); KBo 5.1 i 52 (MH/NS)	KBo 42.93 vs. 18 (NH) (Luvian)

**Stem formation and inflection:** The stem does not exist as an *āi*-stem. The attestations point to an *a*-stem and an *i*-stem (also possibly a consonantal stem per Rieken (2004: 536)). No ablaut.

**Discussion:** *zapzagāi*- is listed as an erroneous reading by Rössle (2002: 307), who corrects it to *zapzagaya*-, *zapza/iki*-. While the form *zapzagaya*- is taken as a collective by Rössle and Tischler (HEG 4: 669), there is no reason not to assume an *a*-stem *zapzaga*- followed by the conjunction *-a/-ya*; such a reading cannot be excluded in any of the attested contexts.

To conclude, the *i*-stem is attested in OH/NS and the *a*-stem in later texts. This could be of significance, as a sign of Luvian influence.

Possibly a loanword of foreign origin via Luvian (Rieken (2004: 536)), based on the Luvian attestation in a Hittite context, KBo 42.93 vs. 18. Similar forms found in Ugaritic and Akkadian point to an areal expression.

HEG 4: 669; Neu (1995: 395-402); Rieken (2004: 536); Rössle (2002: 307)

2.2.3 *āi*-stem nouns of indeterminate gender

<sup>GIS</sup>*parlāi*- c./n.? 'wooden part of bed' (?)

nom./acc.sg.	dat./loc.sg.
<sup>GIS</sup> <i>pár-la[-a-i]</i>	<sup>GIS</sup> <i>pár-la-a-i</i> (
IBoT 4.15 4	KBo 55.38 4 (NH)

**Stem formation and inflection:** *p.* is attested only in one text and its parallel/duplicate. As seen below in the autograph, the stem sequence *-a-i-* is assured. If the attestation is not erroneous, the fact that *p.* is attested with *-a-i-* in the dat./loc.sg. confirms the *āi*-stem.

**Discussion:** *p.* is listed as an *āi*-stem by Berman (1972: 59), based on the KBo 55.38 4 attestation. The two texts in which *p.* is used are either parallel or duplicates. The following is the autograph of KBo 55.38 4 (<sup>GIS</sup>*parlāi*- continued by *še-e[r]*):



As assumed by the CHD, the lemma <sup>NINDA</sup>*parlāi*- attested in KUB 42.87 iv 4 as <sup>NINDA</sup>*pár-la-i* could be the same word, or the bread could be named after the shape of a part of a bed.

*p.* may have originated in the Luv. adj. *parla/i*- 'front'. The Luvian word is attested in the birth ritual KBo 9.25 iii, where the sense of *parlay-* may be that of 'in front position', but *p.* may also be a substantive of unknown meaning:

13 [                                    ]x x *an-na-an pá-r-la-i-in du-ú-wa-an-d[u]*

14 [                                    ]x-an-za=pa=ku-wa *an-na-an ap-pa-ra-i-in-d[u]*

While the connection to CLuvian *parlay(a)*- and ultimately *parla/i*- seems very likely, its precise sense in the passage above remains uncertain.

CHD P: 174; HEG 2: 484; Rössle (2002: 298)

[šakuiššāi- c./n.? (a body part)]

dat./loc.sg.	instr. (or nom./ac..?)
ša-ku-iš-ša-i(-), ša-ku-i[š-š]a-i, ša-ku-x[	ša-ku-iš-ši-it
KUB 45.24 i 9 (NS); KBo 33.37 Rs.? 2 +IBoT 2.48 3 (NS); IBoT 2.47 4 (NS)	KUB 17.28 i 15 (NS)

**Stem formation and inflection:** š. is attested only in the dat./loc.sg. and in the instr. As the dat./loc.sg. does not show a weak stem, the instrumental attestation alone can neither confirm nor disprove the stem ablaut. If one compares *ḫaštāi-/ḫašti-*, dat./loc.sg. *ḫa-aš-ta-i*, instr. *ḫa-aš-ti-an-za*, we can see that these attestations are insufficient to decide about ablaut (which is for *ḫaštāi-* assured by e.g. gen.sg. *ḫa-aš-ti-ya-aš*, *ḫa-aš-ti-<sup>l</sup>i-aš*; see the entry *ḫaštāi-* n.).

**Discussion:** š. is attested with certainty only in one text (KUB 45.24) and its copies, all of which were written in NH. It is listed as an *a*-stem collective plural *šakuišša-* by Tischler (HEG 2: 738), who takes final *-i* as the dat./loc.sg. ending (though in *a*-stems the dat./loc.sg. usually does not include the stem vowel: cf. commune *atti*, neuter *pedi*, adjective *arawi* etc.)

As shown by Rieken (2005: 102), š. is likely to have originated from the words *šaku-* 'eyes' and *išš-* 'mouth'. Such a *dvandva* compound would then have the meaning 'eyes and mouth; face'. She finds a parallel for the presence of both vowels *a* and *i* in the dat./loc.sg. in the form *tabarnai* ' (to) tabarna'. What remains unusual is the absence of any derivational suffix. (and NB, compare TochA *akmal* 'face' < *ak* 'eye' + *mal* 'nose'.

Such a compound would point to an *a*-stem *šakuišša-*. The *āi*-stem of š. is obviously secondary.

The instrumental form is understood as 3sg.pret.act. of a verb by Kloekhorst (EDHIL: 701). The whole passage is translated by Rieken (1999: 61) and discussed under the lemma *šāku-* n. 'eyes'; this connection is also implied by Tischler (HEG 2: 738), who understands the instrumental form as nom./acc.sg.

*šakui=šit*. Rieken concludes that because the passage is so difficult to translate, it is quite uncertain whether the form belongs to *šāku-*. The CHD suggests both possibilities, that the form *ša-ku-iš-ši-it* may be an instr. to *šakuiššāi-* (CHD Š: 77) or nom./acc.n. to *šakui-* (CHD Š: 66).

As there is no parallel for such a compound in other IE languages, *š.* seems to be an inner-Hittite formation made up of two members, both of which have an IE etymology (see EDHIL: 166 for *aiš-/išš-* 'mouth' and EDHIL: 704 for *šakuwa-* 'eye').

[CHD Š:77; EDHIL: 701; HEG 2: 738; Rieken (1999: 61)]

\**dušgarāi-* c./n.? 'joy'

gen.sg.	uncertain
<i>t]u-uš-ka-ri-i-aš</i>	<i>t]u-uš-ka-r[i-i-aš; du-uš-ga[-</i>
KBo 25.112 vs. Ii 20' (OH/OS?)	KBo 7.54 6' (pre-NH/MS); KBo 7.54 4' (pre-NH/MS)

**Stem formation and inflection:** Ultimately from *duške/a-* 'to be joyful, happy, rejoice (in)'. Likely an *āi*-stem. The genitive is interpreted as an *i*-stem by Kloekhorst (EDHIL: 901). Possibly commune.

**Discussion:** Besides the gen.sg. attestation, the other two assigned to this lemma by Rössle (2002: 92) are incomplete and quite uncertain. As they may belong to a neuter *t*-stem cognate *dušgaratt-* 'joy' (GrHL: 122), the context of KBo 25.112 *tuškariyaš* DINGIR-*uš* 'god of joy' might be its only attestation. The source of the formant *-ar(a)-* is far from obvious, but it is shared with *dušgaratt-*, *dušgarātar* 'joyfulness', and *dušgarawant-* 'joyful'. Despite appearances, a genuine deverbative use of *\*-ro-* from a derived verbal stem (not a root) would be unparalleled. More likely is a base *\*dušgar(a)-* 'joyful' analogical to the near-antonym *\*naḥšar(a)-* 'fearful' < *\*neh<sub>2</sub>s-ro-* (= OIr. *nár* 'modest').

The stem of the underlying verb *duske/a-* 'to be joyful, happy, rejoice (in)' definitely reflects a lexicalized stem in *\*-skél/ó-*, *pace* Kloekhorst (EDHIL: 902). Despite the protestations of Tischler (HEG 3: 466), the sense of Skt. *tuṣāyantī-* (RV 10,27,16) is 'satisfied, content' (LIV<sup>2</sup>: 641-642, note 2 with refs.) and justifies setting up a root *\*teus-* 'be satisfied, content' *separate* from *\*th<sub>2</sub>eus-* 'be silent'.

EDHIL: 901; HEG 3: 465; Rössle (2002: 92)

*dušqariwāi-* c./n.? '?'

<b>instr. (case uncertain!)</b>
<i>du-uš-qa-ri-wa-it</i>
KUB 22.53 6

**Stem formation and inflection:** Both stem and case of this hapax are uncertain.

**Discussion:** *d.* is a hapax in KUB 22.53 6 attested only in the instrumental case. Tischler (HEG 3: 469) lists it as an *a*-stem *dušqariwa-*. In that case, however, one would expect †*du-uš-qa-ri-wi-it*. If the form is genuine, an *āi*-stem is more likely. Although Tischler marks the form with a question mark, I do not see what other case could be expressed by the form in its context.

Although we cannot translate this word, the possibility of a *dvandva* compound 'joy and sorrow' may conveniently be proposed (as by C. Melchert, p.c.) — so far, however, without possible verification.

HEG 3: 469

[†<sup>(GIŠ)</sup>*zaltāi-* c./n.? 'chariot'(?)]

gen.pl.	nom./acc.pl.
<sup>GIŠ</sup> <i>za-[al]-ta-ya-[aš]</i> ; <sup>GIŠ</sup> <i>za-al-ta-i-ya-aš(-š=a)</i> ; <sup>GIŠ</sup> <i>za-al-ta-ya-aš</i>	<i>za-al-ta-i-ya</i> ; <sup>GIŠ</sup> <i>za-al-ta</i>
HKM 24 Vs. 5 (MH); HKM 18 Rs. 24 (MH); KUB 19.22 13' (NH)	KUB 23.68 Vs. 18' (NH); HKM 24 Rs. 34

**Stem formation and inflection:** There is no compelling evidence for an *āi*-stem. As persuasively argued by Rieken, HS 110 (1997) 171-174, all forms except the first are compatible with a substantivized Luvian adjectival stem *zaltaiya-*, borrowed into Hittite. The word is likely a collective *plurale tantum*.

**Discussion:** *z.* is attested from MH. It is understood as an *a*-stem *zalta-* by Rieken (2004: 538) and the *-i-* in its genitival attestation as a hiatus-filler, but this is inferior to her analysis of 1997. If it is not merely an error, *zalta* may be the collective plural of the nominal base of the adjective, whose substantivization produced an equivalent of the base noun. All of the gen.pl. attestations are used as attributive to ÉRIN.MEŠ or *tuzzi-* 'army' (in KUB 23.68), and so translated as '*zalta(ya)(š)* troops'. In the piggy-back letter HKM 18 Rs. 24, it is interestingly found in a phrase *ka-a-aš-ma ÉRIN.MEŠ URU Iš-ḫu-u-pi-it-ta ÉRIN.MEŠ GIŠ za-al-ta-i-ya-aš-ša kuin ḫal-ki-in tu-kán-zi* 'the grain which the troops of Išhupitta and *zaltayaš* hold for cultivation?' (Hoffner (2009: 136-140)).

The sense 'chariot' assigned by Rieken based on the resemblance to HLuvian *zal(l)al-* 'wagon', etc. is not assured. In formal terms, *zaltaiya-* is surely an appurtenance adjective to the Luvian noun *zalt(i)-* (Melchert, forthcoming), whose contexts point to an object of the natural world (see KUB 35.145 iii 16, where it stands between wild animals and 'apple tree'). The GIŠ determinative of the derived adjective suggests (though hardly proves) a tree or woody plant as a source of wood. The *zaltaiya-* would thus be something made of the wood of the *zalt(i)-*. While this could refer to chariots, the parallelism with a city name raises the possibility of some installation where troops are housed. A substantivized *i*-stem adjective is likewise understood by Starke, StBot 41 (1995: 41, note 94),

who also connects it to Luv. *zalti-* and thinks of an animal designation for the latter (see the passage referred to above).

As the meaning of *z.* is not fully clear, it remains etymologically unexplained. See Tischler (HEG 4: 638) for several unconfirmed etymological proposals.

Alp (HBM 1991: 148, 311); GrHL: 356; HEG 4: 636-8; Hoffner (2009: 136-140); (Rieken (2004: 538); StBot 41: 41



2.2.4 *āi*-stem adjective*warāi-* / *wari-* '?'

nom.pl.	acc.pl.	acc.pl.?	unclear
<i>wa-ra-a-[e?]-eš</i>	<i>wa-ra-a-uš</i>	<i>wa-ra-e-eš; wa-ra-e-eš</i>	<i>wa-ra-e-eš</i>
KUB 18.5 i 41 (MH/MS)	KUB 18.5 i 35 (MH/MS)	HKM 47 Rs. 44 (MH/MS); HKM 47 Rs. 46 (MH/MS)	HKM 49 Rs. 16 (MH/MS)

**Stem formation and inflection:** *w.* is attested only in strong cases in the plural. Both the plene stem and root vowels are present, *-a-* and *-e-*. The stem formation is unknown. The inflectional endings do not disambiguate an *āi*- or *i*-stem.

**Discussion:** *w.* is found as a MH epithet of birds of augury. Its meaning and origin remain unclear. Both an *āi*-stem and an *i*-stem are possible, but the use as an epithet suggests the latter.

The word is listed as an *a*-stem by Tischler (HEG 4: 311), but there does not seem to be justification for such a claim. Though the adjective endings of the *a*-stem class are *-eš*, *-uš* for nom.pl.c. and *-uš* for acc.pl.c., the stem *-a-* is not preserved, thus e.g. *araweš*, *alwanzeneš*, never the type of *-āeš* (GrHL: 84).

*w.* is of unknown origin. Its stem form cannot be convincingly established.

GrHL: 84; HEG 4: 311; Rössle (2002: 299)

### 3 Conclusions and summaries of the core *i*-stem and *āi*-stem set

#### 3.1 Core *i*-stems

"To distinguish between possibility, probability and provability" (Kloekhorst 2008: ix), that is the question. Here the task is to gather forms with a common feature (in this case, the *-i-* suffix) and distinguish them from other forms bearing the same feature but differentiated by their origin.

The inclusion of lexemes in the core group, thus likely inherited, is not necessarily based on fixed criteria. As the set is not large, one can take the liberty of also including those that have been spoken of as inherited, although a closer look may eventually exclude them from the inherited group, as well as those which, due to insufficiency of attestations, cannot be instantly excluded. Hittite etymological dictionaries (HED, HEG, EDHIL, LIV<sub>2</sub>, HW<sup>2</sup>) may agree on some etymologies but differ considerably in others.

The important issue of accent/ablaut patterns can be studied on the basis of words, their inflectional forms and their derivatives. The study of Hittite phonology, given that it is a language recorded exclusively in cuneiform script, is a challenging field. Of interest with regard to the accent is the problem of so-called "plene spelling": while Hittite words are typically rendered by syllabic (beside logographic) cuneiform signs, there also appear single vowels, for example *ar-k-i-i-e-eš* besides *ar-ki-uš*. While a connection to accent is agreed, this plene spelling does not directly reflect accent. As native speakers know the position of stress in word forms, overt marking of accent in writing systems is rare, with early Sanskrit and Greek being unusual in this regard. Furthermore, although only one vowel in a derivative can be accented, two vowels may be marked by plene.

In general, very few nouns and adjectives descriptively made up of root + *-i-* are inherited or even derived from PIE material.

##### 3.1.1 Common gender

The following lexemes are treated in Part 2 as common *i*-stems with a putative PIE connection:

<sup>SIĜ</sup>*ali-* 'fine wool', <sup>LÚ</sup>*antuwašalli-* (dignitary), *arki-* 'testicle', *arši-* 'planting, cultivation', *addi-* (body part), <sup>NINDA</sup>*hali-* (bread type), *halki-* 'barley; grain', *halpi-* '?', [*hari-* 'valley'], <sup>UZU</sup>*ha/urpi-* '?', [<sup>NINDA/DUG</sup>*harši-* 'round, leavened bread/ jar'], [<sup>\*\*</sup>*hawi-* 'sheep'], <sup>GIŠ</sup>*hurki-* 'wheel', <sup>UZU</sup>*ha/urni-* '?', *kappi-* 'a bit of (grain), grain', *karpī-* 'anger', <sup>(GIŠ)</sup>*kurak(k)i-* 'dais; column, pillar', *:liki-* 'saltlick', <sup>(GIŠ)</sup>*mūri-* 'grape-cluster', <sup>DUG</sup>*palhi-* 'basin, vessel for holding beverages; kettle', *pattarpalhi-* 'broad-winged' (oracle bird), *pēri/e-* (unknown meaning/ functionary), [*šāri-* 'file, column'], *tarumaki-* (a bird), *ūrki-* 'trail, track', *weši-* 'pasture'.

Bracketed lexemes, that is *hari-*, *hawi-* and *šāri-*, have been excluded: the first and the third because their status as *i*-stems (not *ya*-stems) is unlikely; the second as a Luwian formation (although the best attested PIE *i*-stem noun of all, its status as a genuine Hittite word is unsupported). <sup>LÚ</sup>*antuwašalli-* and *pattarpalhi-* are compounds with adjectival second member, respectively *šalli-* 'great, big' and *palhi-* 'wide, broad'; both are treated among the core *i*-stem adjectives.

The remaining twenty, however, by no means form a homogenous group. Firstly, the origin of some of them is unknown, and foreign origin can be neither confirmed nor excluded. This holds true for <sup>SIĜ</sup>*ali-* (though a Hurrian origin, as suggested by some, is unsupported, there are no IE connections), *arši-* (with a quite uncertain formation/etymology), *addi-* (which is scarcely attested and could even be an *a*-stem), <sup>NINDA</sup>*hali-* (its etymology is uncertain, but as the word is abundantly attested from OS to NS and as there is no cognate word for this type of bread outside Anatolian, it needs to be treated with caution), *halpi-* (an unclear hapax), <sup>UZU</sup>*ha/urpi-* (attested only in the nom.sg., with unknown morphological connections), <sup>UZU</sup>*ha/urni-* (of unknown derivation), <sup>(GIŠ)</sup>*kurak(k)i-* (connections have been suggested with two IE verbal roots, but neither is assured), <sup>(GIŠ)</sup>*mūri-* (none of the etymological proposals is conclusive), *pēri/e-* (uncertain meaning, no etymology), *tarumaki-* (hapax). *halki-* is a special case in this group: although it has no attested cognates, its meaning 'barley; grain' and attestations throughout the written history of Hittite and use as a theonym already in OH make this word is likely candidate for PIE origin.

Secondly, there are seven lexemes with an attested PIE root, but with the *i*-stem found exclusively in Anatolian: <sup>GIŠ</sup>*hurki-* (< PIE *\*h<sub>2</sub>wr̥g-* 'to turn'), *kappi-* (< *\*kmb<sup>(h)</sup>-i-* 'small', discussed under adjectives), *karpi-* (to the verb *karp-* (med.) 'get angry' < PIE *\*krep-* 'to be angry'), *līki-* (< PIE *\*leyǵ<sup>h</sup>-* 'to lick'), <sup>DUG</sup>*palhi-* (connected to the adjective *palhi-* 'wide, broad' < PIE *\*pleh<sub>2</sub>-* 'flat', with cognates in other IE branches), *ūrki-* (though derived from the verbal stem *\*wr̥g-*, the verb is not attested in Hittite, so the stem *\*wr̥g-i-* must have existed already in pre-OH), *weši-* (with two possible verbal roots as its base, *\*wes-* 'to pasture, to feed' and *\*weis-* 'to flourish, to grow', *w.* may have been prehistorically an ablauting noun with ablauting *-i-* suffix). Except for *weši-*, they must reflect zero-grade root, which suggests, but does not prove, that they reflect the 'modified' acrostatic type of *arki-* (see below).

The only lexeme for which the *i*-stem can be confirmed as inherited from IE on the basis of its attestation in other branches is *arki-* 'testicle' < PIE *\*h<sub>1</sub>órǵ<sup>h</sup>i-* / *\*h<sub>1</sub>(e)rǵ<sup>h</sup>i-*, where *\*ó* alternates with zero-grade root. The standard acrostatic paradigm is reconstructed with *ó/é* root ablaut, but the weak stem with *e*-grade does not seem to be supported, so a shift from *ó/é* to *ó/∅* ablaut already in PIE may be assumed for *a.* and its cognates (Gr. ὄρχις, Arm. *orji-k'*, Av. *ərəzi-*).

### 3.1.2 Neuter gender<sup>120</sup>

[*hāli-* n. 'pen, corral (for herd)'], [<sup>(GIŠ)</sup>*kattaluzzi-* n. 'lintel, threshold'], *le/išši-* n. 'liver', <sup>A.ŠÀ</sup>*terippi-* n. 'plowed field'

Neuter *i*-stems are almost unattested in PIE, and the same picture is found in Hittite. The first two lexemes, *hāli-* and <sup>(GIŠ)</sup>*kattaluzzi-*, must be excluded from the list, the first on the basis of lack of etymological connections, the other as a compound with *ai*-stem noun *luttāi-/lutti-* 'window' as second member (compare p. 200).

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<sup>120</sup> For neuter *i*-stems, see Melchert (2021).

For *lišši-*, the etymology remains an open issue; it has no known cognates, but at the same time may well be of IE origin based on its semantics. *terippi-* is likely a deverbative formation from *teripp-* 'to plow' < PIE *\*trép-* 'to turn').

To conclude, there are no known Hittite primary *i*-stem neuter nouns.

(Of interest to Anatolian studies is the form <sup>A.Š.Ā</sup>*mariyani-c.* 'swampland', which confirms that the noun *\*móri-* n. 'lake, sea' is of PIE origin (Oreshko 2019: 233). The dat./loc.sg. of <sup>A.Š.Ā</sup>*mariyani-* is listed as a Luvian lemma by Melchert (DCL: 175), who states: “Derivative of *\*móri-* with Oreshko, op. cit. 233–7, but not collective, rather individualized, virtual *\*moriyo-on-* ‘the watery (place)’.”

### 3.1.3 Indeterminate gender

*warši-*, also because of its unknown meaning, has no assured etymology.

### 3.1.4 'Proterokinetic' and other primary-appearing adjectives

*i*-stem proterokinetic adjectives considered of PIE likely origin are not numerous. Among them may be counted *ḫarki-* 'white, bright', *\*ḫarši-* 'head-shaped', *ḫuelpi-* 'fresh, young, new', *karši-* 'bare, mere; frank; harsh, astringent (of medicament); sour(?)', *mēkki-*, *mēkk-* (or *mēkka-*?) 'much, many', *palḫi-* 'wide, broad', *parkui-* 'clean, pure, free of something', *šalli-* 'great; adult, large, important, vast', *šuppi-* 'pure (ritually), sacred, holy; taboo', *daluki-* 'long', *dankui-* 'dark, black', *warḫui-* 'rough, shaggy; unshaven; covered with trees'. Other adjectives which are worth study with regard to their possible IE origin are *kāki-* 'thin' (or sim.), *kappi-* 'small', *kaši-* (a color), *\*lazzi-* 'good, fine', [*manni-* 'related to pregnancy'], *\*marri-* ? 'whole; mere', *\*marši-* (modifies ritual), *teri-* 'three', *walli-* 'shorn, smooth (?)'.

Although *i*-stem core adjectives form a relatively small group, a PIE etymology is certain for many of them, and some are among the more frequently occurring adjectives in the language. The crucial question is whether they can also be considered adjectives already in the proto-language.

Of unconvincing derivation (and therefore etymology, though they may well be based on PIE material) are the following adjectives. There is no information about

the formation or origin of *huelpi-*. This holds true also for *\*šuppi-*, the origin of which remains unknown. *\*harši-* must be excluded as neither primary nor old (its derivation remains problematic). The etymology of *kāki-* is uncertain. The status of *\*lazzi-* remains uncertain due to lack of attestations (not even its meaning 'good, favourable' is secured). *manni-*, listed only for completeness, is not included in the group; it is a hapax, and Luvian appurtenance cannot be excluded. *marri-*, which may be connected to Lat. *merus*, is attested only as an adverb. The status of *\*marši-* as an *i*-stem is not assured; we could be also dealing with a *ya*-stem. Another famous stem, *mēkki-*, has an assured PIE ancestor *\*megh<sub>2</sub>-*, though certainly not an original *i*-stem as its source. *daluki-*, with plentiful adjective cognates across the IE branches, is certainly of the PIE ancestry (< *\*delh<sub>1</sub>-* / *\*d̥lh<sub>1</sub>-*), but hardly primary as an *i*-stem. *walli-* is not unlikely to be of IE origin, although due to lack of attestations it must be accepted with caution. *warhui-*, which is given a PIE preform in EDHIL: 960, cannot be included among the inherited stems with certainty; there are no cognates outside Hittite, nor parallels in other IE languages.

*teri-* is the only adjective of this group that can certainly be projected back to PIE, not only with regard to its root but also to its adjectival status (against Grestenberger 2009: 16, who quotes Prauss, note 28, for the claim that not a single *i*-stem adjective is attested in more than one branch of the IE family). Hittite *teri-* goes back to PIE *\*trei-* / *\*tri-*; cf. Melchert (1994: 58, 93), who explains the Anatolian forms Hitt. *teri-*, Lyc. *terihe* as showing anaptyxis of the vowel *\*-e-* in Proto-Anatolian. Alternatively, it could go back to full-grade root *\*téri-*, in which case Melchert would predict a long vowel. But the absence of plene could easily be due to chance, so the evidence favors *\*trei-* / *\*tri-*, which is reflected in other IE languages (Ved. *tráyah*, Lat. *trēs*, etc.).

Although likely of PIE origin, *karši-* is most probably not from a PIE *i*-stem. Though there are competing suggestions for its ancestry, the most compelling is its derivation from *\*kers-* 'to cut', and it must be pre-Hittite, since some of its many senses are not directly derivable from the attested verb.

The two property adjectives, *kappi*- 'small' (< *\*kmb(h)-i*- 'small') and *kaši*-, likely belong to the Caland group. As a designation of colour, *kaši*- could be of IE origin, etymologically connected to several words for colours in other IE languages; the lack of ablaut may be due to chance.

Likely candidates for inherited *i*-stem adjectives are *ḫarki*- (< *\*h<sub>2</sub>(e)rǵ-*) with its adjective cognates and *palḫi*- < PIE *\*pleh<sub>2</sub>-* 'flat', with *o*-stem adjectives attested in other branches. While cognates for *parkui*- are found only in Germanic, its IE connection seems quite likely, in which case it might be a primary *i*-stem (< PIE *\*prǵ<sup>w</sup>-yé-* to *\*perk<sup>w</sup>-*). *šalli*-, with cognates in Luvian and outside Anatolian, is also certainly of inherited origin, though its formation is not easy to explain (surely from PIE *\*swélh<sub>2</sub>o-*, but the root vocalism is difficult to explain). The *i*-stem is found only in Hittite. As to *dankui*-, a word of assured IE origin, there is again no support for projecting the *i*-stem back to PIE, so we can safely reconstruct only the adjective base *\*d<sup>h</sup>ǵ<sup>w</sup>-*.

At least for *šalli*- and *dankui*- we have some reason to believe that the *i*-stem is not technically primary, but secondary to an *o*-stem. I find it likely that the same is true for *ḫarki*-, *palḫi*- and *parkui*-, which are also property concept roots (strictly speaking, this is not true of *šalli*-, though a root 'to swell' can easily shade into 'be swollen', neither of the above mentioned *karši*-). For the observation that Caland adjectives usually belong to the group of property concept adjectives, see Rau (2009: 78).

Three explanations have been given for this type of *i*-stem adjectives:

(1) Abstraction from abstracts as first compound members. This theory is based on the view that when adjectives were used as first members of a compound, they were replaced by deadjectival abstracts, typically *i*-stems (Nussbaum 1976 (diss.), 1999, Schindler 1986 and others). Following this process, new adjectives could have been based on the first members of compounds, which would be *i*-stems.

(2) The appositional theory of Grestenberger (2016: 3), who discusses second members of compound with the *-i-* suffix replacing an *a*-stem or with a

nonexistent simplex. She concludes that they are typically used predicatively (non-attributively).

(3) Rieken's (2005: 53-58) proposal that *i*-stem abstracts replaced *o*-stem abstracts, e.g., *\*sólh<sub>2</sub>-o-m* 'the big (one)' > *\*solh<sub>2</sub>-i-/solh<sub>2</sub>-oy-* 'big' (adj.).

The above quoted hypotheses have one axiom in common: that the only "true" *i*-stems in PIE were abstracts or result nouns.

Another attractive scenario is presented by Nussbaum (2014a). What is considered "arguable" by Nussbaum (2014a: 304) is that the only primary adjectives in PIE were underivable *o*-stems like *\*h<sub>1</sub>rówd<sup>h</sup>-o-* 'red'. With regard to the derivational processes affecting *o*-stem adjectives, secondary denominal suffixes frequently form in parallel both exocentric derivative nouns (abstracts/result nouns, almost entirely feminine in Core IE; *ibid.* 304, 306) and endocentric adjectival substantivizations 'the X one' which, when preserved as such, are usually masculine in Core IE. However, as shown especially by secondary *n*-stems in Germanic,<sup>121</sup> the latter may also transform into adjectives of virtually equivalent meaning to the original *o*-stem base, giving rise in Germanic to the weak adjectives in *\*(o)n-*. As an example of this development, Nussbaum cites one of the Hittite adjectives under discussion here: on the basis of the adjective *\*h<sub>2</sub>(e)rǵó-/\*h<sub>2</sub>rǵó-* (found in Gr. ἀργός) 'bright, shining' was derived a substantive *\*h<sub>2</sub>(o/e)rǵi-* (found in Hitt. *ḫarki-*) 'bright, shining one'; the adjective also formed an abstract *\*h<sub>2</sub>(o/e)rǵi-* (seen in Gr. ἀργι- or Skt. *ṛji-*) 'brightness'.

I suggest that the intermediate step of substantivization assumed by Nussbaum may not have necessarily taken place. The endocentric adjectives may have remained adjectives, though marked for definiteness (see Höfler 2021 for this rather complicated but promising approach), before they eventually lost their definiteness function in most cases.

Under this scenario, one must still account for the ablauting suffix *-i/-ay-* of Hittite *i*-stem adjectives. Per Nussbaum's derivational path (for more examples,

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<sup>121</sup> And also by secondary *\*-e/ont-*stems in Hittite; see Melchert (2000).



see Nussbaum 2014a: 304) the accent-ablaut pattern would be that of "modified acrostatic" inflection, with  $*o \sim *Ø$  root ablaut. Under these circumstances, it is necessary to explain the suffix ablaut by analogy to the *u*-stem adjectives.

To conclude, I prefer not to exclude *a priori* the existence of *i*-stem adjectives inherited from PIE, for there is no reason not to believe such a development for some of the adjectives in the set mentioned here together with *teri-*. What this implies is that Hittite may be closer to the PIE state of affairs in showing direct reflexes of ablauting *i*-stem adjectives, whether they are truly primary or secondary via Nussbaum's account.<sup>122</sup>

### 3.2 *āi*-stems

Synchronically, Rössle (2002: 318) presents the fact that the *āi*-stems (that is, words with plene writing of suffix vowels, *xa-a-i*, *xa-i-i-ya*, *xa-i-ya*, *xa-a-ya* etc.) show an accented stem. As he states, there is no root-ablaut and the accentuation and length of the diphthong is shown by the *scriptio plena*. It can be confirmed that both the ablauting and the non-ablauting stems have stable accentuation of the stem.

Rössle gives evidence for the stem accent of the non-ablauting stems attested in both the singular and the plural. The stem-ablauting *āi*-stems are expected to follow the pre-OH hysterokinetic paradigm.<sup>123</sup> Its outcome in the *āi*-stems has

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<sup>122</sup> More complicated is applying Nussbaum's account to Luvian and Hittite, where e.g. *šalli-* must have had root accent to explain the *-ll-* instead of *-lḫ-*. We could assume that  $*swolh_2-ó-$  'swollen' is at least Common Anatolian and the source of both the Luvian and the Hittite. But that would require that Hittite followed the archaic pattern and made a modified acrostatic  $*swólh_2i-$ ,  $*swlḫ_2-i-$  for the endocentric derivative (eventually generalizing the strong stem). This account is not impossible, but somewhat unnecessarily created just to explain one form. And though one cannot with certainty tell the root of *karši-* or *parkui-*, they could be of the "proterokinetic" type. Other than that, there is no evidence for an *o*-stem base for either.

<sup>123</sup> By a hysterokinetic paradigm Rössle means one that accents the stem in nom./acc. sg. and the ending in gen.sg.; that is, he implicitly follows the division of PIE ablauting lexemes into proterokinetic, amphikinetic and hysterokinetic. Another division is suggested by Kloekhorst

stable accent on the stem, except possibly in the genitive singular. This can be supported by the position of plene versus regular vocalisation of the ending (strong versus weak cases). The levelling of the accent has also influenced the levelling of the ablaut in some attested examples. Most of the *āi*-stems, however, show no stem ablaut.

According to the Erlangen model of accent and ablaut, the PIE (animate) *\*oi*-stems (predecessors of some of the Hittite *āi*-stems) have been assumed to follow the amphikinetic paradigm with root-ending stress alternation, schematically strong R(é)-S(*oi*)- and weak R(zero)-S(*i*)-E(é). However, examples of well-attested lexemes (as presented by Yates 2019: 200), such as acc.ag. *ḫurdāin* / gen.sg. *ḫurtiyaš* or nom.sg. *zahḫāiš* / gen.sg. *zahḫiyaš*, show stress on the stem rather than on the root, that is, strong R(zero)-S(*ói*)- and weak R(zero)-S(*i*)-E(é). Per Yates, the *\*oi*-stems therefore stressed the suffix *\*-oi-* in the strong cases and had zero-grade suffix in the weak cases, where the accent shifted to the ending. The position of the stress on the stem is supported by its frequent plene spelling (Yates 2019: 211). Though plene vowels are not found in endings, the final position of the stress is confirmed by the fact that the suffix is surely unaccented, as it lacks the syllable nucleus (*\*-y-*) and the stress cannot be on the root as it cannot precede the derivational suffix (the presuffixal stem is invariant and clearly unstressed in the strong cases). But since there are some genuine examples of PIE amphikinetic nouns, e.g., *\*d<sup>h</sup>éǵ<sup>h</sup>-ōm* ~ *\*d<sup>h</sup>ǵ<sup>h</sup>-m-* 'earth', the matter remains open. What is certain is that the current evidence suggests that Hittite inherited at best

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(2018: 184), who divides the original paradigms into only two classes, proterodynamic and hysterodynamic – with accent on the root in the nominative, on the stem in the accusative, on the ending in the oblique cases and on the stem in the locative (where -kinetic and -dynamic have the same meaning). Kloekhorst, following Beekes, expects a correlation between the accent paradigm and gender, where to hysterokinetic belong kinship terms in *\*-r-*, nomina agentis in *\*-r-*, masculine *n*-stems and possessive adjectives in *\*-s-*. All neuters and feminines in *-ti-* and *\*-h<sub>2</sub>-* or *\*-ih<sub>2</sub>-* belong in his view to the proterokinetic. This leads him to discussion of the development of gender, where he favours the PIH common-neuter ancestor of late PIE masculine-feminine-neuter. The conclusion (2018: 200-201) makes it obvious that Kloekhorst believes that the IE language developed from simpler to more complex.

only a small core of such nouns, which in turn suggests that the PIE set was quite small.

The use of the suffix *-āi-* to form two major groups, animate deverbal abstracts and concrete nouns and also animate denominal abstracts and concrete nouns, is exemplified by a group of well-attested *āi-*stems in Yates (2019). The only form for which Yates proposes a primary origin is Hitt. *ḫurdai-*.

### 3.2.1 Common gender

The commune *i-*stem nouns listed in Part 2 are *āi-wāi-* 'pain and woe' (and its neuter variant *uwāi-* n. 'woe'), *armuwalašḫā(i)-* 'moonlight', *\*a(u)wa(u)wāi-* (an animal; a golden vessel in the shape of the animal), *erāi-* c. (part of liver), <sup>DUG</sup>*ḫakkunnāi-* (container for precious oil; building part), *ḫalluwāi-* 'violence, brawl, quarrel', *ḫarāi-* '?', *ḫar/hurnāi-* 'non-solid arboreal substance', *ḫukmāi-* 'conjunction, spell', *ḫullanzāi-* 'fight; defeat', *ḫurtāi-* 'curse', *irḫāi-* (unknown substance), *išḫamāi-* 'song; specific name of a song', <sup>(SÍG)</sup>*ištaggāi-* 'bow string', *ištarningāi-* 'illness', *kurkurāi-* 'scaring, intimidation', *lakšāi-* (object of silver), <sup>KUŠ</sup>*laplāi-* (body part), <sup>GIŠ/GI</sup>*lazzāi-* (kind of tree or wood), <sup>DUG</sup>*le/ilḫuntāi-* 'vessel to receive liquid' (?), *lingāi-* c./n. 'oath; oath deity; perjury', <sup>GIŠ</sup>*lūlāi-* c.? (an object made of wood or a tree and its product), *maniyahḫāi-* 'administrative district; administration, government, rule', *muḫlāi-* '?', <sup>UZU</sup>*mu/aḫrāi-* 'a part of the upper leg of mammals', *šagāi-* 'omen, sign', *šāklāi-* 'custom, habit, rite, ceremony, privilege', *šalwāi-* <sup>(MUŠEN)</sup> (oracle bird), <sup>LÚ.MEŠ</sup>*šari(ku)wāi-* c./adjective? (type of troops), *šulāi-* 'lead; ingot of lead', *šuwāi-* 'rejection, abandonment', *taḫalāi-* 'liver' or 'raw' (?), *taḫarāi-* '?', <sup>SÍG</sup>*tah(a)p(i)šā(i)-* 'object of wool', *tuhḫuwāi-* 'smoke', *wagāi-* 'seizer of flour; weevil, flour worm', *\*waggarāi-* 'revolt?', <sup>LÚ</sup>*waqqarunāi-* 'absentee, missing person', *waštāi-* 'sin', [*?wattāi-* 'bird?'], *zahḫāi-* 'battle', <sup>GIŠ</sup>*zahrāi-* (object for sitting), *zašḫāi-* 'dream'.

Many of these words are poorly attested; for that reason (alongside other issues, such as lack of cognate candidates or uncertain meaning) their predecessors cannot at present be reliably established. The same conclusion may apply to some better attested, but still obscure words. Among these are *armuwalašḫā(i)-*,

\*a(u)wa(u)wāi-, <sup>DUG</sup>hakkunnāi-, halluwāi-, harāi-, har/hurnāi-, irhāi-, (<sup>SÍG</sup>)ištaggāi- (with a possible but so far unproven IE etymology), kurkurāi- (a "nonce" creation in context), lakšāi-, <sup>KUŠ</sup>laplāi-, <sup>GIŠ/GI</sup>lazzāi-, <sup>DUG</sup>le/ilhūntāi- (although derivable from PIE \*leh<sub>3</sub>w-, as a hapax it might as well be a nonce word), <sup>GIŠ</sup>lūlāi-, muhlāi-, šulāi-, taḥarāi-, <sup>SÍG</sup>tah(a)p(i)šā(i)-, \*waggarāi-, <sup>LÚ</sup>waqqarunāi-, [?wattāi-] (which might as well be an *i*-stem), <sup>GIŠ</sup>zahrāi-. Of Hurrian origin is most probably *erāi*-, of Hattic origin *taḥalāi*-. Of Luvian origin might be the words *šalwāi*-(<sup>MUŠEN</sup>) and <sup>LÚ.MEŠ</sup>šari(ku)wāi-; they may be reshaped Luvian stems in *-ā(i)yi*-, i.e., substantivizations of adjectives in *-ā(i)ya/i*-.

Most common gender action/result nouns that stand beside a synchronically attested verb and have no *oi*-stem cognates elsewhere can and should be taken as a productive class of Hittite creations: *išhamāi*- (could be < PIE \*sh<sub>2</sub>ém-ōi-), *ištarningāi*- (< ?), *lingāi*- (though one might like to find an IE connection, one has not yet been established), *maniyahhāi*- (connected to Lat. *manus*, PIE stem uncertain), *šuwāi*- (< PIE \*seuh<sub>1</sub>-), *waštāi*- (although PIE reconstructions have been suggested, there are no convincing cognates), *zahhāi*-.

Seven other *āi*-stems have a convincing IE root etymology: *hukmāi*- (of uncertain formation but likely < PIE \*h<sub>2</sub>ueg<sup>h</sup>-), *hullanzāi*- (< PIE \*h<sub>2</sub>uelh<sub>1</sub>-), <sup>UZU</sup>mu/aḥrāi- (< PIE \*mé/óh<sub>2</sub>r- / \*mh<sub>2</sub>r-), *šāklāi*- (< PIE \*séh<sub>2</sub>k-li- ← PIE \*sh<sub>2</sub>k-ló-), *tuhḥuwāi*- (< PIE \*d<sup>h</sup>uh<sub>2</sub>wí- ← \*d<sup>h</sup>uh<sub>2</sub>wó-), *wagāi*- (< PIE \*wóh<sub>2</sub>g-ei), *zašhāi*- (< PIE \*d<sup>h</sup>eh<sub>1</sub>- / \*d<sup>h</sup>h<sub>1</sub>-). Of these, at least <sup>UZU</sup>muḥrāi- and *tuhḥ(u)wāi*- are reshaped oxytone *i*-stems (per Rößle 2002), and it is highly likely that *šāklāi*- is also (since there are only two late plene spellings of the root syllable, easily attributable to influence from the transparently related verb).

As for the two forms denoting 'dream, sleep', *zašhāi*- seems to be a true secondary derivative from *tešha*-; see Rößle (2002: 120) who shows that their usage is not the same. Only *tešha*- occurs in the nom. sg. and as an agent (the fact that it may mean 'sleep' in some examples does not affect this). It is also noteworthy that the derived verb *tešhaniya*- never develops a construction with the experiencer (of the type of English *I dreamed*) and it is not attested in the dat./loc.sg. On the other hand, *zašhi*-/*zašhāi*- is never attested in the nominative and is frequent in the

dat./loc.sg. So, *tešḫa-* is the general word for dream and *zašḫāi-* is used as individualizing word.

Being sound symbolic, *āi-wāi-* is a special case, reconstructible for PIE (arguably with its neuter variant *uwāi-*, or from Luvian?). *ḫurtāi-* could also be of primary origin. The case of *šagāi-* is less convincing, but it could be a primary form derived from the root *\*seh<sub>2</sub>g-*, namely PIE *\*sh<sub>2</sub>g-ōi-*. The older and predominant spelling has short *-a-*, in contrast to the verb *šākiye-* 'to give a sign', which must be inherited given cognates with full grade elsewhere (which does not of course prove that this example should be projected back to PIE, though that cannot be excluded). There must have been a role model to start the productive deverbal type, which with Yates (2015) may have been *ḫurtāi-*. However, without word equations, there is no reason to claim that any of the words in question are assured as PIE.

The common gender stems in *-āi-* that show variants in *-a-* and those for which we might expect an *o-*stem (*ḫukmāi-*) remain an unresolved matter. To the first set belong *armuwalašḫāi-* 'moonlight' ("nonce" formation to *armuwalašḫa-*), *ḫullanzāi-* 'fight; defeat', and <sup>SIG</sup>*ištaggāi-* 'bowstring'. However, these words do not have the same history. For *armuwalašḫa-/ armuwalašḫāi-*, the *a-*stem is predominant, which is not surprising, since *-ašḫa-* is a well-known suffix, so here the *-āi-* stem must be analogical (and certainly not the source of the variation). Also, one may suppose that *ḫukmāi-* for the expected noun (not adjective, per Yates 2015) *\*ḫukma-* is also a secondary creation, generalized in the immediately prehistoric stage (note that except for the inherited word *tarma-* 'peg, nail' there are virtually no other Hittite *\*-mo-* stems; the productive suffix *-ima-* is a special development). The problem is to identify the starting point for such variation.

A tentative idea could be to seek the source of analogy in the form *ḫullanzan* (OH/OS). The expected syllabification of the acc.sg. of a common gender *\*-oi-* stem would be *\*-oy-ṃ*. That would result in *\*-ayan* and by loss of intervocalic yod attested *-an* in *ḫullanzan*, which could lead some speakers to think that *a-*stems could alternate with *āi-*stems. One may still legitimately wonder if this one cell in the paradigm was enough to have such an effect. It would putatively have

applied in every such paradigm, so in principle it could have produced nominative singulars in *-aš*, such as *ištaḡgaš* beside *ištaḡgan*. More debatable is whether a pattern of nom. sg. *-āiš*, *\*-ān*, pl. *-aeš*, *-auš* and weak stem in *-i/-y-* could have triggered the reshaping of *\*ḫukma-* to an ablauting *-āi-* stem. Here one cannot appeal to the weak stem variants in *-a- < \*-aya-* as in ablauting *i-*stem adjectives, as the old *āi-*stems had zero grade of the suffix in the weak cases, e.g. *ḫukmāi-*, gen. *ḫukmiyaš*. Unfortunately, there is no "proportional" analogy available based on the related verb *ḫu(e)k-*, as that would have led to *\*ḫugāi-*.

### 3.2.2 Neuter gender

To the neuter *āi-*stems belong <sup>NINDA</sup>*ašhumāi-* (bread type), *ḫar/ḫurnāi-*<sup>SAR</sup> (plant), *ḫaštāi-* 'bone(s); (metaphorically) strength; a measure of length', *ḫašuwāi-*<sup>SAR</sup> (plant), <sup>MUNUS.MEŠ</sup>*ḫazkarāi-/* <sup>MUNUS.MEŠ</sup>*ḫaz(i)kara-* 'group of ladies (in temple duty)', <sup>DUG</sup>*ḫupuwāi-* (container), <sup>GIŠ</sup>*kargarāi-* (a basket? made of reed), <sup>NINDA</sup>*gatāi-* (?) (bread type), *ki-ši-ip-zu-wa-a-i-* (a plant used for making incense), <sup>GIŠ</sup>*luttāi-* 'window', *šakuttāi-* 'thigh' (or similar) (part of the leg of animals and humans), *šankuwāi-* 'fingernail, toenail; (a unit of linear measure)', (<sup>UZU</sup>)*ši/ešāi-* 'an animal body part; tail (?)', <sup>NA4</sup>*taḫapšettāi-/taḫupaštāi-* (stone object), <sup>DUG/GIŠ</sup>*tallāi-* (container), <sup>NINDA</sup>*tūḫurāi-* (bread type), *wantiwantāi-* 'lightning', (<sup>DUG</sup>)*zalḫāi-* 'metal vessel', *zammurāi-* 'insult, slander', [*\*\*zapzagāi-* 'glass beads (?)'].

That virtually all of the neuter *āi-*stems are also Hittite creations is hardly in doubt. Most are names of cult objects or plants and so unlikely to be based on IE material: <sup>NINDA</sup>*ašhumāi-*, *ḫar/ḫurnāi-*<sup>SAR</sup>, *ḫašuwāi-*<sup>SAR</sup>, <sup>DUG</sup>*ḫupuwāi-*, <sup>GIŠ</sup>*kargarāi-* (or from *\*g<sup>h</sup>er-* 'to grab'?), <sup>NINDA</sup>*gatāi-*, *ki-ši-ip-zu-wa-a-i-*, <sup>NA4</sup>*taḫapšettāi-/taḫupaštāi-*, <sup>NINDA</sup>*tūḫurāi-* (possibly Hattic, but no Hattic cognates), *wantiwantāi-*, *zammurāi-* (definitely adapted from Luvian and not old), [*\*\*zapzagāi-*] (possibly only Luvian). Akkadian affinity is confirmed for <sup>DUG/GIŠ</sup>*tallāi-*, and Hurrian for (<sup>DUG</sup>)*zalḫāi-*. Although the alternation in <sup>MUNUS.MEŠ</sup>*ḫazkarāi-/* <sup>MUNUS.MEŠ</sup>*ḫaz(i)kara-* may point to Luvian mediation, it can still be of Hattic origin.

Four of the neuter *āi-*stems have a convincing IE etymology: *ḫaštāi-* (< PIE *\*h<sub>2</sub>óst(h<sub>2</sub>)- / \*h<sub>2</sub>ést(h<sub>2</sub>)-*), *šakuttāi-* (< PIE *\*sóg<sup>w</sup>t(h<sub>2</sub>)-i-*), *šankuwāi-* (<

PIE *\*sh<sub>3</sub>ng<sup>wh</sup>-*), <sup>(UZU)</sup>*ši/ešāi-* (< PIE *\*seh<sub>1</sub>(i)-* 'long'). Of these, *ḥaštāi-* and *šakuttāi-* are definitely Hittite creations, with no support elsewhere for a PIE collective *\*-oi-* stem in these words. It is not possible to decide whether *šankuwāi-* has a similar history or is a reshaped *o*-stem modeled on the other two. As for the word for 'tail', *šišāi-*, which is related to *šēša-* (also 'tail'), it is very arguable whether one can explain it as a collective in *\*-ói-* to an *o*-stem.

The one neuter that could possibly be inherited from PIE as an *oi*-stem is *luttāi-* 'window'. The problem is that its relationship with TochB *lyauto*, *lyautai* 'hole; cleft', which would secure its stem etymology, is not certain. Unfortunately, such a comparison is clouded by the apparent lengthened grade of the root in the Tocharian, which precludes a direct equation. If it is cognate with CLuv. <sup>GIŠ</sup>*lūda-*, the reconstructed form should rather be *\*louH-to/eh<sub>2</sub>-*.

To conclude, *ḥaštāi-* 'bone' and *šakuttāi-* 'thigh' are the only two neuters that can safely be derived from a PIE source. As there are no assured examples that point to a PIE neuter type in *\*-oi-*, the Hittite facts indicate that such nouns did not exist in the protolanguage.

### 3.2.3 Indeterminate gender

As the reason for unknown gender is typically lack of attestations, the same phenomenon precludes the identification of reliable etymologies. Of the five words treated, the first, <sup>GIŠ</sup>*parlāi-* c./n.? 'wooden part of bed' (?), remains uncertain, and the second, [*šakuiššāi-* c./n.? (a body part)], as a compound is likely an *a*-stem. For *\*dušgarāi-* c./n.? 'joy', its stem is uncertain. *dušqariwāi-* c./n.? '?' is a hapax, and the last form, [<sup>(GIŠ)</sup>*zaltāi-* c./n.? 'chariot'(?)], remains etymologically unexplained and is possibly not even an *āi*-stem.

### 3.2.4 Adjectives

The only *āi*-stem adjective, *warāi-/wari-* '?', is of unknown formation and origin.

#### 4 Final words

As has been shown, a number of *-āi-* stems (though mainly those of common gender) and some of the "core" *i*-stems are of PIE origin with regard to their root. However, projecting back most or even many of the attested Hittite reflexes to PIE is unjustified. Only a very few *i*-stem nouns and adjectives can be considered of primary origin.



## 5 Bibliography

Bawanypeck, Daliah (ed.). hethiter.net/: CTH 398 (Expl. B, 24.03.2016)

Beekes, Robert. 2010. *Etymological dictionary of Greek*. 2 vols. Leiden – Boston: Brill.

Beckman, Gary. 2019. *The Hittite Gilgamesh* (JIES Supplemental Series 6). Atlanta: Lockwood Press.

Berlin, Brent / Kay, Paul. 1969. *Basic color terms: their universality and evolution*. Berkeley, California: University of California Press.

Berman, Howard. 1972. *The stem formation of Hittite nouns and adjectives*. Dissertation. The University of Chicago.

Blanc, Alain / Lamberterie, Charles de / Perpillou, Jean-Louis. 2002: Chronicle of Greek etymology, number 7 (CEG 2002) In: *Revue de philologie, de littérature et d'histoire anciennes* 1, 113–142.

Blažek, Václav. 2013. O indoevropském slovu "ječmen". *Linguistica brunensia* 61.1/2, 15–33.

Brosch, Cyril / Hock, Wolfgang. 2008. *Nominalkomposita und kompositionsähnliche Strukturen im appellativen Wortschatz des Hethitischen*. Humboldt-Universität zu Berlin, Philosophische Fakultät II.

Byrd, Andrew Miles. 2011. Deriving dreams from the divine: Hittite *tesḫa-/zash(a)i-*. *Historische Sprachforschung* 124, 96–105.

Christiansen, Birgit. 2006. *Die Ritualtradition der Ambazzi. Eine philologische Bearbeitung und entstehungsgeschichtliche Analyse der hethitischen Ritualtexte CTH 391, CTH 429 und CTH 463* (Studien zu den Boghazköy-Texten, 48). Wiesbaden: Harrassowitz.

Christiansen, Birgit. 2012. *Schicksalsbestimmende Kommunikation. Sprachliche, gesellschaftliche und religiöse Aspekte hethitischer Fluch-, Segens- und Eidesformeln* (Studien zu den Boghazköy-Texten, 53). Wiesbaden: Harrassowitz.

Cohen, Yoram. 2010. Rara avis – a study of the HU section of the Sa vocabulary. In: Baker, H. D. / Robson, E. / Zolyomi, G. (eds.), *Your praise is sweet: a memorial volume for Jeremy A. Black from students, colleagues and friends*. Oxford: The Griffith Institute, 29–40.

Cohen, Yoram. 2013. *Wisdom from the Late Bronze Age*. Atlanta: Society of Biblical Literature.

Cohen, Yoram. 2015: The wages of a prostitute: Two instructions from the wisdom composition ‘Hear the Advice’ and an excursus on Ezekiel 16,33. *Semitica* 57, 43–55.

Collins, Billie Jean. 2014. Royal co-option of a popular ritual: the case of Hantitassu. In: Taracha, Piotr / Kapelusz, Magdalena (eds.). *International Congress on Hittitology 8*. Proceedings of the Eighth International Congress of Hittitology: Warsaw, 5–9 September 2011.

Čop, Bojan. 1971. Remarque sur les thèmes en -ai-. In: *Indogermanica Minora I: Zu den anatolischen Sprachen*. Ljubljana: Dissertationes VIII, Classis II – Philologie et Litterae, 46–49.

Eichner, Heiner. 1971. Urindogermanisch *kwe* 'wenn' im Hethitischen. *Münchener Studien zur Sprachwissenschaft* 29, 27–46.

Eichner, Heiner. 1985. Das Problem des Ansatzes eines urindogermanischen Numerus "Kollektiv"("Komprehensiv"). In: Schlerath, B. (ed.). *Grammatische Kategorien: Funktion und Geschichte. Akten der VII. Fachtagung der Indogermanischen Gesellschaft*. Wiesbaden: Reichert, 134–169.

Friedrich, Johannes / Kammenhuber, Annelies. 1975- 2017. *Hethitisches Wörterbuch*. Zweite, völlig neubearbeitete Auflage auf der Grundlage der edierten hethitischen Texte. Heidelberg: Carl Winter.

Friedrich, Johannes. 1960. *Hethitisches Elementarbuch*. 2 vols. Heidelberg: Winter.

Fritzner, Johan. 1867: *Ordbog over det gamle norske Sprog*. Kristiania.

Grestenberger, Laura. 2009. *The Vedic i-Stems and internal derivation*. Diplomarbeit, Universität Wien. Philologisch-Kulturwissenschaftliche Fakultät. Betreuerin: Malzahn, Melanie.

Grestenberger, Laura. 2016. *On some eccentric \*i-stems in Indo-European compounds*. ECIEC 35, University of Georgia, Athens, June 6–8, 2016.

Güterbock, Hans Gustav / van den Hout, Theo P. J. 1991. *The Hittite instruction for the royal bodyguard*. Chicago: Oriental Institute of the University of Chicago.

Höffler, Stefan. 2021. Agree to not agree. On the presence and absence of derived feminine adjectives in Greek and Indo-European. Paper read at the 32nd UCLA Indo-European Conference, November 5–7, 2021.

Hoffner, Harry A. 1966. Composite nouns, verbs and adjectives in Hittite. *Orientalia. Nova Series* 35, 377–402.

Hoffner, Harry A. 1974. *Alimenta hethaeorum. Food production in Hittite Asia Minor* (American Oriental Series 55). New Haven: American Oriental Society.

Hoffner, Harry A. 1990. *Hittite myths*. Edited by Garry Beckmann (Writings from the Ancient World / Society of Biblical Literature, vol. 2). Atlanta: Scholar's Press.

Hoffner, Harry Angier. 1997. *The laws of the Hittites: a critical edition*. Leiden: Brill.

Hoffner, Harry. 1998. From the disciplines of a dictionary editor. *Journal of Cuneiform Studies* 50, 37–44.

Hoffner, Harry A. / Melchert, Craig H. 2008. *A grammar of the Hittite language*. Vol. I: *Reference grammar*. Winona Lake: Eisenbrauns.

Hoffner, Harry Angus. 2009. *Letters from the Hittite kingdom*. Atlanta: Society of Biblical Literature.

Hrozný, Bedřich. 1915. Die Lösung des hethitischen Problems. *Mitteilungen der Deutschen Orient-Gesellschaft* 56. Berlin: Deutsche Orient-Gesellschaft, 17–50.

Hrozný, Bedřich. 1917. *Die Sprache der Hethiter*. Leipzig: J.C. Hinrichs'sche Buchhandlung.

Jasanoff, Jay. 2018. The Phonology of Tocharian B *okso* 'ox'. In: *Farnah. Indo-Iranian and Indo-European studies in honor of Sasha Lubotsky*. Ann Arbor – New York: Beech Stave, 72–78.

Jie, Jin. 1994. *A complete retrograde glossary of the Hittite language*. Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Kitazumi, Tomoki. 2019. Typologies of setting paragraph dividers in the Hittite texts. In: Hazirayan, Y. / Süel, A. (eds.): *Acts of the IXth International Congress of Hittitology, Corum, 08–14 September 2014*. Vol. 1. Ankara: Baski, 417–458.

Kimball, Sara. 1999. *Hittite historical phonology*. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

Kloekhorst, Alwin. 2006. Initial laryngeals in Anatolian. *Historische Sprachforschung* 119, 77–108.

Kloekhorst, Alwin. 2008. *Etymological dictionary of the Hittite inherited lexicon*. Leiden: Brill.

Kloekhorst, Alwin. 2018. The origin of the Proto-Indo-European nominal accent-ablaut paradigms. In: Rieken, Elisabeth (ed.), *100 Jahre Entzifferung des Hethitischen*. Wiesbaden: Reichert, 179–204.

Kloekhorst, Alwin. 2018. Anatolian evidence suggests that the Indo-European laryngeals *\*h<sub>2</sub>* and *\*h<sub>3</sub>* were uvular stops. *Indo-European linguistics* 6, 69–94. DOI: <https://doi.org/10.1163/22125892-00601003>. Accessed on 4/5/2021.

Košak, Silvin. 1982. *Hittite inventory texts: CTH 241–250* (Texte der Hethiter, 10). Heidelberg, Winter.

Kronasser, Heinz. 1962. *Etymologie der hethitischen Sprache*. Bd. 1–6. Wiesbaden: Otto Harrassowitz.

Kroonen, Gus. 2013: *Etymological dictionary of Proto-Germanic*. Leiden: Brill.

- Kümmel, Martin. 2015-. *Addenda und Corrigenda zu LIV<sup>2</sup>*.
- Liddell, Henry George / Scott, Robert. 1972. *Greek-English lexicon*. Oxford: Clarendon Press, issue 15.
- Lipp, Reiner. 2009: *Die indogermanischen und einzelsprachlichen Palatale im Indoiranischen*. Band I: *Neurekonstruktion, Nuristan-Sprachen, Genese der indoarischen Retroflexe, Indoarisch von Mitanni* (Indogermanische Bibliothek. 3. Reihe: Untersuchungen). Heidelberg: Winter.
- Luraghi, Silvia. 2020. External possessor constructions in Indo-European. In: Barðdal, Jóhanna / Spike, Gildea / Lujan, Eugenio R. (eds.). *Reconstructing syntax* (Brill's Studies in Historical Linguistics, 11). Leiden: Brill, 162–196.
- Melchert, H. Craig. 1984. *Studies in Hittite historical phonology*. Göttingen: Vandenhoeck and Ruprecht.
- Melchert, H. Craig. 1994. *Anatolian historical phonology*. Amsterdam: Rodopi.
- Melchert, H. Craig. 2000. Tocharian plurals in *-nt-* and related phenomena. In: Pinault, G.-J. et al. (eds.): *Tocharian and Indo-European studies* 9, 53–75.
- Melchert, H. Craig. 2019. Hittite historical phonology after 100 years (and after 20 years). In: Kim, R. I. / Mynářová, Jana / Pavúk, Peter (eds.): *Hrozný and Hittite: the first hundred years. Proceedings of the international conference held at Charles University, Prague, 11–14 November 2015*. Leiden–Boston: Brill, 258–277.
- Melchert, H. Craig. 2011. The PIE verb for ‘to pour’ and medial *\*h<sub>3</sub>* in Anatolian. In: Jamison, Stephanie W. / Melchert, H. Craig / Vine, Brent (eds.). *Proceedings of the 22<sup>nd</sup> Annual UCLA Indo-European Conference*. Bremen: Hempen, 127–132.
- Melchert, H. Craig. 2012. Hittite *ḫi*-Verbs of the type *-āC<sub>1</sub>i*, *-aC<sub>1</sub>C<sub>1</sub>anzi\**. *Indogermanische Forschungen* 117, 173–185.
- Melchert, H. Craig. 2020. Addenda and corrigenda to Harry A. Hoffner Jr. and H. Craig Melchert, *Grammar of the Hittite Language* (GrHL). *Reference Grammar*.

Melchert, H. Craig. 2021. Hittite neuter *i*-stems. In: Fellner, Hannes A. / Malzahn, Melanie / Peyrot, Michaël (eds.). *lyuke wmer ra. Indo-European studies in honor of Georges-Jean Pinault*. Ann Arbor – New York: Beech Stave, 379–390.

Melchert, Craig. Forthcoming: Hittite reflexes of the PIE root *\*welH-*.

Miller, Jared L. / Giorgieri, Mauro. 2013. *Royal Hittite instructions and related administrative texts*. Atlanta: Society of Biblical Literature.

Mouton, A. (ed.); S. Görke – S. Melzer (ed.), [hethiter.net/](http://hethiter.net/): CTH 447 (INTR 2015-07-20)

Morpurgo Davies, Anna. 1987. Gr. *λεύσσω* and *λευτο-*: an unsolved problem. *Minos* 20/22, 459–468.

Neu, Erich. 1968. *Interpretation der hethitischen mediopassiven Verbalformen* (Studien zu den Boğazköy-Texten, 5). Wiesbaden: Harrassowitz.

Neu, Erich. 1985. Zur Stammabstufung bei *i*- und *u*-stämmigen Substantiven des Hethitischen. In: Ölberg, H. M. / Schmidt, G. (eds.), *Sprachwissenschaftliche Forschungen. Festschrift für Johann Knobloch zum 65. Geburtstag dargebracht von Freunden und Kollegen* (Innsbrucker Beiträge zur Kulturwissenschaft, 23). Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck, 259–64.

Neu, Erich. 1995. Hethitisch *zapzagi-*. *Ugarit-Forschungen* 27, 395–402.

Nikolaev, Alexander. 2015. Hittite *wattaēš* ‘birds’. *Münchener Studien zur Sprachwissenschaft* 69/2, 257–268.

Nikolaev, Alexander. 2019. Shame and insult in Anatolia: Luvo-Hittite *zammurāi-*. *Journal of the American Oriental Society* 139, 187–199.

Nussbaum, Alan J. 1999. *\*Jocidus*: an account of the Latin adjectives in *-idus*. In: Eichner, Heiner / Luschützky, H. C. (eds.). *Compositiones indogermanicae in memoriam Jochem Schindler*. Prague: Enigma, 377–419.

Nussbaum, Alan J. 2013. Arcadian *λευτον* (IG 5.2.3, 3) plus/minus *λευτοντες* (IG 5.2.16, 10) with an appendix on *λεύσσω*, *λεύσω* and Proto-Greek *\*-ki-*. In: Luz, Menahem / Vishnia, Rachel Feig / Zelnick-Abramovitz, Rachel (eds.). *Scripta*

*Classica Israelica, Yearbook of the Israel Society for the Promotion of Classical Studies* 32, 1–21.

Nussbaum, Alan J. 2014a. Feminine, abstract, collective, neuter plural: some remarks on each (expanded handout). In: Neri, Sergio / Schuhmann, Roland. *Studies on the collective and feminine in Indo-European from a diachronic and typological perspective* (Brill's Studies in Indo-European Languages & Linguistics, 11). Leiden – Boston: Brill, 273–306.

Nussbaum, Alan J. 2014b. The PIE proprietor and his goods. In: Melchert, H. Craig / Rieken, Elisabeth / Steer, Thomas (eds.). *Munus amicitiae: Norbert Oettinger a collegis et amicis dicatum*. Ann Arbor – New York: Beech Stave, 228–254.

Nussbaum, Alan J. 2017. Agentive and other derivatives of "τόμος-type" nouns. In: Le Feuvre, Claire / Petit, Daniel / Pinault, Georges-Jean (eds.). *Verbal adjectives and participles in the Indo-European languages. Proceedings of the conference of the Society for Indo-European Studies (Indogermanische Gesellschaft), Paris, 24<sup>th</sup>–26<sup>th</sup> September 2014*. Bremen: Hempen, 219–252.

Nussbaum, Alan J. 2018. A dedicatory thigh: Greek μηρός and μηῖα once again. *Farnah. Indo-Iranian and Indo-European studies in honor of Sasha Lubotsky*. Ann Arbor – New York: Beech Stave.

Oettinger, Norbert. 1976. Der indogermanische Stativ. *Münchener Studien zur Sprachwissenschaft* 34, 109–149.

Oettinger, Norbert. 1979. *Die Stammbildung des hethitischen Verbums* (Erlanger Beiträge zur Sprach und Kunstwissenschaft, 64). Nürnberg: Carl.

Oettinger, Norbert. 1980. Die *n*-Stämme des Hethitischen und ihre indogermanischen Ausgangspunkte. *Zeitschrift für vergleichende Sprachforschung* 94, 44–63.

Oettinger, Norbert. 1995. Griech. ὀστέον, heth. *kulēi* und ein neues Kollektivsuffix. In: Hettrich, Heinrich / Hock, Wolfgang / Mumm, Peter-Arnold / Oettinger, Norbert (eds.). *Verba et Structurae. Festschrift für Klaus Strunk*

(Innsbrucker Beiträge zur Sprachwissenschaft, 83.) Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck, 211–228.

Oettinger, Norbert. 1999. Der ablaut des *i*-Kollektivums. In: Habisreiter, Jürgen / Plath, Robert / Ziegler, Sabine (eds.). *Gering und doch von Herzen: 25 indogermanische Beiträge Bernhard Forssman zum 65. Geburtstag*. Wiesbaden: Reichert, 207–214.

Oettinger, Norbert. 2000. Heth. *udnē*, armen. *getin* "Land" und lyk. *wedre/i-*. In: Hunitze, Almut / Tichy, Eva (eds.). *Anusantatyai. Festschrift für Johanna Narten zum 70. Geburtstag*. Dettelbach: J. H. Röhl, 181–188.

Oettinger, Norbert. 2001: Hethitisch *-ima-* oder: Wie ein Suffix affektiv werden kann. In: Gernot Wilhelm (ed.): *Akten des IV. Internationalen Kongresses für Hethitologie: Würzburg, 4.-8. Oktober 1999*. Wiesbaden: Harrassowitz, 456–477.

Oettinger, Norbert. 2016. Die Wechsel *-Ø/n-* und *-i/n-* im Rahmen der indogermanischen Heteroklisie. In: Hansen, Bjarne Simmelkjær Sandgaard / Whitehead, Benedicte Nielsen / Olander, Thomas / Olsen, Birgit Anette: *Etymology and the European lexicon: Proceedings of the 14th Fachtagung der Indogermanischen Gesellschaft, 17–22 September 2012, Copenhagen*. Wiesbaden: Reichert, 319–326.

Olander, Thomas. 2015. *Proto-Slavic inflectional morphology: a comparative handbook* (Brill's Studies Leiden: Brill).

Olmo Lete, Gregorio del / Sanmartín, Joaquín / Watson, Wilfred G. E. 2015. *A dictionary of the Ugaritic language in the alphabetic tradition* (Handbook of Oriental Studies, 112). Leiden – Boston: Brill.

Oreshko, Rostislav. 2019. Swampy places in Çineköy and Karatepe. *Historische Sprachforschung* 132, 225–245.

Pinault, Georges-Jean. 2017. Tocharian *tsälp-* in Indo-European perspective. In: Hansen, Bjarne Simmelkjær Sandgaard et al. (eds.), *Usque ad radices: Indo-European studies in honour of Birgit Anette Olsen* (Copenhagen Studies in Indo-European, 8). Copenhagen: Museum Tusulanum Press.



- Poetto, Massimo. 1993. Luvio geroglifico MU-RU-WA-TÀ-ZA. In: Szemerényi, Oswald / Brogyanyi, Bela / Lipp, Reiner (eds.), *Comparative-historical linguistics: Indo-European and Finno-Ugric*. Amsterdam: Benjamins, 163–170.
- Pokorny, Julius. 1959. *Indogermanisches etymologisches Wörterbuch*. Bern: Francke.
- Puhvel, Jaan. 1984–2013. *Hittite etymological dictionary*. Berlin: Mouton de Gruyter.
- Puhvel, Jaan. 1997. Luvo-Hittite :*lapan(a)*-. In: Disterheft, Dorothy / Huld, Martin / Greppin, John. *Studies in honor of Jaan Puhvel*. Part One: *Ancient Languages and Philology*. Washington, D.C.: Institute for the Study of Man, 29–35.
- Rau, Jeremy. 2009. *Indo-European nominal morphology: the decads and the Caland system* (Innsbrucker Beiträge zur Sprachwissenschaft, 132). Innsbruck: Institut für Sprachen und Kulturen der Universität Innsbruck.
- Richter, Thomas. 2012. *Bibliographisches Glossar des Hurritischen*. Wiesbaden: Harrassowitz.
- Rieken, Elizabeth. 2004. Merkwürdige Kasusformen im Hethitischen. In: Groddek, Detlev / Röbke, Sylvester (eds.), *Šarnikzel: Hethitologische Studien zum Gedenken an Emil Orgetorix Forrer (19.02.1894 –10.01.1986)*. Dresden: Technische Universität Dresden, 532–543.
- Rieken, Elizabeth. 2005. Kopulativkomposita im Hethitischen. In: Kazansky, N. et al. (eds.), *Hṛdā́ mānasā: studies presented to Professor Leonard G. Herzenberg on the occasion of his 70-birthday*. Saint Petersburg: Nauka, 99–103.
- Rieken, Elisabeth. 2005. Neues zum Ursprung der anatolischen *i*-Mutation. *Historische Sprachforschung* 118, 48–74.
- Rieken, Elizabeth. 2010. Das Zeichen <sà> im Hieroglyphen-Luwischen. In: Süel, Aygül / Hazirlayan, Yayina (eds.), *VII. Uluslararası Hititoloji kongresi bildirileri*.

*Acts of the VII<sup>th</sup> International Congress of Hittitology, Çorum, August 25-31, 2008.* Ankara, 651–660.

Rieken, Elizabeth. 2017. Heth. <sup>(NA4)</sup>*taḫūp(p)aštai-* u. ä. ‘Schlachtblock’ und die uridg. Wurzel \**deh<sub>2</sub>p-* ‘schlachten, zerfleischen’. In: Hajnal, Ivo / Kölligan, Daniel / Zipser, K. (eds.). *Miscellanea Indogermanica. Festschrift für José Luis García Ramón* (Innsbrucker Beiträge zur Sprachwissenschaft, 154). Innsbruck: Institut für Sprachen und Kulturen der Universität Innsbruck, 699–704.

Rieken, Elizabeth. 2021. Anatolische Fruchtbarkeit, urindogermanische Männer und die Wurzel \**men* "hervorragend". In: Fellner, Hannes A. / Malzahn, Melanie / Peyrot, Michaël (eds.). *lyuke wmer ra. Indo-European Studies in Honor of Georges-Jean Pinault.* Ann Arbor – New York: Beech Stave, 462–476.

Rix, Helmut / Kümmel, Martin Joachim / Zehnder, Thomas / Lipp, Reiner. 2001. *Lexikon der indogermanischen Verben: die Wurzeln und ihre Primärstammbildungen.* 2., erw. und verbess. Auflage. Wiesbaden: Reichert.

Rößle, Sylvester. 2002. Sprachvergleichende Untersuchungen zu den hethitischen *ai*-Stämmen. Ph.D. diss., Universität Augsburg.

Rößle, Sylvester. 2004. *šu-wa-iš* (ein bestimmter Vogelname)?, ‘Vogel’? < idg.\**(s)h<sub>2</sub>uóǵi*? oder Vom Wunsch als Vater des Gedankens. In: Groddek, Detlev / Rößle, Sylvester. *Šarnikzel: Hethitologische Studien zum Gedenken an Emil Orgetorix Forrer (19.02.1894–10.01.1986).* Dresden: Technische Universität Dresden, 545–556.

Rüster, Christel / Neu, Erich. 1989. *Hethitisches Zeichenlexikon.* Wiesbaden: Harrassowitz.

Schindler, Jochem. 1980. Zur Herkunft der altindischen *cvi*-Bildungen. In: Mayrhofer, M. et al. (eds.), *Lautgeschichte und Etymologie. Akten der VI. Fachtagung der Indogermanischen Gesellschaft.* Wiesbaden: Harrassowitz, 386–393.

Schindler, Jochem. 1994. Alte und neue Fragen zum indogermanischen Nomen. In: Jens Elmegård Rasmussen (ed.). *In honorem Holger Pedersen. Kolloquium*

*der Indogermanischen Gesellschaft vom 25. bis 28. März 1993 in Kopenhagen.* Wiesbaden: Reichert, 397-400.

Starke, Frank. 1995. *Ausbildung und Training von Streitwagenpferden: eine hippologisch orientierte Interpretation des Kikkuli-Textes* (Studien zu den Boghazköy-Texten, 41). Wiesbaden: Harrassowitz.

Sturtevant, Edgar H. 1927. Hittite *h* initial = Indo-European *bh*. *Language* 3, 109–122.

Sturtevant, Edgar H. 1933: *A comparative grammar of the Hittite language*. Philadelphia: University of Pennsylvania Press.

Sturtevant, Edgar H. 1934. Adjectival *i*-stems in Hittite and Indo-European. *Language* 10/3, 266–273.

Sturtevant, Edgar H. 1937. Latin and Hittite substantive *i*-stems with lengthened grade in the nominative. In: Hjelmslev, Louis (ed.): *Mélanges linguistiques offerts à M. Holger Pedersen à l'occasion de son soixante-dixième anniversaire, 7 avril 1937*. København: Universitetsforlaget i Aarhus, 57–62.

Szemerényi, Oswald. 1966: Iranica II (Nos. 9-31). *Die Sprache* 12, 190–226.

Tischler, Johann. 2008: *Hethitisches Handwörterbuch mit dem Wortschatz der Nachbarsprachen*. 2., vermehrte und verb. Aufl. (Innsbrucker Beiträge zur Sprachwissenschaft, 128). Innsbruck: Institut für Sprachen und Kulturen der Universität Innsbruck.

Tischler, Johann. 1983–2006. *Hethitisches etymologisches Glossar*, Teil 1–4 (Innsbrucker Beiträge zur Sprachwissenschaft, 20). Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

Tognon, Rosanna. 2005. Gli oracoli Mušen Hurri: una tecnica divinatoria ittita. Ph.D. dissertation, Università degli studi di Napoli L'Orientale.

Vine, Brent. 2004. On PIE full grades in some zero-grade contexts: *\*-tí-*, *\*-tó-*. In: Clackson, James / Olsen, Birgit. *Indo-European word formation: proceedings of*

*the conference held at the University of Copenhagen, October 20th–22nd.* Copenhagen: Museum Tusulanum Press, 357–379.

Vine, Brent. 2006. An alleged case of 'inflectional contamination': On the *i*-stem inflection of Latin *civis*. *Incontri Linguistici* 29, 139–158.

Watkins, Calvert. 1975. La famille indo-européenne de grec ὄρχις. Linguistique, poétique et mythologie. *Bulletin de la Société de Linguistique* 70, 11–26.

Watkins, Calvert. 1982a. Notes on the plural formations of the Hittite neuters. In Neu, Erich (ed.), *Investigationes philologicae et comparativae: Gedenkschrift für Heinz Kronasser*. Wiesbaden: Harrassowitz, 250–262.

Watkins, Calvert. 1982b. Paper read at the 1st East Coast Indo-European Conference, Yale University.

Watkins, Calvert. 2013. Aspects of the "expressive dimension" in Indo-European: toward a comparative grammar of speech registers. In: Jamison, Stephanie W / Melchert, H. Craig / Vine, Brent (eds.). *Proceedings of the 24<sup>th</sup> Annual UCLA Indo-European Conference*. Bremen: Hempen, 243–253.

Weidner, E. 1923. Astrologische Texte aus Boghazköi. Ihre sprachliche und kulturhistorische Bedeutung. *Archiv Für Keilschriftforschung* 1, 1–8.

Weiss, Michael. 2013: Interesting *i*-stems in Irish. In: Cooper, Adam I. / Rau, Jeremy / Weiss, Michael. *Multi nominis grammaticus: studies in classical and Indo-European linguistics in honor of Alan J. Nussbaum on the occasion of his 65<sup>th</sup> birthday*. Ann Arbor–New York: Beech Stave.

Weiss, Michael. 2010: *Language and ritual in Sabellic Italy. The ritual complex of the third and fourth Tabulae Iguvinae* (Brill's Studies in Indo-European Languages and Linguistics, 1). Leiden – Boston: Brill.

Weiss, Michael. 2020. *Outline of the historical and comparative grammar of Latin*. 2nd ed. Ann Arbor – New York: Beech Stave.

Weitenberg, Jos. 1979. Einige Bemerkungen zu den hethitischen Diphthong-Stämmen. In: Neu, Erich / Meid, W. (eds.). *Hethitisch und Indogermanisch*.

*Vergleichende Studien zur historischen Grammatik und zur dialektgeographischen Stellung der indogermanischen Sprachgruppe Altkleinasiens* (Innsbrucker Beiträge zur Sprachwissenschaft, 25). Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck, 289–303. Brill's Studies in Indo-European Languages and Linguistics

Widmer, Paul. 2004. *Das Korn des weiten Feldes. Interne Derivation, Derivationskette und Flexionsklassenhierarchie: Aspekte der nominalen Wortbildung im Urindogermanischen* (Innsbrucker Beiträge zur Sprachwissenschaft, 111). Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.

Wodtko, Dagmar S. / Irslinger, Britta / Schneider, Carolin. 2008. *Nomina im indogermanischen Lexikon*. Heidelberg: Winter.

Yakubovich, Ilya. 2017. The Luvian title of the great king. In: Mouton, Alice (ed.), *Hittitology today: studies on Hittite and neo-Hittite Anatolia in honor of Emmanuel Laroche's 100th birthday = L'hittitologie aujourd'hui: études sur l'Anatolie hittite et néo-hittite à l'occasion du centenaire de la naissance d'Emmanuel Laroche*. Istanbul: Institut Français d'Études Anatoliennes Georges Dumézil, 39–50.

Yates, Anthony. 2015. Anatolian default accentuation and its diachronic consequences. *Indo-European Linguistics* 3, 145–187.

Yates, Anthony. 2019. Suffixal \*o-vocalism without "amphikinesis": On Proto-Indo-European \*-oi-stems and ablaut as a diagnostic for word stress. In: Goldstein, David M. / Jamison, Stephanie W. / Vine, Brent (eds). *Proceedings of the 30<sup>th</sup> Annual UCLA Indo-European Conference*. Bremen: Hempen, 199–221.

### **Hurrian:**

Gernot, Wilhelm. 2008. Hurrian. In: Woodard, Roger D. (ed.). *The Ancient Languages of Asia Minor*. Cambridge: Cambridge University Press, 81–104.

Haas, Volkert / Salvini, Mirjo / Wegner, Ilse / Gernot, Wilhelm (eds.). *Corpus der hurritischen Sprachdenkmäler*. Abt. 1: *Die Texte aus Boghazköy 1–10, 1984–2005*. Abt. 2: *Die Texte aus anderen Archiven 1–4*. Roma: Multigrafica.

Laroche, Emanuel. 1980. *Glossaire de la langue hourrite*. Paris: Klincksieck.

Neu, Erich. 1996. *Das hurritische Epos der Freilassung I. Untersuchungen zu einem hurritisch-hethitischen Textensemble aus Hattuša* (Studien zu den Boghazköy-Texten, 23). Wiesbaden: Harrasowitz.

Richter, Thomas. 2012. *Bibliographisches Glossar des Hurritischen*. Wiesbaden: Harrasowitz.

Speiser, E. A. 1941. *Introduction to Hurrian* (Annual of the American Schools of Oriental Research, 20). New Haven: The American Schools of Oriental Research.

Szemerényi, Oswald. 1966. *Iranica II. Sprache 12*, 190-226.

Wegner, I. 2000. *Hurritisch, Eine Einführung*, Wiesbaden: Harrasowitz.

SCCNH = *Studies on the Civilization and Culture of Nuzi and the Hurrians*, vol. 1-19. 1981 – 2018. Winona Lake: Eisenbrauns.

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