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THE HITTITE -ḪI / -MI CONJUGATIONS :

AN EARLY VOICE OPPOSITION

by

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ABSTRACT

The Hittite *-ḫi* conjugation is acknowledged to be one of the most enigmatic of Indo-European formations. Despite its link to the Indo-European perfect, attempts to establish the extent and nature of this relationship have met with serious difficulties. In this thesis, I argue that the *-mi/-ḫi* conjugations represent a vestige of an earlier Indo-European binary system and the original voice opposition in Hittite, with other voice-related developments, including the "medio-passive" in *-r* and the "reflexive" particle *-z(a)*, secondary and/or increasing as the original diathesis became obsolete.

Volume I discusses the morphological, phonological and semantic factors which distinguish the two Hittite conjugations. Adopting Lehmann's (2002) terminology, I identify the *-ḫi* conjugation as the *centripetal* member of the opposition and the *-mi* as *centrifugal.* The former is distinguished by its orientation to the self--a direct parallel to Sanskrit *ātmanepada* voice ('word for self') vs. *parasmaipada* voice ('word for another'). Higher self-involvement is the essential characteristic of middle voice as traditionally defined (Lyons 1969, Barber 1975, Klaiman 1991 and Kemmer 1993).

I present argument and evidence that the inflectional elements which mark the Hittite opposition most clearly in the first person singular represent different cases of first person pronominal stems cliticized to the verb: direct case *-ḫ* (centripetal voice) and oblique case *-m* (centrifugal voice). These grammaticalized elements are identical in origin to the

independent pronouns of IE. Two factors unique to Hittite allow me to make this argument: the existence of laryngeal phonemes and the presence of nominative-case clitics

Volume II focusses on 132 clearly attested Hittite *-ḫi* verbs. I motivate the allocation of this group of verbs to 'high-self-involvement- type' by illustrating their social, cultural and intellectual centrality both in Hittite and IE culture. I refer to criteria set out in Kemmer's 1993 study of middle voice to show that the majority of *-ḫi* verbs fall clearly within the semantic range of this type of verb. I provide evidence of morphological similarity of *-ḫi* verbs to the IE perfect, including *o*-grade, ablaut patterns and archaic stative morphology (in *-e*), as well as semantic parallels to *media tantum*, deponent or middle-marked verbs in other IE languages.

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DEDICATION



at-ti-mi

'to my father'

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LIST OF ABBREVIATIONS AND SYMBOLS

ABL = Ablative case

ABoT Ankara Arkeoloji Müsesinde bulunan Boğazköy Tabletleri. Istanbul 1948.

ACC or A = Accusative case

ACT, A or act = active. Context differentiates between A (active) and A (accus.)

AI *Analecta Indoeuropaea* (= IBS 135). Jaan Puhvel. 1981. A compilation of several of the author's short papers, most of which have been published elsewhere.

Arm = Armenian

Avest = Avestan

BCE = Before Common Era

Bo Inventory numbers of Boğazköy tablets excavated 1906-1912.

BoTU E. Forrer, Die Boghazköi-Texte in Umschrift (WVDOG 41/42). Leipzig 1922, 1926.

ca. = circa (approximately)

CHD *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, ed. by Hans G. Güterbock and Harry A. Hoffner. 1980-1994: L-N, P (Fasc 1). Chicago: Oriental Institute. Cited under Güterbock in bibliography.

CLuvian = Cuneiform Luw/vian

conn = Hittite sentence connective (usually *nu*)

CTH *Catalogue des textes hittites* (= Laroche 1971)

DAT = Dative case

EI *Epilecta Indoeuropaea* (= IBS 104). Jaan Puhvel. 2002. A compilation of several of

the author's short papers, covering the period 1978-2001, most of which have been published elsewhere. I will cite only the page number of the reprinted (2002) version, unless otherwise specified. Puhvel provides a full list of the original publication data for each work in this work (2002:ix-xii).

et al = and the others

ff. = and following pages

Fs. = Festschrift

Goth. = Gothic

Gk. = Greek

Gdr. *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen.* Brugmann's multivolumed work (1897-1916). Strassburg: Karl J. Trübner.

HED *Hittite Etymological Dictionary*, ed. by Jaan Puhvel. 1984-. 1984 = Volume 1 = HED 1 (Words beginning with A) and Volume 2 = HED 2 (Words beginning with E and I); 1991 = Volume 3 = HED 3 (Words beginning with H); 1997 = Volume 4 = HED 4 (Words beginning with K); 2001 = Volume 5 = HED 5 (Words beginning with L); 2003 = Volume 6 = HED 6 (Words beginning with M). Berlin/New York: Mouton de Gruyter.

HT = Hittite Texts in Cuneiform Character

ibid = 'in the same place' = a citation from the same previously cited work, both date and page

IBS = *Innsbrucker Beiträge zur Sprachwissenschaft*

IE = Indo-European

IH = Indo-Hittite (Sturtevant's theory)

IMP = Imperative

INST = Instrumental case

KBo *Keilschrifttexte aus Boghazköi.* I-VI Leipzig 1916-1923; VII-XXXV. (= Akademie der Wissenschaften und der Literatur. Kommission für den alten Orient.) Berlin: Gebrüder Mann Verlag. 1954-1993. (ongoing)

KUB *Keilschrifturkunden aus Boghazköi.* I-LX. (Akademie der Wissenschaften der DDR. Zentralinstitut für alte Geschichte und Archäologie.) Berlin: Akademie Verlag. 1921-1990.

Lat = Latin

lit. = literally

LOC = Locative case

LSJ *A Greek-English Lexicon*, compiled by Henry George Liddell and Robert Scott (revised and augmented in 1925 and in 1940 by Henry Stuart Jones with the assistance of Roderick McKenzie). 1940 [1845]. Oxford: Clarendon Press, in two volumes. Volume I, α - κώψ (pages 1-1020), Volume II, λ - ὠώδης (pages 1021-2111); This work will be cited using only the volume and page number thus: LSJ I: 925, or LSJ II: 2001.

M or MID = "middle" or medio-passive voice.

m.c. = metri causa 'for the sake of the meter'

NOM or N = Nominative case

nt. = note (as in footnote, endnote)

OEng or OE = Old English (700-1066 CE)

OH = Old Hittite

OHG = Old High German

OI = Old Irish = Celtic

OSax. = Old Saxon

PART = participle

PASS = passive

p.c. = personal communication

PERF = perfectivizing particle (regularly *-kan*). See also prt

perf = perfect

pl = plural

Pok Julius Pokorny. 1959. *Indogermanisches Etymologisches Wörterbuch.* Bern: Francke Verlag. The standard dictionary of IE roots. Citations are by Pokorny's numbering.

PP = prepositional phrase

pret = preterite

prpr = preterite present

prt = particle

pvb = preverb

REFL = reflexive particle (*-za*)

RHA = *Revue hittite et asianique*

RV Rig Veda. The collection of the oldest Sanskrit hymns. The edition I have used here is Van Nooten, Barend A. and Gary B. Holland (eds.). 1994. *Rig Veda: A Metrically Restored Text with an Introduction and Notes.* Harvard Oriental Series. Volume 50.Cambridge, Ma: Harvard University Press. I explain citation details within the text where relevant.

sg = s = singular

Skt. = Skr. = Sanskrit

StBoT *Studien zu den Boğazköy-Texten*, ed. by Heinrich Otten. 1965- (Kommission für den alten Orient der Akademie der Wissenschaften und der Literatur.) Wiesbaden: Otto Harrassowitz.

THeth *Texte der Hethiter*, ed. by Annelies Kammenhuber. 1971-. Heidelberg: Carl Winter.

VAT Inventory numbers of tablets in the Staatliche Museen in Berlin

VBoT Verstreute Boghazköi-Texte, ed. by A. Götze. Marburg 1930.

§ = Section, typically of the Hittite Laws

[] The symbol [ ] is used in three ways:

1. It indicates missing and/or restored text in Hittite tablets (ex. *ut-t*[*ar i-e-i*]*r*)

2. It is used to indicate omitted text with a quote [...]

3. It is used to indicate the original date of a text which has been reprinted. Within the text, when I first cite such a text, I use both dates (ex. Buck 1933 [1931], where 1933 represents the reprinted date and 1931 the original publication date. Unless there is some

relevance or importance to the original date, in subsequent citations, I use only the date of the reprint.

= In a citation, this symbol indicates a cliticized element (ša=an, as in example (32)). Within the text, it is used to indicate 'equals' or 'is the same as' (ex. StBoT 24 = Otten 1981).

For other symbols used in specific contexts, see also §4.2.

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PREFACE

Hittite is the oldest Indo-European (IE) language of which we have extensive records. Discovered and excavated only recently (beginning in 1906[1]), the vast palace archives of the Hittite capital at Ḫattuša (modern Boğazköy, about 210 kilometers east of Ankara), have so far revealed some 10,000 clay tablets (including fragments, the number is more that 30,000), more than half of which have yet to be published.

Although written in Akkadian cuneiform, the tablets were found to contain a total of eight languages: the two languages of cuneiform "high culture", Sumerian and Akkadian, the non-Semitic, non-Indo-European indigenous languages Hattic and Hurrian, three IE languages of the Anatolian group: Hittite, Palaic and Luwian (both in cuneiform and hieroglyphic script), and the Indo-Iranian language of the kingdom of Mitanni.

These documents, which cover a period of some five centuries (ca. 1650-1180 BCE), record such diverse matters and genres as History, Laws and Treaties, Trade dealings, Political Correspondence, Religious Rituals, Medical texts, Poetry, Myth and Literature. Much of this material has been published in two major series, *Keilschrifturkunden aus Boghazköi* (abbreviated as KUB) and *Keilschrifttexte aus Boghazköi* (abbreviated as KBo).

The writing was done by a select group of skilled persons, all men, as far as we know,

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1

Although Puhvel (2002:235) counts the centenary of Hittite research from the publication, in 1902, of *Die zwei Arzawa-Briefe*, an edition of two letters from the Tell el-Amarna archives of Pharaoh Amenophis IV (= Akhenaton), by Norwegian assyriologist Johan Knudtzon. The letters themselves were first unearthed in 1887.

known as 'scribes'. In Hittite culture, these scribes were not mere recording devices, but were highly skilled, learned and respected, often not only recording, but even acting as policy consultant to the kings and royal personages who dictated treaties, policies, laws, etc. The scribes were trained in Mesopotamian schools of writing which were called *Edubba* 'The House of Tablets'. They were generally literate in several languages, minimally their own and Akkadian which was the official language of commerce, diplomacy and correspondence throughout the Ancient Near East.

The tablets themselves were rectangular in shape, able to be held in the hand. Generally the whole of their surface front and back ('obverse' and 'reverse') was closely covered with the cuneiform script. (Occasionally, the scribe would continue along the side of the tablet). Each side of the tablet was divided into as many as four vertical columns, and the text was also divided into sections by ruled horizontal lines or 'paragraph dividers'. Often, the bottom section, separated by two lines, would be a 'post-script' from one scribe to another.

The cuneiform system which the Hittites adopted from the Akkadians is a complex one, mixing logographic and phonetic spellings. Words may be written entirely logographically in Sumerian or in Akkadian with no indication of how the corresponding Hittite word was pronounced[2]. It is also possible to find a Sumerian word with Akkadian "phonetic complements" (e.g. DINGER^{LUM} = Akkadian *ilum* 'god' (Sheehan 1974/1975:12)).

2

The Akkadian preposition *IŠTU* 'by', 'from' is an example. We have no way of knowing how, or even *if*, it was pronounced in Hittite.

Words may be spelled entirely phonetically, or written with a Sumerian logogram plus a Hittite phonetic complement (e.g. LUGAL-*uš* = [ḫašš-us] or LUGAL-*un* [ḫašš-un]. See Sturtevant (1933:38) who exemplifies eight different ways to write the word 'hand'.

The phonetic system of cuneiform is syllabic, with V, CV, VC and CVC signs. "The orthography can thus directly indicate final consonants and internal clusters of two consonants, but initial or final consonant clusters or internal clusters of three or more consonants must be represented using "empty" vowel signs" (Melchert 1994:12) (e.g. *wa-al-(a)ḫ-ta* = [wálkhta]. Melchert notes that we, as non-native speakers, have to depend on indirect means (such as etymologies) to determine whether a vowel is empty or not.

Even with etymologies, it is not always easy to tell. The verb *išpand-* 'libate'(entry #47 in Volume II), cognate with Greek words for libations such as σπονδή 'drink offering', and its "sister" word *šipand* 'sacrifice' (entry #101) are cases in point. Also problematic are word final *-a* vowels which are often "empty", or "prop" vowels, employed only to facilitate the spelling of a word-final cluster. There are several examples of this type of occurrence (especially with "contaminated" ending *-šta* < **-st*) which will be discussed on a case-by-case basis as they appear in particular verbs in Volume II. One example from Melchert (1994:176) will suffice to illustrate the point: third singular preterite "*ēpta* 'took' < **épt*".

THE DATING OF HITTITE TEXTS

The language we call "Hittite", written and recorded over a period of some five hundred years, predictably underwent substantial changes over the course of its development.

Most scholars agree on a tripartite demarcation into Old, Middle and New Hittite, but disagree on the precise dating of these periods. Virtually all scholars concur that the most pronounced difference was between the Old Hittite (OH) and the later periods: "the difference between Old and Middle Hittite is much bigger than the difference between the latter and New Hittite" (Luraghi 1997:3). Perhaps the most reliable method of dating Hittite texts involves syncretisms with known historical persons and dates (see Bryce (1998:410) for a list of some of the more important of these). For dating purposes, I generally I follow Justus (1995) (also 1983) who provides an excellent review of traditional dating (as Otten (1969) and throughout StBoT series), Rüster and Neu (1989), and Kammenhuber (1993) whose substantial writings are the subject of Justus' review. Bryce's most recent work (1998) is extremely informative in establishing both relative and absolute chronology of the various Hittite dynasties. These two sources disagree mainly on the dating of the Middle Period. Both disagree with Melchert on the matter of the OH period, which he sets (far too conservatively, to my mind) at 1570-1450 BCE[3]. Dovetailing both recent and traditional sources, I am assuming a time line as given in the List of Hittite Kings which follows: OH (early 18th century BCE- 1500 BCE), Middle Hittite (1500 BCE- 1380 BCE), and New Hittite (1380 BCE-1200 BCE). See Appendix IV for the List of Hittite Kings.

3

Melchert's dating cannot be right if one accepts that king Muršili I's sack of Babylon (the event which marked "the peak of Hittite military power in the Old Kingdom"(Bryce 1998:103), occurred in the reign of Samsuditana, who died in *ca.*1595 BCE.

SOME DIAGNOSTIC CHARACTERISTICS OF OLD HITTITE TEXTS

Dating a Hittite document is no easy matter. Even if we are able to establish chronological parallelism, other problems remain. Nearly all the material that has been recovered is written on clay tablets[4]. Tablets were constantly being copied and recopied. Consequently, one must always be aware of the role and hand of the scribe. Often, especially when copying older texts, the scribe will deliberately maintain an "archaic" feature of the original. Such "archaisms" lend a certain status to both the document and to the scribe, and were commonly incorporated into ancient literary material.

Nevertheless, there are several features (referred to as the *ductus*) considered to be useful in "diagnosing" the age of a text[5]. However, one must be aware that such diagnostics can be unreliable when used in isolation from other considerations. With this caveat in mind, I list here some of the (less controversial) features which are considered to be characteristic of OH. Several of these, especially those with a direct bearing on voice-related matters (such as the *-za* particle and the endings in *-ri*), will be discussed further within the main body of the thesis. Others are notable as they help to establish the archaic nature of certain texts where the *ḫi* verbs are plentiful, indeed, often characteristic (as, for instance, the Ritual for the Royal Couple).

4

We know from references to these in the clay tablets to other materials that were used, such as wood, and to treaties inscribed on silver and iron. As recently as 1986, a treaty was discovered inscribed in bronze (containing 353 lines and weighing 5 kilos).

5

Luraghi (1997:3) lists "noun inflection and case syncretisms, verbal voice, the use of sentence particle and connectives".

OLD HITTITE DUCTUS CHARACTERISTICS

1. Ablative (*-az*) and instrumental (*-it*) cases were formally and functionally distinct only in OH (Luraghi 1998:179). In OH, these two cases could be followed by inanimate nouns only.

2. Locative of goal = "terminative case" with the ending *-a*, and answering the question 'whither' as opposed to 'where' is a characteristic of OH (Starke 1977).

3. By Late Hittite, the locative in *-i* has almost entirely replaced the "terminative" in *-a* (Held et al 1987:26). However, certain 'locatives of time' in *-i* are attested in OH: see for instance *išpanti* 'at/by night'.

4. Related to the above are the so-called "endingless locatives" such as those of the OH type *siwatt* 'in the day' or *dagan* 'on the ground' (the locative of *tekan* 'ground'), which Luraghi (1998:179) refers to as "natural locatives". This last type often involves some vowel gradation which serves to differentiate it from the nominative. However, some of these endingless locatives which *appear* to be of the same type and age, are indeed later. In this category belong such forms as *lukkat* 'at first light', which is not attested until the 13th century and the "apparently locative" *lukkatti* (Justus 1995:256). These are presumably formed on analogy with the attested pair OH *siwat* and NH locative *siwatti*. On the other hand, the verb *lukkatta* 'it dawns' (= [lukt] according to Kronasser 1966:385), the source of the adverb *lukkatta* 'on the next morning', *is* attested in OH original texts, and is thus older than either the adverb or the endingless locative.

5. The original dative ended in *-e* (Held et al 1987:26)

6. The genitive plural in *-an* is characteristic of OH, and is only rarely seen in NH (except for deliberate archaisms, as above).

7. Certain features, such as the enclitic possessive *-it* with a locative, once thought to be an archaism, may in fact be indications of copies of OH texts, not of originals (Melchert 1978:2).

8. Spellings often are diagnostic of antiquity. For example, before Muwatalli, the verb *kururi(y)aḫḫ-*, 'become hostile' is spelled with the double vowel *ku-u-ru-ri-*, after this time with a single vowel *ku-ru-ri*.

9. The first personal pronoun 'I' is generally *ú-uk* in OH; the form with the pre-posed particle *am-*, *ammuk* is more common in New Hittite.

10. The orthographic distinction between /i/ and /e/, although often confused in later writings, is consistently maintained in the Old Script (Luraghi 1997:5).

11. [There are no signs in the Hittite writing system for /o/ (Akkadian had no phonemic /o/). Some have assumed that one of the *u* signs is in fact to be understood as /o/.] This fact is important as it relates to the discussion of the possible sources of Hittite *-a*.

12. Conjunction *šu* 'and' is characteristic of OH, as is *ta* in the meaning 'then' in the protasis of 'if ... then' syllogisms.

13. In general, the use of sentence particles increases after the OH period: "The usage of sentence particles in Old Hittite is not widespread [...] After the OH period, the use

of sentence particles increases" (Luraghi 1997:54); OH *-(a)pa* and *-an* disappear altogether after the early period, *-šan* after the MH period (Luraghi, *ibid*).

14. In OH, *takku* is the most frequent conjunction in the meaning 'if'. This conjunction is a regular feature in the Laws, among the most archaic of Hittite documents. *takku* is replaced in later texts by *man* 'if'(not, as originally, 'when'). With this fact in mind, it should be noted that temporal clauses with *mān* 'when' are usually OH.

15. The quotative particle *wa(r)* is generally used *without* verbs of saying in OH, with the consistent exception of verb *te-/tar* (Luraghi 1997:51). Later, the verb becomes obligatory with *wa(r)*.

16. The particle *-kan* appears only rarely in OH (Laroche 1961 apud Josephson 1972:9).

17. There is a tendency in the later language to confuse and conflate Akkadian case indicators *I-NA* 'in', 'into' and *A-NA* 'to', so that both or either could denote locative or terminative (especially with neuters) (Held et al 1987:67).

18. Syntactic indicators often indicate an OH feature. In OH uninflected names often appear as the second element of a syntactic sequence: an apparent parallel to the Semitic *status constructus*. Thus, for example, from the Anitta text: DUMU^{I}*Pí-it-ḫa-a-na* 'son of Pithana'.

19. The use of 'reflexive' particle *-za* is extremely rare in OH, but increases into the later language (Hoffner 1973b:521, 523). In OH it is used "in complementary distribution with the middle in order to express the subject's involvement, since it never occurs in sentences with middle verbs" (Luraghi 1997:51). Only from the MH period

onward, is *-za* regularly used in the 'reflexive' or 'reciprocal' function. Such verbs as *eš* 'sit' or *kiš* 'become', 'happen' occur without the particle in OH, but the particle begins to appear regularly in the post-OH period (see Hoffner 1973b for a comprehensive discussion of specificities of use) . This could be related to a change in typology from OV to VO, perhaps because of language contact?

20. *-ri* increases in usage in the post OH period (Neu 1968a,b; Justus 2000)). As a 3rd person impersonal, it is attested in the oldest documents.

21. The original value of the Hittite "middle"as reflecting the older opposition between active/stative (as in Neu 1968b or Lehmann 2002) is clearest in OH.

22. The use of the *Glossenkeile* (double wedges) generally indicates a late text. During the reign of Muršili II (ca. 1350 BCE in Justus 1995:246), the use of the *Glossenkeile* was introduced before words in a Hittite text to mark them as foreign (usually Luwian). When such foreignisms became extremely common, this usage was discontinued.

23. Often a formulaic composition is indicative of a certain period. This is true of some of the oldest Hittite documents: historical narratives which begin with a stock phrase and culminate in the triumph of the royal subject of the text. This is the case in the Anitta text, one of oldest, if not the oldest, of Hittite documents.

A BRIEF OUTLINE AND CAVEAT

The purpose of this thesis is to argue that the Hittite *-ḫi /-mi* present conjugations represent the original voice opposition in Hittite, similar in this respect to the binary voice systems of the other two oldest attested Indo-European languages, Vedic Sanskrit and Ancient Greek. I am well aware that "Juxtaposition of well-established facts with new hypotheses (the latter in some cases necessarily speculative) carries some risk" (Melchert 1994:1). By putting forward this proposal, I am in no way heedless of what has become "received wisdom" in Historical Linguistics; neither do I intend insouciance toward the tenets of Historical and Comparative Linguistics that have stood the test of time. On the contrary, it is precisely because of the meticulous work of early scholars such as Bopp, Brugmann, Delbrück, Meillet and others in working out and recording the details and data of the various classical languages that later investigators are able to propose new possibilities: If we see clearly at all, it is because we are standing on the shoulders of giants.

The authors of the standard handbooks -- here I include not only the scholars mentioned above, but also Müller, Whitney, Mayrhofer[6] and Burrow for Sanskrit, Buck, Chantraine, Frisk, and Atkinson for Greek and Latin, as well as comparativists Kuryłowicz and Szemerényi -- have laid before us a sumptuous feast of phonological, morphological and

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Primarily Mayrhofer's *Kurzgefaßtes etymologisches Wörterbuch des Altindischen*, in four volumes. Volume I , published in 1956, covers A-TH; Volume II, published in 1963 covers D-M; Volume III, published in 1976 covers Y-H, plus corrections and addenda; Volume IV, published in 1980 is an index. I cite Mayrhofer's dictionary by volume and page. Thus, for instance, *véda* 'knows' is discussed in Mayrhofer III:256. See my bibliography for full details.

syntactic material. Fortunately for us, in addition to carefully recording extensive data from the known Classical languages Greek, Latin and Sanskrit, these researchers dutifully recorded the items that did not fit: phonological and morphological "residues" and aberrant syntactic patterns. It is these "residues" which can be most instructive as they often hold the key to an earlier system. Because it is just such an earlier system which I am seeking to describe here, I make use of many of these aberrant items – all of which are to be found in the careful, systematic records contained in these standard handbooks.

The scholarly and scientific methods employed by our predecessors have value even with the passage of time and new discoveries. Based on data from then-known classical languages (Greek, Latin and Sanskrit), Delbrück (1967[1897]:40-59), and later Brugmann (1970 [1904]:510, 511, 518) proposed elements which must have belonged to the proto-language. Had many of the early insights of these scholars been given more attention, some of the features of Hittite would not have seemed so surprising. I give two examples, but there are many others.

1. Brugmann, following Delbrück, proposed that the proto-function of the *n*-suffix/infix (as in Greek and several Sanskrit present classes (5,7,9) was "terminative" (an early aspectual meaning). These insights were confirmed by the evidence of Hittite, which contained the *-n* element in various stages of development. These developments, including the spread of this important IE affix, could be traced: despite the great archaism of Hittite, the suffix had already undergone significant expansion from its early (aspectual) sense and was being used productively both as an early causative *-nu-* (as in *ar* 'arrive' (= 'bring self')

> *ar-nu* 'bring' (='cause to arrive')) and as a causative/factitive *-nin-* (as in *ḫark* 'perish' > *ḫar-nin-k* 'destroy').

2. We know from the evidence of Hittite that the type of infinitive so well attested in Sanskrit, Greek and Latin is not a feature of the earliest language. Hittite's "infinitives" are really verbal nouns. Brugmann had suggested long before the discovery of Hittite that it was some type of nominal form, not infinitives, which should be assumed for the proto-language. The Hittite evidence thus reinforced Brugmann's insight. Friedrich (1960 [1940]:142) confirms this, saying: "Das verbalsubstantiv wird nicht verbal, sondern nominal konstruiert" and giving as an example *ANA* KARAŠ *uu̯atar iyanun* 'ich machte für das Heer eine Besichtigung'(= 'I made an inspection for (of ?) the army'). Here *uu̯atar* is a verbal noun which inflects as an *r/n* stem[7].

In praise of the work of such illustrious predecessors, Lehmann (1993:49) says "Their work will never be surpassed because of its information and its care in presenting it, as well as cautiously proposed hypotheses in attempts at explanation". It is in a spirit of agreement with these sentiments, and with deep humility that I here cautiously propose my own attempt at explaining certain matters concerning the Hittite *-ḫi/-mi* conjugations. My debt to scholars who have toiled and continue to toil in the Anatolian fields (importantly, though not exclusively Sturtevant, Kammenhuber, Oettinger, Kronasser, Friedrich,

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The two suffixes which create these early verbal nouns (*-ātar* and *-āwar*) are truly ancient. Melchert (1994:86, 106) identifies their formation as "pre-Hittite". From these original suffixes are built the "infinitive" forms *-anna-* and *uu̯anzi* (see Luraghi (1997:37ff.) for details). As I point out below, verb final languages (such as Hittite) typically lack infinitives, employing instead de-verbal nouns in this function.

Güterbock, Hoffner, Justus, Kimball, Luraghi, Melchert, and especially Puhvel) will be clear in Volume II of this thesis, a discussion of the one hundred and thirty-two clearly attested *-ḫi* verbs. I have determined this inventory based on morphological criteria outlined in Yoshida (1991), and such attested forms that meet these criteria. Where possible, I cite the attestation from the actual source. Where this is not possible (because of unavailability of texts), I provide such citations as are given in reference works including the Chicago Hittite Dictionary (which I was able to consult during a research trip to the University of Toronto Library), the Hittite Etymological Dictionary (= HED, so far in six volumes) (1984-2003), Oettinger (1979), Friedrich (1960), and Kronasser (1966). This list of sources is in no way exhaustive.

Finally, this study is presented in a framework of Historical Linguistics and is intended as an introductory one only: I have only scratched the surface of the interesting group of verbs that comprise the Hittite *-ḫi* conjugation. Those who specialize in Hittitology will no doubt find certain shortcomings and inadequacies (mostly of a philological nature) in what is presented here. I hope that critics will show indulgence, given the multi-leveled complexities of the historical, orthographical, historical and linguistic situation which is Hittite. In spite of these inevitable shortcomings, I hope this study will have some heuristic and informative value both for Historical and Comparative Linguistics. I leave it to others to hone, expand and fine tune what is laid out here in rudimentary form.

Volume I of this thesis is organized as follows. The Introductory section provides historical background and introduces some important aspects of the theoretical background,

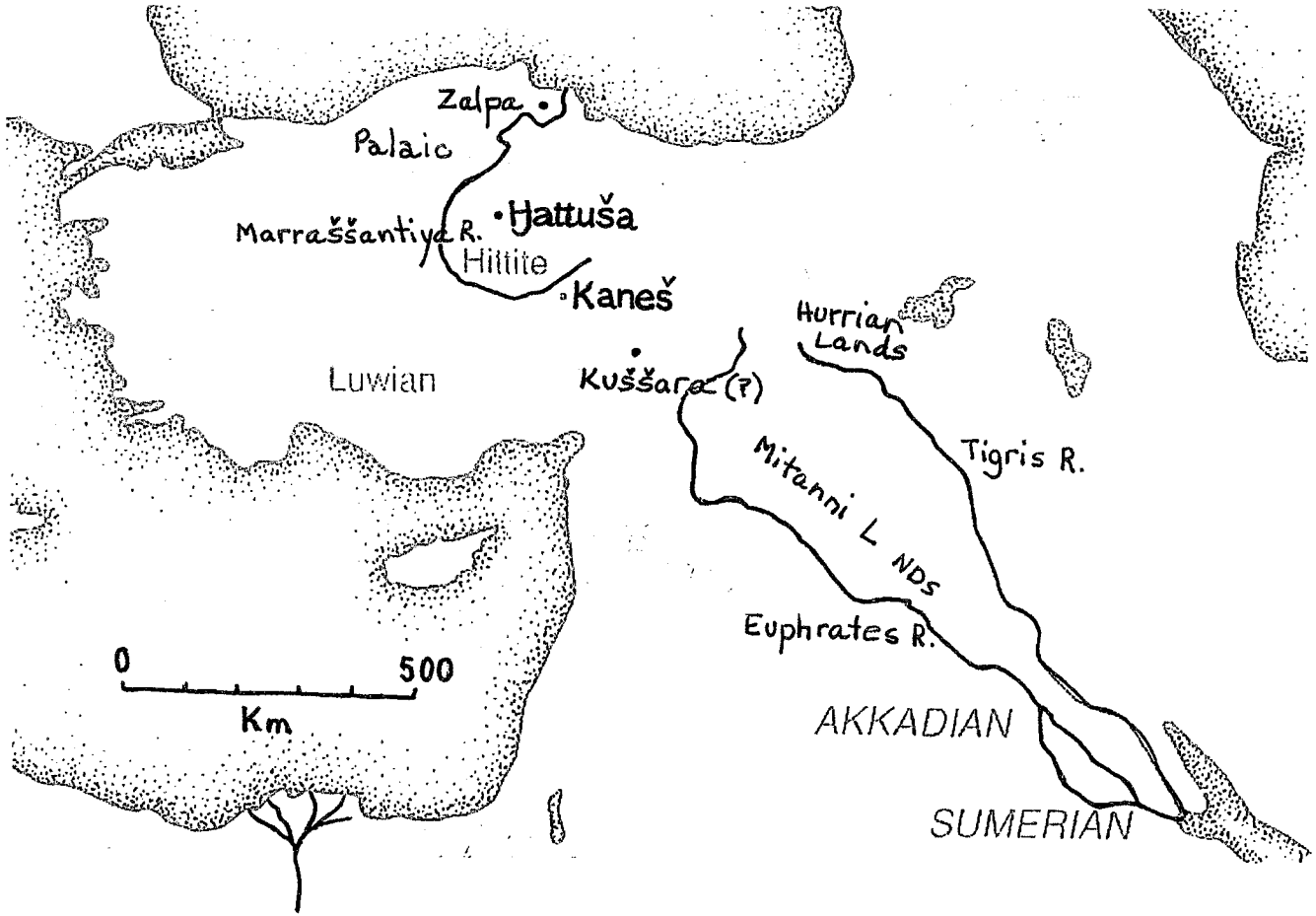
including terminology. In Chapter One, I address the issue of "middle" voice and provide a summary of relevant prior scholarship concerning this system. Early voice systems of Sanskrit, Greek and Latin and what they originally conveyed, are discussed. I address the issue of the (mis)-use of Greek grammarian Dionysius Thrax's voice terminology. In Chapter Two, I give an overview of the Hittite verbal system in general and the *-ḫi* conjugation in particular. I discuss prior scholarship concerning the origins of *-ḫi* conjugation, its links to the IE perfect and the Germanic preterite-presents. In Chapter Three, I discuss the diachronic origin of grammatical suffixes in general, then, in particular, of the opposing personal suffixes *-m* and *-ḫ* which mark the binary centripetal/centrifugal opposition in Hittite. Chapter Four discusses the first person pronouns of the most archaic IE daughter languages, and the significance of the reconstructed form of PIE 'I' to first person singular voice markers throughout the family. Chapter Five is devoted to a discussion of the phonological character of the *ḫ* element as a reflex of the second laryngeal *$*-H_2$ which is used as a marker of the first person singular in the Hittite *ḫ*, in the IE perfects, certain Latin perfects and, possibly, the Greek κ perfect. I show evidence for the identity of the verbal inflection and the velar element which is found in the Hittite direct case pronoun *ūk* 'I'. In Chapter Six, I discuss the markers of the second and third persons of the two present conjugations, arguing that the marker of the *-ḫi* conjugation is an aspirated *t* [t^h] with the "plain" *t* [t] appearing as the marker of the 3rd singular *-mi* conjugation. I show the links of this Hittite marker to other IE second person singular suffixes. I briefly discuss the "contaminated" nature of second and third person suffixes in opposition to the over-characterised first person singular as signalling

the special character of the first person singular. I discuss the element which occurs *after* the desinential suffix, *-i* in the *-m* conjugation and *-e* in the *-ḫ* conjugation. The final Chapter outlines briefly some of the voice developments which came *after* the original system argued for here had, for all intents and purposes, collapsed.

In Volume II, I list and discuss the 132 verbs which I have identified as belonging to the *-ḫi* conjugation, regularly based on clear attestation in the singular[8] (following morphological principles outlined in Yoshida 1991). I indicate how each verb may be interpreted as "middle" (= *centripetal*) voice, either as understood in Kemmer 1993, or because of its orientation to the *special interests of the subject* as expressed in Ritual, Social or Legal contexts. The overall work is summarized at the end of the second Volume of the thesis.

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There are some exceptions, which will be noted as they appear, as well as the rationale for their inclusion.



MAP OF CENTRAL ANATOLIA DURING THE TIME OF THE HITTITES

(Adapted from Mallory 1989:25 and Bryce 1998)

VOLUME I

THE HITTITE -ḪI / -MI CONJUGATIONS AS A VOICE OPPOSITION

INTRODUCTION

0.1. Historical Background

0.1.1. Early influences: The pre-Hittite indigenous population

The people we know as Hittites lived in the central regions of the Anatolian peninsula (modern Turkey) some four thousand years ago (see Map on previous page). The evidence, both archaeological and linguistic, suggests that the dominant culture of the region which became the Hittite kingdom was, in the Early Bronze Age, non-Indo-European: "Scholars have long assumed that the predominant population of the region in the third millennium was an indigenous pre-Indo-European group called the Hattians" [cf. *ḫattili* 'in the language of Hatti'] (Bryce 1998:10). The influence of this indigenous population is largely discernable in the areas of religion, art and mythology.[9] This type of adaptive behaviour was the rule rather than the exception wherever Indo-European peoples settled, particularly as it pertained to religion: "the adaptability of the Indo-European community [was] evident most strongly

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Certain names of Hittite kings have been argued to be of Hattic origin: Muršili, Ḫuzziya and Telipinu (Bryce 1998:16). Titles such as Labarna or Tawananna, at first though to be of Hattic origin, are now believed to be Indo-European (Puhvel 1989:351; 2002:217), where he cites Russian *bogatyr Dobrynja* as cognate with Tabarna. Puhvel's link here, if correct, is a significant achievement: the Russian word *Dobrynja* is based on the Slavic root *dobr-* 'good' (cf Russian *dóbryj* 'good, kind'), thought to have no cognates outside Slavic. For more on Hittite royal titles, see also Tischler (1988:355). For the fuller discussion of the impact of indigenous cultures on Anatolian in general, see Justus (1992).

in the religious sphere. Wherever they settled, the Indo-Europeans adopted elements of the local religion" (Lehmann 2002:242). Justus (1995:236, 248) reinforces the importance of this linguistic layer which preceded Hittite as Ḫattusa to the religious culture of the invaders, especially in OH rituals[10]:

- The significance that Hattic had was religious. As a result, loanwords and deities from Hattic persisted long after Hattic had ceased to be understood as a language, and after layers of Luwians and Hurrians brought in new deities and ways of thinking.

Notably, the indigenous influence is felt as well in the name "Hittite". The earliest "Hittite" document records the invasion of the land of Ḫatti, and the conquering of its capital Ḫattuša[11] by two members of a ruling dynasty from the nearby city of Kuššara -- Piṯḫana and his son Anitta -- and the latter's successful war of conquest against the indigenous Ḫatti population. Thus it is these original inhabitants, not their conquerors, who should bear the name "Hittites"; however, the name is too ingrained to be corrected. The people we call "Hittites" probably referred to themselves as Nešites, and their language as *nešili* (alternately

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Even in later texts, this influence perseveres in frozen forms and formulae recited by cult personnel.

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The two should not be identified. The regular use of KUR with Ḫatti and of URU with Ḫattuša indicates that the former refers to the country and the latter to the city.

spelled *nešili, našili, nišili* = 'in the language of the Nešite'), or perhaps *kanišumnili* ('in the language of the Kanešite') (Bryce 1998:10), after the name of the location of their capital (Neša = Kaneš).

0.1.2. Early Assyrian Trading Records

We know from IE names which appear in the records of Assyrian merchants that, by the end of the third millennium, in addition to the Indo-European speaking presence in the central and eastern regions, there were two other groups of people in Anatolia who spoke Indo-European languages: in the west the Luwians [who spoke *luwili* 'in the language of Luwiya'] (see Bryce 1998:54) and in the north the Palaians [who spoke *palaumnili* 'in the language of Pala']. The influence of these two language groups seems to have increased as that of the indigenous ones waned[12].

The Hittite capital Ḫattuša, in the curve of the River Marraššantiya (Halys to the Greeks and Romans), is at the geographical and political crossroads of the ancient Near East. The capital was also squarely at the center of trading routes of Assyria. Dating from the pre-Old Hittite Period (ca. 2000 BCE), some 15,000 tablets which record the operations and transactions of these Assyrian merchants[13] have been excavated in Kaneš (Hittite Neša =

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Kammenhuber (1993:442ff) has estimated that active knowledge of Hattic was lost by 1400BC (also in Beckman 1983:85).

13

Bryce notes that Assyrian traders favoured central Anatolia's well-established urban centers and relatively stable political situation (1998:26, 27)). The main exports of Anatolia were copper, silver and gold; the main imports, woolen textiles and tin (Assyrian *annukum*), the

modern Kültepe), Ḫattuša and Alişar (modern Amkuwa ?) (Bryce 1998:22). It is here that the first mention is made of the Hittites and their language.

0.1.3. Early Records of the Hittites

Slightly later, around 1800 BCE, are documents referring to the man considered to be the vanguard of the Hittite settlement in the area, and the first Hittite "monarch" (known as *rubā'um rabi'um* 'great king' = 'king of kings'), namely one Anitta, Son of Piṯḫana, King of Kuššar (= Neša). The record of the invasion of the land of Ḫatti by Piṯḫana and his son Anitta is the oldest Hittite document. It is preserved in three copies of an original carved (in Hittite, not, as originally thought, in Old Assyrian) on a stela near the king's city. The earliest copy was made some 150 years after the original.

From the Anitta Text[14] we learn of his invasion:

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metal needed in the manufacture of bronze.

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For citation of Hittite texts, I will use standard transliteration practises and conventions. When possible, I use a syllabic transliteration which conveys the one sign one syllable nature of a cuneiform script. Each syllable (corresponding to an individual sign) is separated by a hyphen. Often I cite a source where the author has "normalized" the text. Generally, unless there is an important point involved which is script related, I do not change the citation. This last is known as a transcription: it attempts to reproduce more closely the correct pronunciation. The syllables are put together in words without the connecting strokes (e.g. *ú-uk* 'I' vs. *ūk* 'I'). Where a cliticized element is added and needs to be noted, I will indicate this by the use of a = symbol in the glossing, and sometimes in the transliteration. Missing and restored items are, as is conventional, indicated by square brackets. Hittite words or morphemes appear in lower case italics. Akkadian words are transcribed with italic capital letters, Sumerian words (logograms and ideograms), in regular capital letters. Luwian "foreignisms" (especially in later texts) are preceded by a special sign called a *Glossenkeil*.

5 [LUG]AL ^{URU}*Ku-uš-ša-ra* URU-*az* *kat-ta* [*pa-*]*an-ga-ri-it* *ú*[*- it*]

king (city)Kuššara city+ABL down in force/great numbers+INST c[ame]

6 [*nu* ^{UR}]^{U} *Ne-e-ša-an* *iš-pa-an-di* *na-ak-ak-it* *da*[*-a-aš*]

conn (city)Neša+ACC night+LOC assault+INST take+3sg+pret

7 [^{URU} *N]e-e-ša-aš* LUGAL-*un* *IṢ-BAT* *Ù* DUMU^{MEŠ} ^{URU}*Ne-e-š*[*a-aš*]

(city)Neša king+ACC he-took and(or 'but') child+pl (city)Neša

8 [*i-d*]*a-a-lu* *na-at-ta* *ku-e-da-ni=ik-ki* *ták-ki-iš-ta*

bad not anybody+DAT=prt build (here 'do')+3sg+pret

9 [ ]x *an-nu-uš* *at-tu-uš* *i-e-et*

father+ACC+pl mother+ACC+pl make+3sg+pret

As any of the standard handbooks (Sturtevant 1933, Sturtevant and Bechtel 1935, Friedrich 1960, Oettinger 1979) will discuss basic issues related to script, including what elements are and can be represented, problems related to script, special features such as determinatives, etc, will not be elaborated here. Although I have glossed this first example, in the majority of examples, I gloss only when it is necessary, either to emphasize or explicate a point. I assume that readers will possess a certain level of facility in Hittite.

References listed after a quote will be as extensive as possible to allow the reader to identify and/or easily locate the passage. Reference will be made to standard identification tools such as collection and tablet number(s), (e.g. KBo III 22 5-9 for this passage), and any edition and/or author which treats the particular text. For instance, the above passage is taken from the Anitta Text (Der Anitta-Text), edited in 1974 by Erich Neu as number 18 in the StBoT (= Studien zu den Boğazköy-Texten) series. (It is in these sources that a full range of detail (such various exemplars, matters of script, etc.), transcription, translation, commentaries and glossaries of words and forms which appear in each text are discussed. In the List of Texts Cited, which appears as an appendix to the thesis, reference will be made to Laroche's *Catalogue des textes hittites* (CTH) a numbering system of "universally recognized" usefulness.

'The king of Kuššara c[ame] down from the town in great force

and to[ok] Neša in the night by storm.

He seized the king of Neša, but on the inhabitants of Neša

he inflicted no harm. [Instead], he made [them his] mothers and fathers'

(KBo III 22, 5-9 in Neu, StBoT 18:10)

The language attested in this first and subsequent documents, although written in Akkadian cuneiform, once deciphered, was shown to be in essence, Indo-European. This discovery threw the historical linguistics community into something of an uproar. Theories about the features of the hypothetical proto-language had been, up to the point of the discovery of Hittite, based on the available data of Latin, Greek and Sanskrit. This "new" language gave evidence of a very different (and quite possibly older) system than had been previously described. Some scholars were vindicated: the testimony of Hittite confirmed de Saussure's brilliant insights about the laryngeals[15] (set out in his *Mémoire* of 1878[16]) --

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A set of sounds, without clear evidence before the "discovery" of Hittite, with similarities to the most back (i.e. pharyngeal and glottal) consonants of Semitic. Hence the name. Although de Saussure was the first to propose the existence of such elements in IE, it was Danish scholar Hermann Möller who was the "véritable fondateur de la théorie laryngale" (Szemerényi 1973:11). The adoption of the theory of laryngeals changed the interpretation of the phonemic inventory of the parent language and did much to unite the phonology of the early Indo-European and Semitic. It made it possible to posit what an earlier system might have been.

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The work appeared in December of 1878, but with the date 1879. Lehmann (1993:33) comments that this fact has been causing bibliographical problems ever since. I cite it as

evidence for which had previously been only vestigial and indirect in Greek, Sanskrit and Latin (see various papers in Winter (ed.). 1960. *Evidence for Laryngeals*). To his subtle and analytical mind such 'footprints' had been sufficient to allow him to propose a set of *coéfficients sonantiques* for an earlier stage of the language, and here they were in all their solid glory, in contexts where de Saussure had predicted they would be.

Whereas some were vindicated, others were chagrined: Hittite, despite having clearly "Indo-European" features of vocabulary, morphology and syntax, differed substantially from the system that had been put forward for the proto-language as it had been previously understood. Until the discovery of Hittite (and Tocharian) the perfect was "one of the most secure reconstructions in the whole IE verb" (Watkins 1998:58). However, since neither Hittite nor Tocharian showed any reflex of the (finite) perfect, many aspects of the previous theory had to be revisited. Many preconceptions wavered and fell before the concrete (or should I say 'clay') evidence of this heavily attested archaic language.

Much has had to be reconsidered or adapted to take this new evidence into account. Before the discovery of Hittite, many "egregious" facts of IE morphology had been simply noted, without further comment. In some cases, largely because they did not appear to "fit" current or fashionable models of what the Indo-European language must have looked like, items were ignored, dismissed or pushed to the side as irrelevant. During the course of my research, I have encountered numerous such items. These pieces of the puzzle, although at

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1879 in my bibliography.

first glance disparate and outside the expected, are of great value: "Items and patterns that do not agree with the productive patterns in a language may be residues of an earlier stage" (Lehmann 1995, 2002:21)[17]. Taken together, these disparate "residues" provide strong evidence for the type of opposition outlined here. This approach involves the mustering of both fact (from actual linguistic data) and scholarly opinion, both ancient and modern. In this way, I follow in this thesis what might be termed an "analysis by synthesis" approach.

One may justifiably ask 'If the system we see in Hittite is a voice opposition, why has this not been pointed out previously by scholars who have worked extensively on the Hittite verbal system'? This is an honest question, and one that I feel I must answer before I proceed. There are three issues to be considered: First, it is not entirely accurate to say that the diathetic nature of the two Hittite present conjugations has not previously been recognized. Many scholars have commented on the similarities between the Hittite *-ḫi* conjugation, categories of voice, and the perfect (e.g., Kuryłowicz 1964:56ff). That the system we see opposed in Hittite might actually be a voice opposition has been hinted at by several scholars (Neu 1968b, who described the original binary conjugational split as *Diathese* Aktivum vs. *Diathese* Perfektum, Kronasser 1956, 1966, among others). Nevertheless, although many have sidled around the periphery of such a position, no one has as yet stated categorically that the essential difference between the two Hittite present conjugations is one of verbal VOICE. This study is the first to do so.

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Lehmann cites, as example, vowel alternations in such English words as *man : men, cow : kine* which provide "evidence of umlaut and its use in plurals at an earlier time" (2002:21).

It is also the first study to compile a list of verbs which belong to the *-ḫi* conjugation, which I argue is the "middle" member of the binary voice opposition, an archaism which echoes and expands a previous category which was the common source of both the IE perfect and the "middle" voice. It is the archaic nature of Hittite which allows us a glimpse at this early system: the evidence is found in the confluence of two aspects of the Hittite system, the preservation of laryngeals and presence of case-marked clitics. In concert with "residues" in other IE languages, we are able to get an understanding of the semantic and morphological factors which were characteristic of the Hittite *-ḫi* conjugation.

Such evidence, of course, was unavailable to early scholars. However, based on their careful records, we are able to clarify certain matters and expand our own understanding of the early system. (See, for instance, Table 12 , Schleicher's early (1876) Table of Endings, which shows clearly the binary opposition between the *-m* conjugation and another conjugation which he called perfektum, marked by an as-yet unknown element that appeared as *-a* in Greek and Sanskrit.) Only after the Hittite evidence allowed this element to be correctly identified, could questions concerning its meaning or function be tackled.

The second, and perhaps the most important factor which may have undermined the identification of the *-ḫi* conjugation as "middle" voice is the attested presence in Hittite of verb forms (in *-r*) which have been identified as "medio-passive" (based on certain morphological similarities to such forms in other languages). This much discussed "medio-passive" is the subject of an early paper by Sturtevant (1931c:242ff) and two comprehensive studies by Neu (1968a and b). As outlined in these studies, and the other sources listed

below, voice in Hittite is traditionally understood to oppose two diatheses: the active conjugations (*-ḫi* and *-mi*) and the "medio-passive" conjugation (Sturtevant 1931c; 1933:250, 251; Kronasser 1956:201; Friedrich 1960:76ff; Rosenkranz 1978:84; Luraghi 1997:32; 1998:184). The endings of this "medio-passive" conjugation are presented in Table 1 below (following Friedrich 1960:108ff; Luraghi 1997:34, 1998:183). The chronology and structure of these endings will be discussed at length later in the thesis.

Table 1. Singular endings of the Hittite "medio-passive"

	PRESENT	PRETERITE
1	-ḫa -ḫari -ḫaḫari	-ḫat(i) -ḫaḫat(i)
2	-ta	-ta -tat(i)
3	-ta -tari -a ari	-(t)at(i)

I am in no way disputing the conclusions of these eminent scholars: I am suggesting that this was not the *original* opposition. Working on the logical supposition that "simple inflexion is, as is known, older than complex" (Adrados 1982:30), I suggest that the more archaic system lies "buried beneath" the *-ri* forms, closer to the root.

By way of example, consider the "mediopassive" third person singular ending *-tari*. The chronology of this complex suffix, as outlined in Kronasser (1966:369ff) is provided below:

Table 2. Chronology of a complex Hittite suffix

-ta	earliest
-tar	later
-tari	latest

The earliest form *-ta* is most likely inherited from PIE **-to* (cf. original third person singular "middle" suffix -τοι in Linear B, later -ται in Classical Greek). It was enlarged during the Proto- (?) Common (?) Anatolian period by *-r* (witness Palaic *kitar*) and finally by *-i* in Hittite only. Hittite *ki-tta* 'he/she/it lies' would be an archaism going back to PIE **k'ei-to*. The fact that these endings are optional (already noted and outlined in Sturtevant (1928b:169, 1933:217), Kammenhuber (1969:325), Yoshida (1990:181-206), Justus (2000:4)) is often given short-shrift. Yoshida states clearly that the ending *-ri* was "not used obligatorily before the Neo-Hittite period" (1991:363).

Similarly, the composite plural endings show many signs of being later and derived. Consider for example the first person plural *preterite* composite ending *-ḫat(i)*. Starting from the rightmost morpheme, *-i*, which is most often identified as a present tense particle, here does not mark tense (because this is a preterite), but number: plural[18]. Moving leftwards, the

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Numerous authors e.g., Lehmann (1974:210-202), Shields (1985:189), Adrados (1987:7), and recently, Shields (2000:213), acknowledge the late emergence of the category "plural" from a "unified non-singular" category; "inflectionally expressed number category was a development of late Indo-European". The late emergence of the "non-singular category" is responsible, according to Shields (1991/2), for much of the dialectal variation seen in IE numerals. Lehmann (1993:151) agrees on the late emergence of the plural, and credits such

-t is the preterite marker, imported from the *-mi* conjugation (the most common *-ḫi* preterite marker being *-š*)[19]. The morpheme closest to the verbal root *-ḫ* marks first person. There is no ostensible voice marker.

To judge from the endings of the verbs described by Neu as "medio-passive" (1968a and b) these verbs belong to the *-ḫi* conjugation (or at least, show endings which that conjugation "shares" with the IE perfect) not the *-mi* conjugation. Consequently, despite the existence of "medio-passive" forms such as *eš-ḫa-ḫa-r-i* 'I sit', there are no such forms as **eš-ma-ma-r-i*. To my knowledge, this fact has never been addressed, let alone explained.

Neither does the existence of the *-r* marker prove its archaic nature as a voice marker. As I argue below, both on typological and on internal systemic Hittite grounds, this was quite likely *not* the original function of this marker, although, over the course of its expansion, it did come to denote meanings associated with "medio-passive". There is already support for such a proposal: Whereas Hittite forms with the suffix *-ri* had at first suggested an exact

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knowledge to "clues" to the earlier system which survive in residues, such as the "plural forms of the oblique cases [which] are infrequent and irregular in the oldest Vedic texts". For the late emergence of the non-singular categories see also Shields 1985:189, 2000:213; Lehmann 1974:201,202; Adrados 1987:7)

The non-singular was expressed, again according to Shields (2000:213), "by markers which probably had their origin in enclitic deictic particles". These particles could be used either on verbal or nominal items. One such item was *-*i*, (seen in Latin *lup-ī* 'wolves', Greek nominative *lúko-i* 'wolves', Lithuanian nominative *vilka-ī* 'wolves', Hittite *kurur-i* 'hostilities'(Shields 2000:214). The Hittite word could be considered double marked: the *-r* also marks 'collective' a type of non-singular (Kuryłowicz 1964:204).

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Often these markers appear simultaneously (*-šr.*). This use of both "preterite" markers may be interpreted as an indication of the undifferentiated character of the *not-I* category (i.e., 1 vs. 2+3). These "contaminated" markers are discussed below. See also Jasanoff (2003:70, nt. 12).

correspondence with the Latin or Celtic "medio-passive" forms in *-r* (as a sort of peripheral isogloss) the Hittite *-ri* forms are, in fact, the most recent (Justus 2000; Neu 1968a,b). Many analysts who describe such *-r* forms as "medio-passive" do not take chronological factors into account. Justus (1995:254) points out that the language described by Friedrich in his grammar of Hittite (1960) is that of the *late* stages of the language.

Forms in *-ḫa* (that is, with a final *-a* vowel) (and presumed to originate from *$*-H_2o$*) are also regularly identified in grammars as "middle", with forms in the *-ḫi* conjugation later "active" developments (as in Adrados 1982). This reasoning, again largely based on morphological features of Greek and Sanskrit, admits of alternative and equally plausible explanations, which I provide in Chapter Three.

The third major impediment to the discussion of the original voice opposition in Hittite is related to terminology. Broadly speaking, we are being 'chronologically incorrect' in our approach to the ancient opposition we see in Hittite: we are using 'modern' voice terminology to describe an archaic system. Schmalstieg has suggested that, when we are discussing the "oldest layer of Indo-European" (reflected in Hittite), such common terms as "active", "passive", "transitive" and "intransitive" either have no meaning, or else simply do not apply. From Schmalstieg (1980:172): "...the oldest layer of Indo-European can easily be understood without the notions of active, passive, transitive, intransitive [...] There are merely different ways in which the various participants in an action may [...] be connected with the verb". Our modern voice terminology, "active" "passive" and "middle", "deponent", etc. which we get in large part from the Greek grammatical tradition, is based on a ternary

system of voice opposition, where "middle" stands between the two extremes of "active" and "passive"[20]. If we are to get a clear idea of the nature and function of the binary system which obtained in Hittite (a reflection of early PIE, which had no passive, already in Brugmann 1904), we cannot rely on what are clearly inadequate, inaccurate and anachronistic tools of modern voice terminology. Perhaps the most important starting point in my discussion of this issue is to dispel the impression that the ancient system seen in Hittite resembles more recent voice systems. This simply is not true.

0.2 Theoretical background

0.2.1. Modern Ideas of Voice and the Issue of Terminology

A modern linguist, asked to describe a binary voice opposition, would almost certainly make reference to the familiar active/passive opposition, as is exemplified in (1), where in 1a., an agent/subject of the transitive verb *cooks* is *man*, with *dinner* as the patient/theme/object. In 1b. the patient object *dinner* has been "promoted " (as in Relational grammar) to subject role, and the agent can be either expressed by an agentive prepositional phrase or, in some cases, omitted altogether.

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The ternary terminology with which we are familiar is not relevant in Sanskrit. Only in Sanskrit do we get a sense of what the original distinctions were. So Rocher (1968:19): La grammaire indienne ne connaît pas le concept de <<voix du verbe>>. Elle ne prend non plus en considération rien qui soit analogue à <<voix active>>, <<voix passive>>, <<voix moyenne>>. Elle ne distingue que deux concepts, répresentés par les termes *ātmanepada* et *parasmaipada*.

(1) a. The man cooked the dinner. (ACTIVE)

Agent/Subject Patient/Object

b. The dinner was cooked (by the man). (PASSIVE)

Patient/Subject (PP Agent)

Again, in a modern context, a "middle" voice in this ternary type of system would be syntactically and semantically somewhere between active and passive: the subject both partially performs and partially undergoes the action -- is part agent and part patient -- midway between being the controller and the controllee. The *middle* voice, then, by definition falls somewhere on a cline between the two: the subject is neither fully agent nor fully patient, but somewhere between the two poles: the subject both performs and is affected by the action. (This explains cross-linguistic "middle voice" marking on verbs involving activities which one performs on or for oneself, or activities which originate from the agent themselves, such as *walk, turn, die, be born*, etc. This also explains the common occurrence of reflexive markers to mark "middle" voice (= 'neo-deponents') as in French *se fâcher* 'be angry').

If we attempt to apply this "modern" voice system and its concomitant terminology to the most ancient layers of Indo-European languages, we are guilty of a grave chronological and methodological error. The evidence of the most archaic Indo-European daughters, Vedic Sanskrit (ca.1200 BCE), Ancient Greek (including Mycenaean) and Hittite (ca.1700 BCE-

1200 BCE), indicates that the original voice opposition was indeed binary, but not between "active" and "passive" but rather between "active" and "middle"(or "medio-passive"). This is the opinion of the majority of scholars, virtually all of whom consider the passive voice later and derived (Brugmann 1904:492; Burrow 1955; Lyons 1968:373; Andersen 1991:31; Lehmann 1993:162; Lehmann 2002). This original binary opposition was based on the level of subject involvement or interest in the verbal action, considered the "semantic core" of middle voice (Lyons 1968:373, 1977)[21].

In Sanskrit this semantic distinction was captured by the terms used by the ancient grammarians: *ātmanepada* ('word for self') vs. *parasmaipada* ('word for other') and was marked morphologically by opposing sets of verbal endings. This type of opposition is exemplified in the Sanskrit examples in (2):

(2)	a.	narah	bhojanam	paca-t-i	("ACTIVE")
		man+NOM	dinner+ACC	cook-3sg-*parasmaipada*	
		Agent/Subject	Patient/Object	root-person-'other'-voice	

'The man cooks the dinner' (for someone else)

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21 Lyons (1968:373) commenting on the relationship between the Indo-European middle and the passive says: "the opposition of voice in Greek is primarily one of active v. middle. The passive was a later development (as it was in all the Indo-European languages)."

b. narah bhojanam paca-t-e ("MIDDLE")

man+NOM dinner+ACC cook-3sg-*ātmanepada*

Agent/Subject Patient/Object root-person- 'self'-voice

'The man cooks the dinner' (for himself or the members of his own family)

Here the translations are exactly the same, as they should be. The sentences are morphologically identical but for the final vowel. In 2a. the final *-i* marks "active" voice (*parasmaipada*) and in 2b., the *-e* "middle" voice (*ātmanepada*)[22]. The semantic distinction, conveyed by this final vowel, is that in 2b. the subject will some how benefit, or at least is somehow more intimately invested in the verbal activity than in 2a. Underscoring Kuryłowicz's observation cited above, both sentences in (2) are transitive -- in the examples in (2), the so-called "middle" member is by no means less transitive than its "active" counterpart. Both agent/subjects may rightly be termed "active". Indeed, the argument could successfully be made that the agent in 2b. is very likely more "active", given the more personal nature of his involvement in the activity, and his desire to have a positive outcome. Thus, in this early binary opposition, the "middle" member may encode *higher* intentionality than does the active.

22

The greatest and best known of the Sanskrit grammarians, Pāṇini, following a long grammatical tradition, assigned one or other of the desinential endings to all 2,200 verbal roots (*dhātu*) of Sanskrit into one of these two voice categories (some could take either).

0.2.2. The problem of terminology

If it is acknowledged that the earliest IE voice systems, though binary, had no "passive", immediately the problem of terminology presents itself: How can there be a "middle" term in a binary system? A "middle" term must of necessity be part of a set which has at least three members, which many later voice systems possessed but the PIE system, lacking a passive, did not. One might justifiably wonder why, if we accept the common opinion that neither IE nor its archaic daughters had a "passive" voice, we continue to apply the anachronistic term "middle" to describe a system quite unlike our own, whose roots lie in the pre-Indo-European period (8000-5000 BCE)[23].

I suggest that there are two main reasons: one is a failure to acknowledge chronological factors relevant to the nature of the *original* opposition. Thus, for Hittite, many may refer indiscriminately to *later* forms clearly marked with *-za* or *-ri* as "middle" or "mediopassive" (as do the majority of Hittite scholars, including Friedrich 1960, Puhvel (HED) or Neu (1968a,b). The other reason is that, heretofore, there has been a paucity of terminology which adequately captures the original binary opposition and thus which may accurately be used to describe it. The Sanskrit terms *parasmaipada* and *ātmanepada* are perfect, but are unwieldy[24] and not in common linguistic parlance. This situation has recently

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If one adopts the chronology of PIE periods such as outlined in Lehmann (2002) or Colarusso (1997). Gray and Atkinson's (2003) chronology could shift this period even farther back.

24

Even the grammarians themselves complained about the length of the terms, but used them because their predecessors had passed them on.

been rectified by Lehmann, who, in a recent (2002) book, describing the archaic ancestor of Indo-European ("Pre-IE"), which is in many ways very similar to that of Hittite, uses the terms CENTRIPETAL ('seeking the center') vs. CENTRIFUGAL ('fleeing the center') to describe the original binary voice opposition[25]. These terms succinctly convey both the essential character and some of the subtleties of the earliest voice oppositions. That this is so may be seen by applying them to the examples in (2): the *centrifugal* member would be the (outwardly transitive) 2a., while 2b. represents the *centripetal* member, with the agent subject highly interested in the benefits of the verbal action (in Sanskrit, *kriyāphalam* 'fruits of the action'), with the verbal activity in some way reflected back toward the subject. This early opposition is both formal (morphologically marked by opposing suffixes) and functional (conveys two different degrees of involvement or investment in the verbal activity). This heightened involvement is the "semantic core" of "middle voice", captured in the following definition from Pharr (1985 [1959]:298) referring to Greek: "the action of the middle always has some reference, either direct or indirect, to the subject, and the subject has an interest in, or is affected by the action". In this sense, the "voice" I am discussing in this thesis is not "middle" voice as it is typically understood, but rather the linguistic ancestor of both "middle" and "passive". 'Middle' voice, as the term implies, is a phenomenon which is possible ONLY in a three way oppositional system:

ACTIVE MIDDLE PASSIVE

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Which he calls not "voice" nor "diathesis", but rather "version" (< **wer-* 'turn').

Such a system has, using the traditional terminology, 'active' voice (where the subject is the agent of, typically, a transitive verb), 'passive' voice (where the patient or undergoer is the subject), and 'middle' where the subject is part agent and part patient. I repeat, this is NOT the system which I will be describing. The original voice opposition, from which the ternary system evolved, was binary. As the Hittite evidence shows, this opposition was strongly geared to first person singular (and quite possibly began there). First person singular is semantically the most involved (with third person plural, at the opposite paradigmatic extreme, the least involved)[26].

Hittite has two opposing, morphologically marked, first person singular verbal conjugations. In order to determine the purpose this opposition served and the *semantic* correlate of this *morphological* opposition, I proceeded as follows.

(1) First, in order to determine what the possibilities might be, I looked at the overall Hittite *system* to see what distinctions and contrasts (phonological, semantic and morphological) were (a) important and (b) possible.

(2) Secondly, I looked at the *system* of voice oppositions in the language of a comparable vintage (at least, closest in attestation to Hittite), Vedic Sanskrit. Vedic Sanskrit gives evidence of not three opposing voices, as above, but a binary system, which opposed two voices. The semantic opposition between them involved the LEVEL of involvement of

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See Guillaume (1984:160) for a discussion of the semantic repercussions of "ranking" of the first, second and third persons. One wonders what he would have made of a system, such as Hittite, which possessed not one but two first person singular verbal conjugations.

the human subject in the verbal activity. The distinction was called *ātmane* ['self' + dative] 'for self'+ *pada* 'word' versus *parasmai* ['other' < *para* 'far'] + *pada* 'word'. An example is:

ātmanepada	parasmaipada
kataṃ kurute	*kataṃ karoti*
'He (or she) makes a mat'.	'He (or she) makes a mat'.

This was the ORIGINAL opposition, described by Pāṇini, following a long, well-established grammatical tradition. The Sanskrit terminology (*ātmane* means 'self') makes it clear that the human perspective was essential.

At a later stage of the language, with the development of the morphological passive, the following ternary opposition was possible:

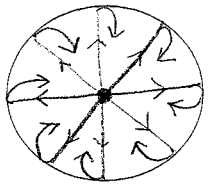
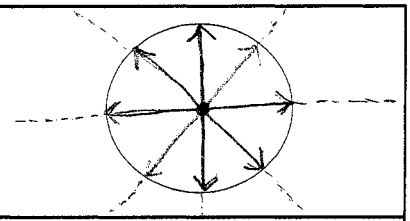
ātmanepada	*parasmaipada*	'Passive'
kataṃ kurute	*kataṃ karoti*	*kataḥ kriyate*
mat+ACC	mat+ ACC	mat+NOM
'He (or she) makes a mat'	'He (or she) makes a mat'	'A mat is made'

Here, the object 'mat' has become the grammatical subject and appears in nominative case. The verb shows passive morphology *-ya-* (added to a zero-grade root) and uses the

ātmanepada endings. In the derived passive, the original distinction of "benefit" is virtually lost. The result of the mat in a "made" state is the focus and purpose of the use of the passive.

Lehmann describes an original system which also opposed two voices, which he calls *centripetal* ('seeking the center' = 'oriented to the center') versus *centrifugal* ('fleeing the center' = 'not necessarily oriented to the center'). As in the Sanskrit terminology, the marked member is the one which is 'oriented toward', or geared to, the center. This binary opposition may be diagrammed as follows, with the center here (and originally) representing the 'self' (the first person singular) :

Table 3. The original binary voice opposition

	
Marked	Unmarked
centripetal (oriented **toward** center)	centrifugal (oriented **away from** center)
Sanskrit *ātmanepada*	*parasmaipada*
Hittite *-ḫ* (= direct case pro)	*-m* (= oblique case pro)

Because the relevant parameter of the marked member in this original binary system is

involvement of the self, the possibility of the *opposite* meaning develops here. In other words, the passive developed from the centripetal member of the opposition; hence the term often used for this voice "medio-passive".

Throughout this thesis, I will use Lehmann's terminology as far as possible when describing the archaic verbal voice opposition in Hittite. However, since the terminology which is used to describe many of these oppositions is, although anachronistic, so deeply ingrained, it is often unavoidable[27]. In cases where it is necessary to (mis)use the term "middle" to describe the centripetal (= *ātmanepada*) term of a binary opposition, I will put "middle" in double quotation marks.

Because this thesis discusses an archaic opposition which had *two* basic opposing voices, rather than the later three-membered (active ~ middle ~ passive) system with which we are more familiar, my task is in many ways simpler. I may bypass much (though not all) of the massive body of literature which focusses on categories of derived voice, including the passive itself, anti-passives, anti-causatives, etc., although I do cite 'modern' scholars (e.g. Haspelmath (1993)) when I discuss voice developments in Late Hittite.

In many ways, however, my task is more difficult. The verbal system we see in Hittite is of extraordinary age: many of its features are not compatible with some aspects of the familiar IE reconstructions (based on the later languages Sanskrit, Greek and Latin). Many aspects of this very early system do not "fit" into present analyses. However, several of the

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I fear it is as deeply entrenched as the name "Hittite" to identify the Nešites. I hope updating this terminology will not prove as intractable.

morphological "residues" of Hittite have parallels in the other IE languages, specifically and often in archaisms, such as the so-called *t*-less third person singulars of Sanskrit. In all, there are only fifteen of these forms, all *ātmanepada* and all athematic (Sihler 1995:460ff), and all identified with the *-ḫ* not the *-m* conjugation). Ferreting around in the dusty closets of IE archaisms of this type, with a view to discovering points of morphological, semantic and systematic tangency between these groups of this type, will illuminate features of an older system.

Although the Hittite system may be morphologically simpler (in opposing the two elements *-m* and *-ḫ*), semantically, it is more complex, marking meanings and distinctions which, although central to Hittite and IE culture, have little meaning to us from our great historical distance. Consequently, I will concentrate on works which apply directly to discussions of the early system in IE. Scholars whose work describes features of this early system, and upon whom I draw heavily, include Kuryłowicz (1964), Schmalstieg (1980), Szemerényi (1996); Kortlandt (1983), Shields (1992), Adrados (1982, 1987), Beekes (1995), and Lehmann (2002).

0.3. Developments in Historical Linguistics with relevance to Hittite

Recently, much recognition has been given to the chronological development of the proto-language. This has typically been neither the field nor forte of Historical Linguistics.

> Comparative linguistics does not deal with languages still in the *process* of

change, but, rather, almost exclusively, with languages in which all change that could have taken place is now 'finalized' and 'at rest' (Beekes 1995:55).

Scholars such as Adrados have argued for developmental "stages" of PIE: early pre-inflection, later mono-thematic inflectional, and later still, polythematic inflectional. The recent work of Lehmann (2002) describes such a stage, equivalent to Adrados' second (mono-thematic) stage, which he calls "Pre-Indo-European". At this very early "mono-thematic" stage, the thematic ~ athematic stem characterisations, so much in evidence in Vedic, Greek and Latin, are still being worked through. Many categories such as NUMBER, PERSON, and GENDER, fully developed in later well-attested languages, are still in their infancy (or, more accurately, mark oppositions which are more relevant to the contemporary language, e.g., human vs. non-human was more relevant to the Hittite system --and one assumes to the Hittites themselves-- than *male* human vs. *female* human). The archaic nature of Hittite allows us to see attested evidence of such transitional stages (such as the "contaminated" endings of the second and third persons).

The presence of archaic phonemes – "laryngeals"-- in Hittite made it necessary to revise the phonological system that had been proposed for PIE. Lately, Gamkrelidze and Ivanov have modified portions of their original reconstructions, taking into account not only Hittite, but also features of other languages outside the IE family which are possibly related at an earlier stage. Such a broadening of scope allowed phenomena which had formerly defied analysis to be explained (Lehmann mentions the infrequency of Indo-European **b*,

which, before the glottalic theory, was "simply noted" (2002:211). The laryngeal theory allowed for the satisfactory explanation of what had seemed quite disparate forms of the daughter perfects : the endings of Greek *oîda, oîstha, oîde*, Vedic *véda, véttha, véda*, Hittite *šak-ḫi, šak-ti, šak-i,* were all shown to derive from from PIE *-H_2e, *-tH_2e, *-*e* (Lehmann 1993:174).

0.3.1. Pre-PIE as an "active" language as described in Lehmann 2002

Lehmann (2002) describes the language which preceded Proto-Indo-European as an "active" language. He credits recent advances in archeology, genetics, work on macrofamilies as well as the work of other historical linguists and typologists (such as Klimov 1974 who suggests such a system for certain Caucasian languages) with providing the necessary background for his proposal of what form the earlier language might have possessed. Other scholars, such as Adrados (1982, 1987), Bomhard and Kerns (1994) and Gamkrelidze and Ivanov (1995) to name a few, have also propounded such an earlier stage. Many have suggested what the characteristics of such an early stage of IE, or a precursor of the IE family itself, might have possessed (notably Neu (1968a, b), Shields (1992), but see also references in the bibliography, also Schmalstieg (1980)). Lehmann (2002:3-6) improves on the precision of these earlier studies by identifying Pre-IE as an "active" language, one of the characteristics of which is that there is no "passive", a typological situation which persevered throughout the entire IE period and into the earliest stages of all IE daughters, as we have noted above.

In active languages, according to Lehmann, the *lexicon* is primary and consists of nouns, verbs and particles. In a precursor to the familiar tripartite gender system, nouns and verbs are construed as either animate/active or inanimate/stative. Sentences are constructed on the basic of agreement (active nouns paired with active verbs, stative nouns with stative verbs). Inflection is at a bare minimum, or in the incipient stages, especially for stative verbs which are inflected "only for the singular and third plural" (2002:5)[28].

0.3.2. Some archaic features of Hittite

The archaic nature of Hittite would certainly partially explain many distinctive features of the language, such as its lack of a fully developed feminine form, the lack of thematicization by means of post-root vowels, the lack of elements such as the *-s-* aorist so common in Greek, Sanskrit, and, to a lesser extent, Latin. Archaism could also explain the presence of an opposition which goes back to a time when inflectional categories such as case and number were in their early stages, when "Indo-European moved from a pre-inflectional structure to an inflectional structure" (Shields 1992:23).

Listed below are several of the features that set Hittite apart from IE and, often, from other Anatolian languages. The similarities between the Hittite system and the pre-IE system

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It should be noted that one conspicuous lack of correspondence of Hittite with the system which Lehmann proposes for Pre-IE is the existence in Hittite of a fully present and functioning verb 'to have'. Hittite is unique among ancient IE languages in using this verb as an auxiliary in a surprisingly "modern" type of periphrastic construction (see Boley 1984 for a study of this construction).

outlined above should be clear.

1. Gender: The Hittite system opposes two genders: neuter and common gender. Common gender "subsumes both the masculine and feminine gender of the other Indo-European languages" (Held et al 1987:12) and thus are typically, though not exclusively, animate, and often human. It is important to note that there is no clear consensus as to whether the two-gender system of Hittite reflects an archaic situation. According to some scholars, e.g. Melchert (1993), Anatolian has lost the feminine gender. This would make the Hittite common/neuter split an Anatolian innovation, not an archaism.
2. Typological: opposition of *active* vs. *stative*, which itself may be a voice opposition.
3. Tense: opposition of *present* vs. *preterite*. (Here, only Germanic corresponds).
4. Mood: opposition of *indicative* vs. *imperative*. In this system, the injunctival use of indicative is an archaism. Hittite lacks modal categories typically reconstructed for IE, such as optative and subjunctive.
5. Vocabulary: Productive *-r / -n* stems (with only remnants --'linguistic fossils'-- in other languages).
6. Grammatical: **Lack** of differentiation of second and third persons (evidence of original identity of category 'other'(2/3) in opposition to 'self' (Shields 1993). Regular 'contamination' of second and third endings in present and preterite singular.

7. Grammatical: **Over-differentiation** in first person marking (explained here as a voice opposition). The two first singular endings are NEVER "contaminated": unlike endings of the second and third persons, the first person endings are always in complementary distribution.

8. Typological/inflectional: Evidence of inflectional elements in free (pronouns) and cliticised stages (i.e., marking voice).

9. Grammatical: Case-marked clitics including the typologically rare *nominative* case-marked clitics (3rd person). I consider the *system* of case-marked clitics an archaism, reflecting the heteroclitic pronominal paradigms of PIE (as in Kuryłowicz (1964:183)). Subsequent *usages* of nominative vs. oblique clitics may be innovations, but the availability of the opposition itself reflects an earlier system.

10. Phonological: Retention of laryngeals.

11. Phonological: Remnant evidence of transitional status of parent pharyngeals in complex stops. Allophonic range of 'parent' phoneme $*CH_2$ to alternate reflexes (either $*CH_2 > C$ or $*CH_2 > H_2$ (or its reflexes, including aspiration)). Indirect evidence for aspirated stops (e.g., failure of second person singular *-ḫi* conjugation ending *-t* to affricate before high front vowel, failure of velars to palatalize).

0.4. Developments in Historical Phonology with relevance to Hittite

The discovery of the "laryngeal" phonemes of Hittite has been called one of the most significant discoveries in the history of linguistics. As I note in the final point above, Hittite

evidence shows a phonological system in transition from the early pre-PIE system to the familiar one of the daughter languages. Because the period of time over which the phonological system of Hittite develops is extensive, I have included two phonological systems as background: that of PIE as it appears in Beekes (1995:124), and that of Proto-Anatolian as reconstructed by Melchert (1994:53). The former has the benefit of including both the 'standard' PIE phonology system and its equivalent in the Gamkrelidze and Ivanov system of glottalics. (These appear to the right as columns 4, 5 and 6 in brackets in the following Table 4). This last interpretation partially overcomes the substantial typological problems[29] which arise from positing a system with voiced aspirates but no voiceless aspirates (see Watkins 1998:38). Note also that the system has no /a/ phoneme. The Melchert reconstruction is in most ways similar to the one which Lehmann (2002:201) proposes for Pre-Indo-European; the Proto-Anatolian (=PA) system does not change appreciably into the period of Hittite. Where there are relevant differences between the system of Proto-Anatolian and that of Hittite, I will note them.

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Watkins (1998:38) refers to the typological rarity, even "unnaturalness" of a system which has voiced aspirates, but no voiceless ones. From a typological standpoint, a system with voiced aspirates, but no voiceless ones, is "very rare" if not "non-existent" in the attested languages of the world (Mallory and Adams 1997:461), but see Hock (1986). Ladefoged and Maddieson (in *The Sounds of the World's Languages*) call voiceless aspirated stops "too well known to need much discussion" (1996:66). According to Mallory and Adams (1997:461) the reconstruction of the voiced aspirates rests solely on Indic evidence – the "only stock to have voiced aspirates".

Table 4. The PIE Phonemic System (reproduced from Beekes 1995:124)

CONSONANTS	occlusives/stops						
	Labials	p	b	b^h	(= p	p'	p^h)
	Dentals	t	d	d^h	(= t	t'	t^h)
	Palatals	ḱ	ǵ	$ǵ^h$	(= ḱ	ḱ'	$ḱ^h$)
	Velars?	k	g	g^h	(= k	k'	k^h)
	Labiovelars	k^w	g^w	g^{wh}	(= k^w	$k^{w'}$	k^{wh})
	Fricatives	s					
	Laryngeals	h_1	**h_2**	h_3	(= ʔ	ʕ	ʕ^w)
	sonants						
	Liquids	r	l				
	Nasals	m	n				
	Semivowels	i	u				
VOWELS		e	o				
		ē	ō				

Table 5. The Proto-Anatolian Phonemic System (after Melchert 1994:53)

CONSONANTS							
Stops	Voiceless	*/p/	*/t/	*/k̂/	*/k/	*/k^w/	
	Voiced	*/b/	*/d/	*/ĝ/	*/g/	*/g^w/	
Affricate	Voiceless		*[ts]				
Fricatives	Voiceless		*/s/				*/H/
	Voiced		*[z]				*/h/
Sonorants		*/m/	*/n/	*/r/	*/l/	*w/	*/y/

VOWELS						
*/i/, /i:/						*/u/, *u:/
	*/e/, */e:/				*/o/, */o:/	
		*/æ:/				
			*/a/, */a:/			

Note that there are no aspirated phonemes in the above system. I argue below that Hittite shows evidence of a transitional stage between an earlier system, possibly involving a series of two full phonemes – consonantal stop + consonantal laryngeal– to the "downgrading" of the second element to a secondary feature (aspiration) seen in the aspirated phonemes of PIE daughter languages (Greek and Sanskrit, both of which have

systematically opposed aspirated and unaspirated phonemes).

Phonological issues involving Hittite -*ḫ* and its (pre-) IE ancestor *-H_2 (= *-h_2) are extremely complex and defy over-simplification. I discuss these items more fully in later chapters. For clarification, the main points concerning the Hittite "laryngeal" phoneme and the PIE "pharyngeal" phoneme from which it evolved are the following:

1. PIE *-h_2 is "A tense/voiceless pharyngeal fricative [ħ]" (Melchert 1994:47).
2. PIE *-h_2 is generally preserved in Proto-Anatolian as "a fortis, voiceless fricative" which Melchert symbolizes as */H/. The voiced */h/ represents word initial *h_3- and "lenited" *h_2.
3. The reflex of PIE *h_2 > (> Melchert's PA /H/) in Hittite is ḫ, usually interpreted as a voiceless velar fricative (but see below for Messing's "indirect evidence for assuming laryngeal rather than velar phonemes for Hitt. -ḫḫ- vs. ḫ "). The Akkadian syllabary has a series of signs for this consonant (a voiceless velar fricative in Akkadian). This particular laryngeal is equivalent to Hebrew ח, Arabic خ . We get some indication of the phonetic quality of the Hebrew sound from Greenberg (1965:12) who remarks that in Modern Hebrew, most "non-oriental speakers [...] do not distinguish ח from spirantized כ". See my Chapter Five for a lengthy discussion.
4. Hittite phoneme ḫ patterns with the stops (orthographically) in contrasting -ḫ- and -ḫḫ- between vowels. This is interpreted as a voiced/voiceless contrast (Sturtevant's Law) but other opinions abound (cf. lenis/fortis or aspirated/unaspirated in Melchert

(1994:16,17,22). "In the attested cuneiform languages the synchronic contrast is thus between a fortis pharyngeal fricative /H/ realized medially as a geminate -ḫḫ- and a contrastive lenis pharyngeal fricative /h/ which occurs medially as -ḫ-". (See also Jasanoff (2003:131, nt.10) who states that "the PIE voicing contrast was reinterpreted as *fortis* vs. *lenis*").

5. Correspondences in Anatolian are the following: PIE *-h_2 > PA */H/> Hittite -ḫ(ḫ)- = Lycian k, x or q (depending on following vowels)[30] = Luwian h =Palaic and CLuwian ḫḫ - vs. ḫ (Melchert 1994:68,212, 234, 257ff, 285ff).

0.5. How old is old?

The oldest layers of the Proto-language (PIE) have been located at a time-depth of 6,000 BCE (so Colarusso 1997:121). Pre-PIE, for which Hittite evidence is crucial (Lehmann 1993:210; 2002), would be earlier still (9,000-6,000 BCE). Both Lehmann's chronology and the position taken here find support in a recent paper in the journal *Nature* by Gray and Atkinson (2003). This more remote time frame seems to accord well with the linguistic facts.

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Lycian q which appears to be phonetically conditioned allophone (q = "a mid-velar which results [...] from the fronting of *h_2 before front vowels" Melchert (1994:306ff). Thus PA conjunction *-ke* 'and' < PA *-Ho (<*-h_2o); thus Lycian *qla* 'precinct' = Hittite *ḫila* 'courtyard'; thus PA *Hant- 'front' = *xñt-* in *xñtawa* 'rule'; thus PA *HowV 'sheep' = *xawa-* 'sheep'? /'cow'. PA */H/ can be "lenited" between unaccented vowels: CLuvian pret. 1st sg. *aḫa* = Lycian *aga* 'I made' < PIE *yéh$_1$-h$_2$e; Hittite preterite 1st sg. *ḫḫaḫa(t)* = Lycian-*xagã* < *h$_2$ eh$_2$e+ (Melchert 1994:68).

VOLUME I

CHAPTER ONE

VOICE, ANCIENT AND MODERN

1.1. Previous research on "middle" voice

"Middle" as a category is less studied and possibly less understood than the more familiar voice categories of "active" and "passive". Although studies of these later voice phenomena are profuse and plentiful (Dixon 1979; Hopper and Thompson 1980, Hopper 1982; Shibatani 1988; Geniušienė 1987; Fox and Hopper 1994; see also bibliography in Klaiman 1991), studies which focus on "middle" are relatively few. Notable exceptions include an early (1975) study by Barber, which, though brief, is replete with examples and clearly presents the type of systemic oppositions which obtained primarily in Greek, Sanskrit and Latin. Klaiman's 1991 study devotes a chapter to Indo-European voice systems, as well as discussing "middle" semantics and the morphological elements which mark "middle" in a variety of non-European languages. In an earlier article (1988), discussing the cogent typological characteristics of languages which possess a binary "active" vs. "middle" system, she says:

> In various languages, subjects of non-derived sentences seem to be permitted to have either of two conceptual statuses. I shall refer to these statuses [...] as 'controller' and 'affected entity'. Again, in various languages, a formal

> alternation in verbal morphology indicates which of the two statuses is borne by the sentential subject. [...] I shall refer to such alternate forms as *diathesis* [= Lehmann's "version"] and the system to which they pertain I shall refer to as *voice* (1988:26,27).

Klaiman's terminology is adopted by the authors Arce-Arenales, Axelrod and Fox (1994), who, in a short article, discuss the binary opposition of "Active voice and Middle diathesis". They put forward the following hypothesis:

> all nominative-accusative languages treat syntactically active subjects as semantically either affected or not affected by the action described in the predicate. The class of sentences with syntactically active subjects which are semantically not affected by the action of the verb we will treat as basic *active voice* sentences; the class of sentences with syntactically active subjects which are semantically affected by the action of the verb we will treat as *middle diathesis* sentences (1994:1)

Although this distinction (*active voice* vs. *middle diathesis*) seems to me a bit of evasive hair-splitting, the authors do make several crucial observations:

1. Both members in a binary (active vs."middle") system are BASIC

2. The subjects/agents in both basic types are ACTIVE

3. The semantic distinction between the two is based on the level of AFFECTEDNESS

Drawing exclusively on data from three modern languages (English, Spanish and Koyukon Athabaskan), the authors reach three conclusions (1994:17,18):

1. that in nominative-accusative languages, middle diathesis is a "particular kind of active clause in which the subject is affected by the action"
2. that in such a system, middle diathesis will be morphologically marked on the verb and that
3. middle diathesis is often associated with particular aspects, which they identify as change of state and punctual[31].

Whether the notions of "affectedness" and "control" are mutually exclusive (as Klaiman's analysis suggests) is an interesting point. I claim here that they are not. If the relevant distinction is between a verbal activity which will (or does) directly affect the self

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For reasons of space and time, I have not fully investigated the aspectual correlates of the Hittite *-ḫi* vs.*-mi* conjugations. The suggestion of these authors concerning middle voice/aspect is intriguing though (witness the relationship between the "stative" nature of the early binary system outlined in Neu (1968a,b), and the emergence of a more eventive conjugation from it. Would not 'change of state' be the logical first step in such a development?) Also intriguing is the appearance of the marker *-š* in the preterite of the *-ḫi* conjugation. This marker is regularly linked to punctual (= aorist) aspect in other IE languages (Sturtevant 1933:231).

and an activity which will (or does) not, then presumably, in order to affect a positive outcome, the agent of an "affective" activity will be pro-active, will exert as much "control" as is necessary to produce a positive result on his own behalf or in his own interests.

The subtle semantic distinctions that motivate the selection of one voice over another (and thus have a bearing on "control" and "affectedness") are addressed in a recent (1998) excellent study of middle voice in Modern Greek by Manney. Her examples, drawn from both Ancient and Modern Greek, illustrate the sometimes elusive distinctions that motivate the choice of the semantic category "middle"– a voice category which perseveres in Modern Greek (see her examples on pages 60, 61, below).

Perhaps the most complete and comprehensive work (so far) devoted exclusively to this least-known of the voice categories, is the recent study of the category of middle voice by Suzanne Kemmer (1993). In addition to reviewing the literature of previous studies in relation to IE, she provides data from a far-ranging variety of the world's languages that manifest "middle" systems. She discusses the semantic functions of the "middle" from a cross-linguistic standpoint, summarizing these functions in an appendix to her study. It is this *Checklist for Middle Semantics*, which is meant to be a "rough guide in determining the semantic range of the middle marker for any given language", that I use as a guide in Volume II for determining whether a verb may be considered "middle", or is characteristically so marked in the world's languages. As can be seen in Volume II, the majority of Hittite *-ḫi* verbs fall clearly under the umbrella of what Kemmer identifies broadly as "middle" semantics.

1.2. Examples of typical "middle" voice verbs (from Kemmer 1993)

The following examples provide a representative sample of some of the most common semantic groupings where "middle" voice is found.

Grooming, bodily actions,	Latin	lavo-r	'wash'
self-initiated movements	French	se laver	'wash (self)'
	Turkish	yik-an	'wash'
	Sanskrit	jṛmbhat-e	'yawn'
	Greek	pérde-sthai	'pass wind'
	Greek	trépe-sthai	'turn'
	Sanskrit	vartat-e	'turn'
	German	sich verbeugen	'bow (self)'
Emotion, cognition, speech	Hungarian	bán-kod-	'grieve'
(Complex cognitive events)	Latin	īrasco-r	'be angry'
	Latin	loquo-r	'speak'
	Latin	vereo-r	'fear'
	Sanskrit	manyat-e	'think'
	Greek	eúkhe-sthai	'pray'
Naturally reciprocal, prototypical	Sanskrit	ramat-e	'make love'
two-participant events:	Greek	dialége-sthai	'converse'
	Latin	lucto-r	'wrestle'
	Latin	sequo-r	'follow'
	Sanskrit	sácat-e	'associate'

Several obvious facts will be noted. Agent subjects of these verbs are in no way "passive" or "acted upon". The semantics of most of these verbs denote the involvement of a sentient, typically human agent, in what are typically (or exclusively) human activities: emotional, cognitive, social or communal. This point was already made by Gonda (1979:1ff, 43ff) with reference to certain Vedic "eventive" (not "passive") *ātmanepada* verbs, where the verbal motion emanates from the subject himself: *hanyate* (the *ātmanepada* of *parasmaipada hanti* 'kills') means 'meet one's death' NOT 'is killed' (see entry #2 *ak-* 'die' for a direct semantic parallel).

The fact that many of the above verbs are clearly transitive underscores my observation that *transitivity* is not a determining criterion for determining "middle" vs. "active" voice verbs. Undermining the common opinion that "middle" voice verbs are typically intransitive, I note that while several of the verbs above may be descriptive of certain (human) states ('be angry'), the fact that they are "middle" marked does not mean that they are necessarily "intransitive". Indeed, in modern languages which oppose "active" and "middle", a move from an "active" to a "middle" conjugation can actually *increase* transitivity. The following examples from Fula, a West-Atlantic Niger-Congo language are from Arnott 1956:141, 1970: 259, cited in Klaiman (1991: 279 nt. 11), and illustrate this point (see also the Sanskrit example (13) below:

(3)	ACTIVE		MIDDLE	
	wel-a	'be pleasant, sweet'	wel-o	'please'

mett-a	'be unpleasant'	mett-o	'displease'
end-a	'be kind'	end-o	'be kind to'

1.3. Reflexive and Middle

Another issue which will arise in the course of this discussion is the "reflexive", both as it applies to semantics and to morphology. Geniušienė (1987:8) considers the encoding of reflexivity to be the basic, central function of "middle" voice. Indeed, as may be seen in the examples above from modern languages (such as French or German), the presence of overt reflexive morphemes such as *se* or *sich* may convey this meaning. But I submit that *overt* markers to convey this meaning were later developments in these languages and in IE languages in general.

This fact may have a typological motivation. Lehmann points out (1993:184) that in VO languages, reflexivization and reciprocity are indicated

> by means of separate words, usually pronouns. When the Indo-European languages increasingly adopted VO structure, such words were developed to express these categories. For the first and second person German uses personal pronouns; for the third [...] it developed a new pronoun, *sich*, rhyming with *mich* 'me (myself)' and *dich* 'thee, (thyself)'.

1.3.1. The IE middle included the notion "reflexive"

In one of its important functions, the original IE "middle" encoded reflexivity as part of the semantics of the verb: the addition of a reflexive marker would have been both unnecessary and redundant. For example, the use of the "middle" voice in Greek λούομαι τὰς χεῖρας conveys the meaning 'I wash *my own* hands', without the need to include an overt reflexive particle. In a sense, self-involvement is the "default" category in an early system. Conceptually, in verbs which describe self-initiated activities ('turn', 'enter', 'urinate') or verbs of thinking, speaking, wishing, remembering, who else could be doing the activity but the human agent? In this way, the original system is more subtle and more satisfying conceptually: who else could smile, or remember, or die but oneself? Once the system which conveys such subtle implicit meanings begins to atrophy, however, this 'self involvement' or 'self benefit' must be encoded otherwise, often by the use of overt reflexives[32]: "The reflexive arose in the dialects as the middle lost its force" (Lehmann 1994:58). Thus, although the verb 'smile' may be overtly marked reflexive in Polish (*ušmiecha się, pytam się*-- thus Kuryłowicz (1964:74)), in Sanskrit, the verb is *ātmanepada smayáte.* The verb 'remember' is a single word in Greek (μέμνημαι 'I remember'), Latin and Sanskrit. In French, one cannot say Je *souviens* to mean 'I remember' because modern French does not possess the binary, synthetic morphological voice opposition of Greek or Sanskrit which conveyed such distinctions. When the original system collapsed, this

[32]See Geniušienė (1987) for a fuller discussion.

"reflexive" morpheme was adopted because of **its association with the original category** NOT specifically because of its reflexive meaning. This explains why, despite the presence of the reflexive marker, *Je me souviens* does not mean 'I remember myself' but simply, 'I remember'. Clearly, the reflexive marker does not always encode reflexivity per se, but often has another function that it gained by its historical link with one of the features of "middle" voice. In the case of French *se souvenir,* the reflexive morpheme encodes the presence of a human agent of cognition. French has no alternate method of indicating such a category, other than the use of one morphological marker with a link to the "middle" voice category, the reflexive marker. The same may be said of the *-r* morpheme of Latin. Although marking "passive" is certainly one of its functions, the *-r* does not have this meaning in all cases. In a system with no other method of differentiating the type of verb that belonged to the "middle" category, a morpheme which was somehow involved in the voice system, at perhaps an earlier or later stage, is called into use (however inappropriately) to mark a distinction whose original markers have been lost.

Failure to be sensitive to such semantic and chronological factors may result in confusing the form of the marker with its function, consequently obfuscating the rationale for the marking *per se.* Thus, the addition of the archaic voice-associated marker *-r* (which originally appears to have marked IMPERSONAL) is added to the verb *loquo* to mark this verb as pertaining to the distinctly (and highly personal) human capacity of speech. The ancient verb *loquor* does not mean 'I am spoken' but rather 'I speak'. If Latin had the type of voice system that Greek or Sanskrit did, this verb would have appeared in the "middle"

group. Such was not the case: what other marker was available, but the archaic, voice-related *-r*, an item whose chronology (starting from the 3rd plural) we can trace from Hittite evidence.

The evidence from *media tantum* verbs in Sanskrit, Greek and (as I argue here) Hittite is that overt reflexive markers (either extended third person markers as *-r* or in Hittite *-z* (= 'plain' (unaspirated) *-t* = third singular marker of the *-mi* conjugation, extended in this form throughout all persons of the paradigm), or a fully inflected paradigm *me, se, te* as in French) are later developments: the parent language did not use them, because this distinction was clearly conveyed in the semantics of the *centripetal* voice. I believe that we have been led astray on this point by the translation of these early verbs into the languages of commentators: English, German, and so on. If we understand the early system *on its own terms*, however, and appreciate the subtle systemic meaning difference between, say Sanskrit *parasmaipada pacati* and *ātmanepada pacate*, there is no need to translate the latter as the pedantic 'he cooks for himself'.

How did a situation occur where we have transitive "middle" verbs, "middle" verbs that are not distinctively "intransitive" and may in fact be more "active" than "active"? How can it be that one member of an ancient binary system can be called "middle" in a system that, lacking the "passive", could have no "middle"? The credit (or blame, in this case) for most of these shortcomings must be laid at the feet of the Greeks, in the person of Dionysius Thrax, or perhaps more accurately, at the Roman (mis-)interpreters of Thrax. Before I turn to this discussion, however, an explanation of what voice systems in ancient IE languages

conveyed is useful by way of background.

1.4. Early voice systems: what did they convey?

As I have indicated, most scholars acknowledge that the original voice distinction in ancient IE languages was binary – "active" vs. "middle" (or "medio-passive") -- or, more accurately, using Lehmann's terms, *centrifugal* vs. *centripetal*, respectively (so Delbrück (1967 [1897]:412-435); Brugmann (1970 [1904]:492); Wackernagel and Debrunner (1954); Meillet (1964 [1937]:244-246); Gonda (1979:4ff); Lehmann (1974:181ff); Kammenhuber (1969:215ff); Neu (1968a and b), all of whom consider the "active (eventive)" vs. "middle (stative)" as the basic, earliest contrast). The passive is later and derived in all ancient IE languages including Hittite (Brugmann 1970 [1904]:492; Burrow 1955; Watkins 1969:115; Schmalstieg 1980:92; Andersen 1991:31; Lehmann 1993:162; Bakker 1994:45; Lazzeroni (in Ramat & Ramat 1998:115). This original binary opposition was based on the level of subject involvement or interest in the verbal action, considered the "semantic core" of middle voice (Lyons 1968:373, 1977). In this sense, the very term "middle" is anachronistic as a designation for an archaic system, as it implies the existence of **both** a clearly marked active and passive voice. Thus, we are guilty of an anachronism in identifying one term of an early binary voice opposition as "middle".We must judge the earliest voice oppositions on their own terms, not with reference to what are clearly later, secondary voice developments.

1.4.1. Voice in Sanskrit

If we are to judge from Vedic Sanskrit, next to Hittite the most archaic of attested IE daughters, the original voice distinction was a subtle determination based on the *amount of involvement* of the subject in or with the verbal activity. The distinction was between actions and activities which directly and intimately involved or affected the subject, and those which affected the subject less directly. As I have pointed out above, this distinction is beautifully conveyed by the Sanskrit terminology *ātmanepada* ('word for oneself') vs. *parasmaipada* ('word for another'= the dative of *para* 'other', thus 'other-form'):

> The Sanskrit has two forms for the active, of which the one is appointed for the transitive and outwardly-operating direction, and is called by the Indian grammarians *parasmâi-padam*, equivalent to "stranger-form"; the other, which is called *âtmanêpadam*, *i.e.* "self-form," serves [...] for reflexive or intransitive purposes, or shews [sic] that the action is to the advantage of the subject or stands in some near relation thereto (Bopp 1856 II:598).

In a testament to the importance of this binary distinction to verbal categories, in an appendix to his great grammar the *Aṣṭādhyāyī* ('Eight Chapters') Pāṇini assigns each of the 2,200 verbal roots of Sanskrit to one or the other of these two diatheses (some may appear in both) and provides rules for usage for each voice. The *ātmanepada* desinence is selected *kartrabhiprāye kriyāphale* 'when the result of the action accrues to the subject' (*Aṣṭādhyāyī*

Book 1, Chapter 3, Verse 72). Pāṇini's system as set out in the *Aṣṭādhyāyī* is extraordinarily complex in describing the rule-governed derivation of words by the addition of various affixes and endings. I provide here only the points which are essential to the matter at hand.

1.4.1.1. The morphology of the Sanskrit binary opposition

The Sanskrit verbal system as described by Pāṇini has three *constructions*: (active (*kartari*), passive (*karmaṇi*) and impersonal (*bhāve*)), but two "voices" *parasmaipada* and *ātmanepada*. Each voice contains nine affixes: three person affixes and three numbers. Their forms are set out as follows[33]:

Table 6. Endings of the opposing voices (as in Pāṇini *Aṣṭādhyāyī* 1. 1.71, 3. 4.78)

Parasmaipada	Singular	Dual	Plural
1	mi	vás	más
2	si	thás	thá
3	ti	tás	jhi[34]

(*Aṣṭādhyāyī* 1.4.99) (*Aṣṭādhyāyī* 3.4.78) (Katre 1987:343)

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I have reversed the order of Pāṇini's paradigms. In Sanskrit grammars, forms are cited with the third person forms first (*prathamá*); although the first person forms are last in the paradigm, they are described as *uttamá* 'highest'. This is an indication of the special character of the first person in the Sanskrit system.

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The [jh] is replaced by [ant] for the Present Indicative of both voices (see Katre 1987:xxxv for explanation and other changes in canonical forms as cited in Pāṇini).

Ātmanepada

1	í	váhi	máhi
2	thás	áthām	dhvám
3	tá	átām	jha

(*Aṣṭādhyāyī* 1.4.100) (*Aṣṭādhyāyī* 3.4.78) (Katre 1987:102,343)

Whitney's comment on these paradigms is the following: "The primary middle ending, according to the analogy of the other persons, would regularly be ***me***. But no tense or mode, at any period of the language, shows any relic whatever of a ***m*** in this person[35]; the primary ending, present as well as perfect, from ***a***-stems and others alike, is *e*; and to it corresponds *i* as a secondary ending, which blends with the final of an *a*-stem to *e*. The optative has, however, *a* instead of *i*; and in the subjunctive (later imperative) appears *āi* for *e*" (1967 [1889]:205).

The *parasmaipada* affixes remain in their canonical form without any changes (with the exception of the replacement of initial [jh] by [ant] for the present indicative). By *Aṣṭādhyāyī* 3.4.82, in the Perfect, the nine affixes are replaced by these:

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The μ in the first person singular Greek middle voice ending is a Greek innovation (Watkins 1998:56).

Table 7. Endings of the Perfect (as in Pāṇini *Aṣṭādhyāyī* 3. 4. 82)

Perfect	Singular	Dual	Plural
1	a	vá	má
2	tha	áthus	á
3	a	átus	ús

By *Aṣṭādhyāyī* 3. 4. 79, a set of allomorphic endings is introduced to the *ātmanepada* set above. Thus [i] is replaced by [e]: "thus [ta] becomes [te], [a(n)ta] becomes [ante] and so on; [thās] is replaced by [se 3.4.80]" (Katre 1987:xxxvi). The following is the result:

Table 8. Present endings of the *ātmanepada* voice (Pāṇini 3. 4.79)[36]

Ātmanepada	Singular	Dual	Plural
1	-é	váh-e	máh-e
2	s-é	áth-e	dhv-é
3	t-é	át-e	á (n) t-e

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The rule is 3. 4. 79 **T-IT-aḥ=ātmanepadá-nām TE-r e** meaning "The phoneme [e] is the substitute for the syllable commencing with the last vowel of Ātmanepada l-substitutes (taÑ) [...] with marker **T** as IT" (Katre 1987:344). The paradigm, as for instance of *pac* 'cook' would be:

1	pác-e	'I cook'
2	pác-a-se	'you cook'
3	pác-a-te	'he cooks'

1.4.1.2. Some meanings of the Sanskrit binary opposition

Examples of important meaning distinctions may be seen in the following minimal pairs, where the only difference is in the amount of involvement of the subject in the verbal activity (relevant verses are *Aṣṭādhyāyī* 1.3.56, *Aṣṭādhyāyī* 1.3.72, respectively):

(4)	*parasmaipada* (so-called 'active')	*ātmanepada* (so-called 'middle')
a.	*bhāryàm úpa-yacch-a-ti*	*bhāryàm úpa-yacch-a-te*
	wife+ACC espouses+3sg.+P	wife+ACC espouses+3sg.+Ā
	'has relations with someone else's wife'	'has relations with his own wife'
b.	*ajam* *yaja-t-i*	*ajam* *yaja-t-e*
	goat+ACC sacrifice-3sg.+P	goat+ACC sacrifice-3sg.+Ā
	'He sacrifices a goat'	'He sacrifices a goat'
	(For someone else)	(and will somehow personally benefit)

These minimal pairs are semantically motivated and contrast only the feature 'level of involvement of the subject'. Both are 'active'; both are 'transitive'; both are 'basic'.

Often the special sense of the *ātmanepada* denotes actions that *can* only pertain to ones own body or extensions thereof:

(5) *dato dhāvate* 'he cleans his [own] teeth'.

A Vedic dentist cleaning some else's teeth would be described using the *parasmaipada* voice:

(6) *dato dhāvati* 'he cleans his [someone else's] teeth'

Here, although 'he' was still the agent doing the cleaning, is still the agent, the recipient of the cleaning is someone else's teeth, not his own. This subtle distinction was conveyed totally by the different *vocalism* of the ending: hence our term 'voice'. To return to the point concerning the subtleties of "middle" voice vis-a vis reflexives: the distinctions inherent in the system made it unnecessary, and, indeed, ungrammatical, to say either a. (using an 'ethical dative') or b. (using a redundant, overt reflexive):

(7) a. **dato ātmane dhāvati* 'he cleans teeth for himself' 'he cleans his own teeth'

b. **dato ātmane dhāvate* 'He cleans his own teeth for himself'

Consequently, verbs understood to refer to the subject himself (reflexive) occur in the *ātmane*pada conjugation. Sanskrit verbs whose semantics involve reciprocity as well

regularly appear in *ātmanepada* (*Aṣṭādhyāyī* Book I, Chapter 3, Verse 14[37]).

(8) *vy-áti-lu-n-ate* 'They reap' (i.e. corn) (reciprocally = for each other)

Importantly, when the actual morpheme meaning 'each other' is used, the *ātmanepada* endings are not used (presumably because it would be perceived as redundant, by *Aṣṭādhyāyī* Book I, Chapter 3, Verse 16)). The endings in such a case are *parasmaipada*:

(9) *anyonyásya vy-áti-lu-n-anti* 'They reap each other's grain'

The Sanskrit binary system could as well involve 'transitivity' clines:

(10)

transitive		intransitive
vardhati		*vardhate*
'increases, makes bigger'	vs.	'increases, becomes bigger'[38]

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References are to Pāṇini's *Aṣṭādhyāyī* ('Eight Chapters'). I use various editions, including Vasu's early 1962 [1891] two volume edition, as well as those of Katre 1987 and Sharma 1995. When specific reference is made to one of these commentaries, I cite this source. Otherwise, I cite only the book, chapter and verse from Pāṇini.

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The reader can see that the more transitive meaning, conveyed by the 'active' (centrifugal) ending leaves open the possibility for the *development* of a causative (adding an overt agent

The early voice distinctions can even indicate differences in the animacy of the subject, with the more animate, higher [+human] actions appearing in the *ātmanepada* voice:

(11)	*vahati*		*vahate*
	'(chariot) carries (man)'	vs.	'(man) rides (in chariot)

Clearly, some other parameter, not the syntactic intransitive/transitive one, determines which voice is selected. In the next example, note that the subject of the "active" verb in (12) a. is the (non-human, though grammatically masculine) 'tear'; the subject of the "middle" verb in (12) b. is human. The example is from *Aṣṭādhyāyī* Book 1, Chapter 3, Verse 53.

(12) a. *bāṣpám úc-car-a-ti* 'a tear emerges' (intransitive "active" *parasmaipada*)

b. *kuṭumbam úc-car-a-te* 'deserts the family' (transitive "middle" *ātmanepada*)

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of the 'making bigger') in a way that the 'middle' does not. The middle can be interpreted as a self-directed causative: 'cause self to grow'/'grow for one's advantage'. The outwardly-directed 'transitive' involves causing something else to grow'. The same distinction appears in Greek, where in contrast to the middle, the "active constitutes a sort of causal verb" (Atkinson 1933 [1931]:138). Kuryłowicz makes such distinctions clear in his scenario describing the development of overtly marked causatives from such transitive (not intransitive) stems (1964:87). The centrifugal, more transitive meaning of the *-mi* conjugation is responsible for the development of several overt causatives (*-iya-, -nu-, -nin-*) but few in the (centripetal) *-hi* conjugation, as illustrated in Table 11). Causativity would make little sense in an inwardly directed activity where the main actor is already the causer and causee. All participants in the centripetal verbal drama are present and accounted for.

The distinction between a human and a non-human subject is made in the area of speech. The presumption is that although animals may produce sound, only humans are capable of the organized and cognitively complex behaviour that is speech (*Aṣṭādhyāyī* Book 1, Chapter 3, Verse 48) :

(13) a. *saṃ-prá-vad-ante brāhmaṇāḥ* 'The Brahmins chant in chorus'

b. *saṃ-prá-vad-anti kukkuṭāḥ* 'The cocks are crowing'

"The sense of the sutra is that when men, who are only capable of articulate speech, speak all in one and the same time, then the verb vad takes the affix of the Atmanepada. When lower animals make a chorus of noise, the verb does not take the Atmanepada" (Vasu 1962 I:142).

A distinction can even be made between the heavenly and the mundane (*Aṣṭādhyāyī* Book 1, Chapter 3, Verse 40):

(14) a. *á-kram-a-te ādityáh* 'The sun rises'

b. *ā-krām-a-ti harmya*[39]*-talāt dhūmáh* 'Smoke rises from the roof of the house'

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The usual word for 'house' in Sanskrit is *gṛháḥ* (originally a masculine noun, later neuter *gṛhám*). The cognate lexeme in Tocharian B, *kercīye*, denotes a rather grand residence, regularly meaning 'palace'; the Hittite cognate *gurtas* refers to a 'fortress' (Mayrhofer III:344). The word used in this example, *harmya* can mean 'roof' (in this meaning, it is surely related to *harmuṭaḥ* 'tortoise' (= 'the thing with a shell or 'roof')), but usually simply means 'house', typically a large house, a residence of a wealthy person, or even 'palace' (Mayrhofer

Whether such distinctions (heavenly *sun* vs. earthly *smoke*) are meaningful or not *to us* is not the issue: the relevant sense to be taken from such examples is that the verbal system had available to it a morphological method (*diathesis*) for marking certain distinctions. Verbs involving distinctively human faculties -- cognitive, intellectual, social (including deliberation, forethought, intentionality, volitionality, or social obligations) -- typically appear in *ātmanepada* voice. When a distinction is to be made between levels of animacy, the one that is construed as more animate (human as opposed to animal) typically appears in *ātmanepada* voice.

Another voice-related phenomenon in the language described by Pānini deserves mention. In Sanskrit, the addition of a preverb often changes a *parasmaipada* verb to *ātmanepada* : "After the verb sthâ, preceded by ut [...] the Atmanepada affix is used. [...] The force of the preposition ut must be to express [...] 'effort, exertion, wish or desire, to surprise or excell.' If this be not the force of ut, the terminations are those of the Parasmaipada" (Vasu 1962 I:129).

Other preverbs that commonly participate in this type of voice alternation are *vi-*,

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III:582). The cognate lexeme in Avestan, *za'rimya,* means 'fortress'.

Monier-Williams (1998 [1899]:1292) connects both words for 'house' to the root *ghṛ-* 'shine, burn' (cf. *gharma* 'heat') with both originally referring to the domestic fire hearth. The relation is quite complicated (see Mayrhofer I:344 for *gṛháḥ* 'house', I: 357 for *gharmáḥ* 'heat', III:582 for *harmyám* 'large house', and the possible relationships among them). Mayrhofer III:582 suggests that Sanskrit *harmyám* is related to Greek χερμάδιον 'stone', which in no way makes a connection to 'hearth' impossible: it was the stones which formed and heated the hearth. If all these lexemes are related at some time depth, it would represent yet another occurrence of g ~ gh ~ h ~ k ~ χ~ Av. z.

para-, anu-, sam-, all of which, I submit, convey notions of intentionality. Vasu (1962 I:125-129) lists several examples of this process. I cite but a few by way of example (from *Aṣṭādhyāyī* Book 1, Chapter 3, Verse 36):

(15) *náy-a-ti/náy-a-te* 'lead' may inflect in either voice but only in ātmanepada when it conveys such meanings as 1. the sense of honour, 2. being a spiritual guide, 3.improving one's knowledge, 4. hiring for wages, 5. repayment of a debt, 6. giving a donation to charity.

1. *śāstré náy-a-te* 'He demonstrates the truth of science'

2. *māṇavakám úpa-nay-a-te* 'He initiates the pupil so as to make him a teacher'

3. *tattvám náy-a-te* 'He arrives at the truth'

4. *karmakārám úpa-nay-a-te* 'He hires a servant'

5. *kārám ví-nay-a-te* 'He pays taxes'

6. *śatám ví-nay-a-te* 'He donates a hundred in charity'

As in the above examples, the preverbs themselves arguably have a component of "intentionality", including directionality (both metaphorical and literal), intensity, or other such marks of cognition. Often more "verbal" than "prepositional", preverbs themselves often carry the "middle" semantics: cf. *gácch-a-ti* 'goes' (*parasmaipada*) but *sáṁ-gacch-a-te* 'joins' (*ātmanepada,* with *sáṁ-* 'together' indicating a deliberate purposeful 'going'); *kri-ya-ti* 'does, makes' (*parasmaipada*) but *prá-kur-u-te* 'recites' (*ātmanepada*), as in *gā́thāḥ prá-*

kur-u-te 'recites the Gathas.' (where preverb *prá-* 'toward' transforms the meaning from mundane 'do' to religious 'pray, recite').

It is important to note that *ātmanepada* suffixes are used when the intention is simply to mark the presence of a sentient, deliberative, intentional agent, even if the benefit is not necessarily to the "self". Thus, according to Pāṇini *Aṣṭādhyāyī* 1.3.18, 1.3.72, although the verb *krī-* 'buy' is followed by *ātmanepada* suffixes when the intention is to indicate self-benefit *krīṇīte* '[he] buys (something for himself)', *ātmanepada* suffixes are also used with certain preverbs "when an agent is to be signified, even if the result of the act in question is not intended for that agent: *pari krīṇīte* '[he] buys, hires, pays back', *vi krīṇīte* '[he] sells', *ava krīṇīte* '[he] hires'(Cardona 1988:104). Note that these verbs all involve joint, reciprocal, social interactions: that such verbs appear "middle" marked may indicate the importance of trade, commerce, barter and exchange to the well being of the extended community, and, by extension, to the self. (We will see the same phenomenon in Hittite where, similar in this respect to Sanskrit, verbs containing preverbs typically appear in the *-ḫi* conjugation., i.e., the + high agentivity, + high self- involvement category).

In summary, Vedic Sanskrit, more than any of the other ancient languages, gives us a true sense of the original distinctions and meanings which were relevant to early voice systems. The focus in Vedic was primarily on the *agent*. Verbal endings were chosen to indicate whether the *agent* benefitted in some sense by the action or not. Thus:

(16) a. *devadattaḥ kaṭaṃ karoti* 'Devadatta makes a mat'

b. *devadattaḥ kaṭaṃ kurute* 'Devadatta makes (himself) a mat'

Either the *object* of the action or the *action* itself could be focussed on, and was (*kaṭaḥ kriyáte* 'a mat is made', *devadatetena supyate* 'it is slept by Devadatta' = Devadatta is sleeping'), but such constructions and meanings grew out of and were secondary to, the original binary distinction which marked degrees of involvement of the agent/subject in the verbal action.

I would like to make one final point before I move on to Greek. Many linguists have puzzled over why the verb 'to be', that most intimate and self-involved of all verbs, inflects as an "active" verb in all ancient IE languages. The Indian grammarians had already provided the answer, and in that answer we may get some "extralinguistic" insights into some of the thinking that informed and fed the early system. Patañjali, in his *Mahābhāṣya* 'great commentary' on Pāṇini's *Aṣṭādhyāyī*, notes that certain verbs such as *yāti* 'he goes', *vāti* 'he blows', *drāti* 'he runs', and *psāti* 'he breathes' are not inflected with *ātmanepada* endings. The reason is simple: these verbs, 'eat', 'go', 'run', 'breathe', already express an action which will benefit the subject. Referring to this passage, Rocher explains:

> C'est évidemment là une question de point de vue. Sans doute le résultat de l'action de manger, a savoir être rassasié, revient-il à l'agent; le résultat de aller, à savoir se trouver dans un autre lieu, lui revient aussi. Discerner un résultat de l'action de courir est déjà plus difficile, mais on peut imaginer que, ce faisant, l'agent peut arriver à temps, se réfugier dans un lieu sûr, etc. De même, par action de souffler, l'agent peut se débarrasser d'une poussière gênante, attiser le feu, etc. On le voit, il est toujours possible [...] de découvrir

> le bénéfice que l'agent retire d'une action. A ce compte, on peut comprendre que le *M[ahābhāsya]* estime que toute action peut se faire au bénéfice de l'agent. Il est vraisemblable, d'ailleurs, que **l'opinion du commentateur** [i.e. Patañjali] **soit fondée sur des considérations extralinguistiques, à savoir qu'une personne n'a aucune raison d'engager une action si elle n'y voit aucun profit** (1968:84, emphasis mine: SR).

This consideration, despite its "extralinguistic" nature, should be kept in mind as we consider the meanings of and rationale for the uses of centripetal voice.

1.4.2. Voice in Greek

Ancient Greek, as did Vedic Sanskrit, lacked an inflected passive (Bakker 1994:45). The binary opposition ("middle" vs. "active") was pervasive throughout the verbal system (in infinitives, participles, as well as finite forms). The contrasting feature in voice selection was the semantically motivated 'level of subject involvement': "In terms of meaning, middle voice can be said to be marked with respect to active [...] Its specific feature is the affectedness of the subject of the verb in, or by, the event denoted by the verb. Active inflectional morphology, by contrast, signals the absence of this notion" (Bakker 1994:24)[40].

(17) a. *kourèn* *lúetai*

maiden+ACC loose-3sg. "middle"

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Note the conceptual primacy of the "middle": the "active" is defined negatively in terms of what characteristics of the middle that it lacks. It should also be noted that Greek did possess a passive aorist, which inflected actively.

'He ransoms the maiden'

b. *kourèn* *lúei*

maiden+ACC loose-3sg. "active"

'He releases the maiden'

It seems self-evident, but should nevertheless be stated, that the selection of 'word for self' endings regularly and characteristically indicates subject *benefit* or *advantage* (as implied in Rocher's comments). This type of distinction was highly functional in Homer[41], and, though subtle, perseveres in modern Greek (which has a fully functioning middle voice). An example (from Manney 1998:143[42]) follows:

(18)	a.	**mírase**	tin periusía	tis
		share:3SG:ACT/M	the-estate:ACC	3SG:GEN

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I cite but one of the many examples from Homer. In Book One (verse 56) of the *Iliad*, Homer uses two middle voice verbs κήδετο and ὁρᾶτο (both so-called "middle of interest") to convey the goddess Hera's deep involvement with, and special affection for, the Greeks, whom she sees perishing in large numbers before her very eyes: **κήδετο** γὰρ Δαναῶν ὅτι ῥα θνήσκοντας **ὁρᾶτο**. 'since she **pitied** the Danaans, when she **saw** (or 'kept seeing' them dying'.

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I have reproduced Manney's examples (her 19a. and 19b.) exactly as they appear. The reader is invited to consult Manney's text for glossing conventions.

s tis tris kóres tis

PREP the-three-daughters:ACC 3SG:GEN

'She distributed her estate among her three daughters'

(She kept nothing for herself.)

b. **mirástike** tin periusía tis

share:3SG:MID/A the-estate:ACC 3SG:GEN

me tis tris kóres tis

PREP the-three-daughters:ACC 3SG:GEN

'She shared her estate with her three daughters'

(She keeps a part of the estate for herself.)

The use of the "middle voice" in ancient Greek, as in Vedic Sanskrit, included the notion of reflexivity, but without the use of overt markers. As in the example cited above, the use of the "middle" voice in the (transitive) phrase λούομαι τὰς χεῖρας conveys the meaning 'I wash *my own* hands'. Because of the implied self-involvement, there is no need for the (redundant) use of a reflexive marker: as in Sanskrit, the use of the middle voice alone implies that the verbal activity directly pertains to the self: compare Sanskrit *áśvam jānīte* 'recognizes his (own) horse' vs. *devadattásya gắm jānáti* 'recognizes D's cow' (*Aṣṭādhyāyī* Book 1, Chapter 1, Verse 76). The direct object τὰς χεῖρας is often understood as an accusative of respect, thus 'I wash myself as regards the hands' (Atkinson 1933:136), but

such overt reflexivity does not exhaust the subtleties of the "middle voice". For instance, the phrase παρεσκευάσαντο ναῦς does not mean 'they prepared themselves as regards the ships', but clearly 'they prepared the ships' (with the implication that they themselves would somehow benefit from this activity). If we extend our definition of "middle" voice, then, to include such subtleties as clearly fall under such early voice distinctions, we will have a clearer and more synchronically accurate picture of what these early voice distinctions involved.

As in Sanskrit, in addition to the notion of 'reflexivity', a second clear meaning of the Greek "middle" was the "reciprocative", which Atkinson (1933:137) considers "inherited from Indo-European times":

> in such cases the action expressed by the middle [...] was to the interest of the joint subjects of the verb, or at any rate concerned such joint subjects. Thus we find μάχεσθαι 'to fight each other', διαλέγεσθαι 'to converse', λοιδορεῖσθαι 'to abuse each other', ἀσπάζεσθαι 'to greet each other', διανέμεσθαι 'to divide between each other'".[43]

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The same class of (reciprocal) verb appears in Latin marked with *-r* (but with NO "passive" meaning. Examples include *osculantur* and *luctantur*. Atkinson says that although such verbs were originally plural, "these verbs came to be used in the singular, and developments of meaning took place. It was an easy step from saying διαλεγόμεθά τι 'we are speaking about something to each other' to saying διαλέγομαι τι τινί 'I am conversing about something with somebody'. [...] In some cases the differences between the active and the middle forms is merely that of transitive and intransitive. A well known example is the verb παύω which means 'I cause to cease' the middle παύομαι meaning 'I cease'. In these cases

1.4.2.1. *Media tantum* verbs in Greek

Many of the oldest and most important verbs of Greek belong to a class generally described as "deponents" (= *media tantum* 'exclusively middle'). Brugmann (Grundriss II §140:417fff) defines such verbs as denoting 'actions, processes or states which have their scene essentially in the subject and within the scope of the subject, in which the subject is wholly and solely interested'[44]. (Verbs of this type are not confined to Greek, but appear in Latin as well. These are discussed in the following section.) Atkinson (1933 :137) points out that Greek deponents are "indistinguishable in meaning from actives and [are] often [found] governing objects". All are "middle" in form; all have a meaning "which implied intrinsically that the action was to the interest of the subject". Citing such examples as μητίομαι (cf. Latin *metior*), ἕπομαι (cf. Skt. *sácate,* Lat. *sequor*), νέομαι (Skt. *násate*), he notes that many "correlatives" of these verbs appear as deponents in other languages. This same phenomenon was noted by Kronasser (1956:191) for verbs of the Hittite *-ḫi* conjugation[45]

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the active constitutes a sort of causal verb" (Atkinson 1933:137-138).

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Benveniste's definition is similar: "Dans l'actif, les verbes dénotent un procès qui s'accomplit à partir du sujet et hors de lui. Dans le moyen, qui est la diathèse à définir par opposition, le verbe indique un procès dont le sujet est le siège; le sujet est intérieur au procès (Benveniste 1996 [1950]:174).

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Kronasser (1956:191) states that: "Anderseits ist auch die semantische Struktur eines großen Teiles der *hi*-Verba so, daß in den anderen idg. Sprachen ein Medium (Deponens) entspricht: *aki* -lat *moritur, ispai* –ai. *sphāyate*, *karpi* –lat. *vescitur*, *pahsi* –lat. *tuetur*, *tai* – δέχ.εται, *maltai* – εὔχεται u.a." I add to his list of "correlatives" in Appendix VI.

(*not* in the so-called "mediopassive").

Whereas many of the *media tantum* "middle only" verbs of Greek are clearly transitive, Greek verbs that are identified as active-only (= *activa tantum*) are in many cases intransitive. Of such verbs, Atkinson comments: "Their form is ancient, for it is paralleled in Sanskrit and other languages. Examples are βαίνω (cf. Skt. *gácchati*), ῥέω (cf. Skt. *sárpati*) [...] τρέω (cf. Skt. *trásati*) [...] We might expect all active forms to have been transitive in meaning and all middle forms to have been intransitive. This was not the case. Some grammatical confusion is the result. We can understand and expect an active ἔδω or δίδωμι, but why a middle μέμφομαι or σκέπτομαι? If intransitives such as ἐρεύγομαι or οἴχομαι are middle in form, why do we find active intransitives such as βαίνω or ῥέω?"(1933:138). Atkinson blames this "confusion" on the parent language, saying that the Greek language simply accepted these forms and "did not succeed in reducing them to order"[46]. I lay the blame not on the ancients -- after all, this was their system – but rather on our failure to understand the subtleties inherent in the original binary system. For the reasons for this failing, we must look elsewhere. As much of our "modern" voice terminology comes from Greek grammatical tradition, most of it from Dionysius Thrax, thence to Latin grammarians, thence to us, it is here that we must look for the source of our original mis-steps.

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In the later language, however, such an attempt was made: the verb 'be', which inflects as an "eventive" active-voice verb in ancient Greek (as it does in all IE languages), was later reanalyzed as a middle voice verb.

1.4.2.2. Ancient Greek theories of voice (Thrax's diatheses)[47]

It should be clear from the foregoing that much (if not all) of the traditional vocabulary we use to describe the original binary voice opposition is not only inadequate, it can be inaccurate. (In this category, I include the terms "active"and "middle" themselves, as well as "passive","deponent", "transitive","intransitive".) Schmalsteig states clearly that transitivity as a differentiating factor in early voice systems is not central (1980:168ff): both "active" **sek-*'cut' and "middle" **sok-* 'know' (whence Hittite *šakk-* 'know') are transitive.

In his discussion of the development of IE voice categories, Andersen (1991) states categorically that we are off the mark if we attempt to describe archaic voice systems in terms of our present understanding of such terms as "passive" or "middle". He discusses the theories of the Greek Grammarian Dionysios Thrax, whose terminology, translated into Latin, gives us the term *passive* though not, Andersen claims, "as we understand those terms in modern linguistics" (1991:30ff). Andersen insists that Thrax's definition of voice has been "grossly misinterpreted" and that the term passive "as we envisage the term today is simply an invention of modern linguists". Andersen argues that diathesis in Ancient Greek (as in Sanskrit) was signaled by "two distinct sets of inflectional endings for person and number, i.e. the 'active' and the 'middle'". The significant cognitive feature associated with the 'middle' is that the "subject is affected by the action of the verb as its *signatum*; the contextually dependent *interpretantia* include the reflexive, reciprocal, anticausative, passive

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See Lallot (1989) or Law and Sluiter (eds.) (1998) for text and translations of Thrax's grammar.

and other constructions."

As Andersen illustrates, our modern use of 'passive' is not an accurate rendering of the term πάθος (< πάθ- 'experience') as it is used in the ancient Greek grammatical tradition. Thrax's term πάθος describes the modern "middle" rather than "passive". Thrax (in his Τέχνη Γραμματική) referred to three diatheses, outlined below:

Table 9. The Voice Terminology of Dionysius Thrax (after Andersen 1989:13[48])

Thrax's term	**enérgeia**	**mesótēs**	**páthos**	----------
commonly (mis-) translated as	'active'	'middle'	'passive'	----------
Thrax's meaning	'active'	'mixed'	'experience'	----------
more accurate rendering	'active'	'deponent' (denotes a mis-match of morphology and meaning)	'middle'	'passive'
Thrax's examples	**túpt-ō**	**epoiēsámēn**	**túpt-omai**	[e-túph-thē-n]
	beat-1sg. act	**egrapsámēn**	beat-1sg. mid	[beat-1sg.pass.]
translation	'I beat'	**pépēga**	'I mourn'	['I was beaten']
		diéphthora		

Thrax does not include any passive forms in his discussion of voice. His example of

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I use Andersen's transliterated Greek in these examples.

'experience' voice (where the action affects the subject or his interests) is *túptomai*. This is NOT A PASSIVE. It is a "middle", meaning 'to mourn' (= 'to beat one's breast [for grief]'). Indeed, one of the usages is as a "passive" ('is beaten'), but this is a secondary meaning. The formal passive (in *-thē-*) is a later, derived voice, as is the *-ya-* passive in Sanskrit (The latter being identical to and derived from the fourth *gaṇa* "middle" (Bopp 1856 3:980ff; Whitney 1967:761).[49] Similarly, the reflexive notion (i.e. 'beats his own breast (in a mourning ritual)') is *understood* to intimately involve the self and therefore requires no reflexive marker.

Thrax's examples for *mesótēs* are given below. It is clear that his term refers to forms that *combine features of two extreme positions* (in this case, "active" and "middle"):

1. *pépēga* 'to be fixed', which is a 2nd perfect with 'active' endings but 'intransitive' (anticausative/middle) meaning

2. *diéphthora* 'to be deranged', which is a 2nd perfect with 'active' endings but 'intransitive' (anticausative/middle) meaning

3. *epoiēsámēn* 'to have [a thing] made', 'to cause, bring about', which is a sigmatic aorist with 'middle' endings but 'active' meaning (frequently used with an abstract

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According to Whitney (1967:761), the fourth is "the only [...] class [...] which shows any tendency toward a restriction to a certain variety of meaning". Included in class four (the *div-gaṇa*) are such verbs as typically "signify a state of feeling, or a condition of mind or body", such as *krúdh-ya* 'be angry', *kúp-ya* 'be angry', *klám-ya* 'be weary', *kṣudh-ya* 'be hungry', *muh-ya* 'be confused', *túṣ-ya* 'be pleased', *táp-ya* 'is hot', *hṛṣ-ya* 'rejoices'. Bopp (1856 3:989) identifies the *-ya-* morpheme as the verb 'go', noting its eventual use in passives in Sanskrit and, as the auxiliary in analytic passives of Bengali and Hindustani (thus *karā yāi* 'I am made'). Note the formal and functional parallelism of this entire group of verbs to the Hittite factitives in *-aḫ(ḫ)-*.

accusative to create an intransitive idea)

4. *egrapsámēn* 'to indict' (< 'to write for oneself'), another sigmatic aorist with 'middle' endings but 'active' meaning

All of the examples Thrax cites as representative of *mesótēs* voice, we would properly refer to as "deponents": forms whose meaning and morphology are at cross-purposes. Why did he term these four forms, not one of which is either what we would term "middle" or "passive", *mesótēs*? Presumably, to the analytical Greek mind, something that is the "middle" term of a ternary system includes some features of the two extremes of the system (the same thinking appears in Greek phonological and mathematical texts)[50]. According to Collinge (1963:232):

> Thus each of these uses of "middle" refers really, for the Greeks, to a term which combines some feature(s) shared with one polar term with other feature(s) shared with the other polar term; and, at any rate where the combination involves part likeness to the polar term, it is essentially a matter of combining different features in respect of each pole.

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The same criterion applies to phonological items in Thrax's grammar: he identifies *voiced* plosives β, δ and γ as μέσα, that is "midway" between aspirated and unaspirated (Allen 1987 [1968]:29). This fact is important as it is yet another reinforcement of the differences between *our* modern interpretation of these sounds and his as a contemporary grammarian.

Critically, at the historical point that Thrax is writing, Greek *does* have a ternary system. He would have no way of knowing that this ternary system had in fact evolved from an earlier binary one.

One final point about the Greek voice system before I turn to Latin: Many authors have noted, and been puzzled by, the affinity between the future "tense" and middle voice in Greek (and often in Sanskrit). Bakker calls the regular appearance of middle morphology in the Greek future "the one exception to the lack of active forms of verbs in the present event-type" (1994:29). He considers the explanation quite simple. The Future is associated with volitionality (cf. the grammaticalisation of English *will*): the future "presents an event as a mental disposition, an intention" (Bakker 1994:29). This intentionality is of course the semantic core of "middle" voice. (See the chart which appears in the Appendices, where the correlate of a deponent or "middle" verb is a future "middle".)

1.4.3. Latin Deponents

We noted above that Greek had a large group of verbs which appear exclusively with "middle" marking but "active" meaning. Such verbs were not exclusive to Greek, but appeared as well in other ancient IE languages. Latin has many such verbs. Several representative verbs of this group appear below, and a longer list of early deponents appears as an appendix (see Flobert 1975 for an extensive study). Note that although the meaning of each is "active", they are marked with an *-r,* which morpheme later conveyed "passive" in Latin. It will be clear that the following representative verbs have no "passive" sense;

however, they are semantically to be set apart from certain "active" verbs: this is apparently the use to which the ancient morpheme *-r* was put in Latin. Note that each of these "deponents" involves human activity, typically cognitive:

Latin deponents	loquo-r	'I speak'
	sequo-r	'I follow'
	cōno-r	'I try'
	vereo-r	'I fear'
	orio-r	'I arise'

Even a cursory look at these verbs will establish certain points: most are transitive, most have a highly agentive subject. As Klaiman (1991:47) points out, "... deponency relates to actions of physical or mental disposition presupposing the logical subject's animacy and control". This, of course, is again the semantic 'core' of "middle voice". The usages are similar to "middle" in Greek: *gladiīs ūtuntur* 'They use their swords' = 'They benefit themselves by use of their swords'. As in Greek, many of these usages (such as *osculantur* and *luctantur* 'kiss' and 'fight') were originally plural, with later singular usage, and accompanying developments of meaning. Describing the deponents, whose history he notes is "somewhat obscure", Buck (1952 [1933]:251) says that they "are characterized by an *r*-element, which was combined partly with active, partly with middle forms". How, when, to what and under what circumstances this *-r* element was added is of course crucial.

In the first person singular, the *-r* is added "to the active *ō* or substituted for the active *-m*" (Buck 1952:251). In the first case, we now know that the *ō* of the first person singular is from *-oH*$_2$ (Melchert 1994:52). The *-r* here then is being added to a form which was originally and already marked as first person singular *centripetal*. It is also important to note that this long vowel appears regularly in Plautus (i.e., early), but is "regularized" to a short o later, thus *legōr, morōr* (in Plautus), become *legor, moror* in the later language. In other words, the evidence of the original first person singular suffix *-*oH*$_2$ 'I centripetal'> whence *ō* in deponents is clearer in the oldest stages of Latin, becoming less transparent with time. When in the later language, the *-r* element is generalized, it does replace the *-m* of the active and has a passive sense in opposition to the active. But this is later.

The deponents are very instructive as regards early oppositions in derivational and inflectional patterns. Note that the first person singular vowel is regularly *o*, and **always** different from the second and third persons; the vowels appears **before** the inflectional elements (*-r* and person suffixes *-s* and *-t*). Of this pattern, and what it betokens, more will be said below.

	'try'	'fear'	'follow'	'arise'
1	cōn-o-r	vere-o-r	sequ-o-r	ori-o-r
2	cōn-ā-ris	vere-e-ris	sequ-e-ris	ori-i-ris
3	cōn-ā-tur	vere-e-tur	sequ-i-tur	ori-i-tur

Also as in Greek, many verbs of this group involve the notion of 'reciprocity': the self and at least one other necessary participant. Into this group belong such verbs as *polliceor* 'promise' (which obviously involves making a promise to someone, or committing oneself to certain obligations), *frūstror* 'frustrate' (frustration necessarily involves another person: the frustrator and the frustratee), *misceor* 'assemble, unite', *cōpulor* 'be linked', *osculor* 'kiss', *conflictor* and *luctor* both 'fight'.

As is apparent, the activity involved need not be though many are affectionate (kiss, mate/make love, embrace). Equally as many involve antagonistic relationships (fight, wrestle, litigate). The crucial uniting factor is the implication of reciprocity (you can't kiss or fight with thin air, except in a metaphorical or poetic context: 'wrestling with shadows', 'kiss off' etc.).

Deponent is clearly a misnomer for this type of verb and must be added to the list of terms unsuited both chronologically and semantically to an archaic voice system. Latin verbs of this type were never in any sense "passive". The "passive" use of the *-r* marker was late: originally,

> parallel to the original active transitives, many of the deponents could govern an object complement or combine with active desinences. However, the opposite process also occurred, especially in Late Latin, whereby the deponents were used as true passives, on account of their belonging formally to the passive voice (which presumably outweighed the fact that they had

developed a relatively stable active semantic value). This situation inevitably engendered ambiguity, confusion and hypercorrect forms, as reflected by their absence in Romance (Vineis 1998:300).

The original sense of the "deponents" was to indicate a subject who was intimately (or necessarily) involved in the action as *both* agent and patient, the same meaning which is conveyed by *ātmanepada* (= centripetal) *voice.* Since Latin had no such system to indicate "word for oneself" vs. "word for another", such ideas had to be marked with the only voice related marker available to it, namely, *-r.* Such verbs however are clearly NOT passive[51] such as *rēverto-r* 'I turn' (*vartate* in Sanskrit), *perluo-r* 'I bathe', *oblīvisco-r* 'I forget'(*I am forgotten), *vereo-r* 'I fear'(*I am feared).

It is important to note that deponents as a category were in heavy use during the earliest periods of Latin, and declined steadily in the later language, and were replaced in Romance by what are termed in many modern grammars "pronominal verbs".

Discussing the complex and undeniable morphological and semantic relationship between the deponents and the passive in Latin, Flobert (1975:704) makes an important distinction between an "extrinsic" passive, where the stimulus (agent) is exterior (*agitor* 'I am moved') and the "intrinsic" passive, where the subject and agent are the same (*moveor*

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Except in the sense that the subject is both subject and object–understood in this sense to be simultaneously agent and patient. 'I turn myself = am turned by myself' 'I wash myself = am washed by myself'.

'I move'). There is no necessary link between voice here and *transitivity*: Both "intransitive" *frūmentor* 'stock oneself with grain' and "transitive" *nūgor* 'busy oneself with something' denote activities where the results and benefits of the action of the verb accrue to the subject.

I noted that both "reflexive" and "reciprocal"-type verbs appear middle-marked in Sanskrit, Greek and Latin. There is a reason for the appearance of these two categories in the centripetal member of an early voice opposition: one is a logical extension of the other. The most direct benefit is arguably to the self (reflexive). However, the welfare of the self is intimately bound up with the welfare of the group. Such actions as benefit the collective, benefit the members (reciprocal). As well, there are certain activities in which the self is necessarily engaged which cannot be accomplished alone, but logically require the involvement of another (or a group of others) from which combined activity all will presumably benefit (reciprocity).[52]

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Acquisitional evidence suggests that verbs that involve reciprocity (i.e., which describe canonical social interactions such as 'give', 'put', 'follow', 'lead', 'converse') are the next developmental and cognitive step beyond self-involvement. It is this type of verb which is acquired directly after the original elements in a child's conceptual scheme which involve or describe the self (Smiley and Hutterlocher 1995:55; Maratsos and Deák 1995). One of the most intriguing results of early verbal studies is the *type* of verb which appears at a very early stage. Smiley and Huttenlocher (1995:55) explain: "Appearance based categories children form – of directed movement, salient changes of state, objects, and other people,– may have a special status as primitive elements in the child's conceptual scheme. They emerge very early [...] and they support the later acquisition of perceptually more complex notions involving relations among two or more objects that may be appearance based in whole or in part". Thus early to emerge and basic are verbs that encode a "sequence of perceptually definable actions", what Maratsos and Deák (1995:389) call "movie words":walk, run, wave, move, eat, break, get, find, give, put, go, ride. Among the most salient and earliest appearing are verbs of cognition and perception know, like, look, see, think. Also important at the first stages are such words as can be used either verbally or nominally, such as help, hug, kiss,

1.5. Summary of Distinctions Conveyed by Early Binary Voice Systems

The evidence of the early verbal systems of Sanskrit and Greek , which oppose two basic voices, as well as the "intrinsic passive" semantics of the Latin "deponents", allows us to posit the following three primary uses for the centripetal ("middle") voice:

(1) indication of an action that either affects or involves the subject (Lyons 1968, Barber 1975, Klaiman 1991, Kemmer 1993, Arce-Arenales, Axelrod and Fox 1994, Bakker 1998). This effect is usually beneficial, e.g. Sanskrit *bhuñkté* 'rejoices', Greek θέρομαι 'I become warm'[53]. In a binary system, the higher involvement of the subject is encoded by use of the more self-directed voice. In Lehmann's terms, this is centripetal ('center-seeking') version, in Sanskrit *ātmanepada* voice, in Greek πάθος.

(2) reflexive implication (as in RV I.134.3: *vāyúr yuñkte róhitā ráthe* 'Vayu hitches the tawny horse to (his own) chariot' where *ātmanepada* endings alone (in contrast to

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drink, call, walk.

Apparently subsequent to these types of verbs are those which encode more complex subcomponents or "relational" events. Maratsos and Deák (1995:383) comment that "many concrete object nouns are similar in nature. Plato remarked that "father" is a relational word, not a simple substantive – a father automatically implies an offspring; no one can be a father by himself". It can be seen that such notions as "follow" would clearly fall under this more "complex" or relational type of verbal activity.

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Examples from Lehmann (1993:184).

parasmaipada) convey the notion of reflexivity (that this is *his own* chariot, not someone else's)). (See *Aṣṭādhyāyī* Book 1, Chapter 3, Verse 76)

(3) reciprocal (as in Sanskrit *spárdhate* 'quarrel with one another')

Both of these two basic voices could be transitive (i.e., could have a direct object). The choice of one voice over another is in essence an encoding of the *direction* of transitivity, captured by the terminology *centripetal* vs. *centrifugal*, where, in the former, the verbal activity tends inward; in the latter, outward.

Given the higher level of involvement, semantic distinctions conveyed by the use of centripetal voice could include:

a. Highly or uniquely human activities including deliberation, volitionality (including interest in the 'fruits' of the action), cognition, emotional or psychological states (of humans)
b. Human as opposed to non-human activities
c. More animate vs. less animate
d. Sacred (ritual and prayer, i.e., language of special importance) vs. secular

I have put forward the suggestion that given the increased interest in the outcome of the action, the agent/subject of a centripetal voice verb is likely to be more (not less) "active" in

the pursuance of the verbal goal. Given human nature (which changes in this respect not at all over the millennia) it is also more likely that activities which are perceived as intimate to or characteristic of the subject will be encoded using the centripetal voice. This is the rationale for including in this category such verbs as require self involvement, describe typically or distinctively human activities (speech, thought, deliberation and/or intent) or activities which are perceived as beneficial to the subject's interests and those of his group (ritual, religious, social and legal).

Finally I note that in all the archaic IE languages, voice distinctions were marked by elements **suffixed** to the verbal word. This arrangement is typical of OV typology. Hittite alone of all IE languages shows firm adherence to OV typology: all others show evidence, in varying degrees, of a typological shift from OV to VO[54]. Lehmann (1993:184) points out that VO and OV languages differ in their methods of expressing reflexivity and reciprocity, with VO languages making heavier use of separate items to convey these notions. In VO languages, reflexivization and reciprocity are indicated "by means of separate words, usually pronouns. When the Indo-European languages increasingly adopted VO structure, such words were developed to express these categories. The strategies for doing so vary from language to language. The fact that there are so many of these diverse strategies and devices

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Perhaps, if we were being frivolous, we could say that Hittite 'died' before any such shift could be observed. One could make the argument, though, that the increasing use of the reflexive particle *-za* into the later periods of Hittite was evidence for the early stages of just such a shift. Hoffner (1972:29-35; 1973b:526) discusses not only the chronology of the particle itself, but also its form: the allomorph *-z* is earlier than the fuller *-za* form.

in VO reflexivization patterns illustrates according to Lehmann the relative "recency" of such developments and the fact that they presuppose the demise of the earlier binary system: "When such devices were introduced into any of the dialects, the middle was non-essential. If maintained, it was modified in meaning to a passive" (*ibid*).

We can see that over the course of time, these various developments and changes fed each other. The demise of the semantic distinction between the two original voices (a process already underway even in the oldest dialects --Hittite, Vedic and Homer) both fed and was nourished by typological changes in the move from OV to VO. These new, and increasingly analytic, developments (such as the use of overt reflexive markers) further undermined the productivity and transparency of the former distinction (subtle at the best of times) conveyed by an agglutinated verbal ending. I discuss some of the developments which arose in Hittite once the original binary distinction conveyed by the oppositional inflectional endings *-m/-ḫ* had been lost, as described in Chapter 7. However, first things first. In order to understand and appreciate later developments, it is necessary to understand what went before. It is to that early system which I now turn.

CHAPTER TWO

THE HITTITE SYSTEM OF VOICE OPPOSITION

2.1. Introductory Remarks about Hittite in General

The Anatolian system as a whole differs greatly from the one traditionally reconstructed for Indo-European, prior reconstructions having been based on Greek and Old Indic (Vedic) (Luraghi 1998:182), and in large part before the discovery of Hittite. Although the Indo-Hittite hypothesis has been abandoned, most scholars still admit a special status for Hittite. It was probably the earliest to split off from the main body of the "super-family". I take the position that Hittite is distinguished by its archaisms, not by its innovation. In its archaism, it reflects, especially in the verbal system, a type of pre-Indo-European as outlined (most recently) in Lehmann (2002).

It is generally acknowledged that the differences between the Anatolian family and the other IE descendants were clearest in the verbal system:

> The Anatolian verbal system differs greatly from the system traditionally reconstructed for Indo-European, which is based mainly on Greek and Old Indic. The Anatolian verb only has two finite moods, indicative and imperative, two tenses, present-future and preterite, and two voices, active

and medio-passive (Luraghi 1998:182)[55]

That Hittite was clearly the "outsider" even in its own family can be seen from the following diagram from Luraghi (1998:169):

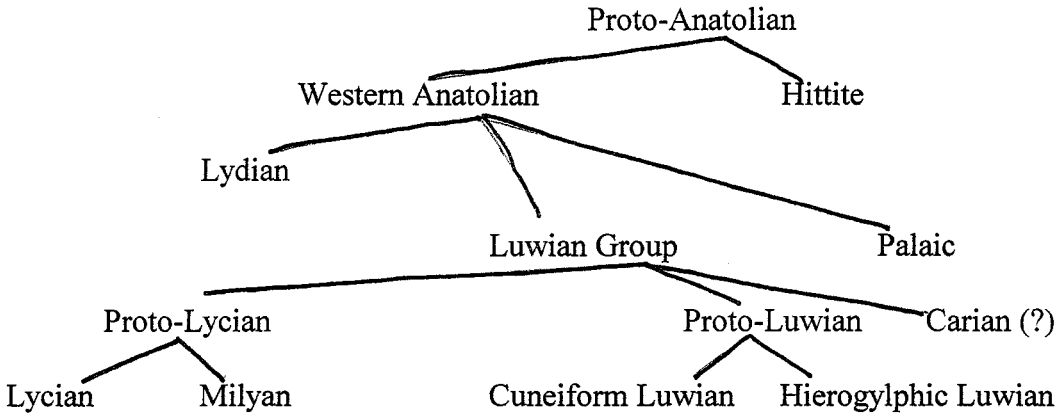


Figure 1. The Anatolian Linguistic Group

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Luraghi clearly doubts the accuracy of the terminology "medio-passive" as applied to that group of verbs, as well as its historical primacy. She says (1998:182) that the term medio-passive is "not perhaps ideal to describe the function of that voice" and suggests that the ḫi conjugation, with its "unclear" and still "controversial" links to the IE perfect may have preceded the developments now termed "middle" or "mediopassive". She flatly states that forms with the suffix *-ri* "which at first suggested an exact correspondence between the Hittite and Latin middle, are in fact the most recent" (1998:183-184). Originally, the *-r* marker appeared only in the third person plural, and optionally there. Szemerényi (1996:334): "The Anatolian material shows in the first place that *r* was restricted to the present, secondly that it was limited to the third persons". The spread throughout the paradigm, especially to the first person singular, was a late development: "In the 1st s. Hittite and Tocharian diverge widely, which shows that their forms were late and independent creations" (Szemerényi 1996:242).

The egregiousness of Hittite is somewhat counterbalanced by the fact that the corpus of Hittite documents is extensive: they may not be the most representative of the Anatolian languages, but what is represented is there in great quantity (Luraghi 1998:170).

2.1.1. The Hittite Verbal System (reflecting pre-IE system)

The Hittite verbal system has two opposing "active", present tense conjugations, the *-ḫi* and the *-mi* conjugations, so named after the first person singular forms where the opposition is most clearly marked. The formal distinction between these two conjugations is found only in the singular, and only in the "active" (Kronasser 1956; Friedrich 1960; Held et al 1987; Yoshida 1991; Beekes 1995; Luraghi 1998).

The *-ḫi* conjugation is found exclusively in Hittite[56] (Rosenkranz 1978:82; Luraghi 1998:183). Traditionally, two possibilities have been put forward to explain this fact. One is to consider that Hittite has preserved an archaic situation, and that the other languages developed their attested forms after the departure of Hittite; a second approach is to consider Hittite the innovator. This latter approach leaves open the possibility that the inflectional ending *-ḫi* is a Hittite innovation formed on analogy with the *-mi* conjugation. Although arguments have been advanced for both positions (and continue to be), scholarly opinion seems to have settled in the camp which considers Hittite not as an innovator, but as a

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Although reflexes of the laryngeal marker of **first person singular** *H occur throughout the family: in Lycian (PA **H* > Lycian *-xa*) (Melchert 1994:311), Luwian "**-Ha* > *-ḫḫa* > *-ha*" (Melchert 1994:257), and Palaic "**-Ha* > *-ḫḫa*" (Melchert 1994:212).

representative of a more archaic form of the parent language. The "evolutionary" model of the Indo-European conjugational system (such as advanced by Neu 1968, 1985:285) is clearly adopted by most scholars, with the archaic nature of Hittite, its chronological "primacy", considered a basic (though not undisputed) tenet. Thus "the wealth of forms, tenses and moods which characterise Greek and Sanskrit [...] is [...] a recent common development of this sub-group of languages" (Polomé 1982b:53).

The *-ḫi* conjugation is apparently older than the *-mi* conjugation (Kortlandt 1983), and is unique even in its own family: no other Anatolian language has such a formation (Luraghi 1998). The older conjugation shows evidence of being in decline, even in the oldest Hittite documents (in this regard it is similar to the binary voice opposition in Vedic and in Homeric Greek). The *-ḫi* conjugation has fewer verbs than does the *-mi* conjugation, in a ratio of approximately 1/4 (Hewson and Bubenik 1997:232, based on inventories in standard grammars, such as Rosenkranz 1978, Friedrich 1960 and Tischler 1977). It is, as a rule, morphologically far simpler than the *-mi* conjugation (see Table 11), and far less productive. It is generally believed to have fewer cognates than does the *-mi* conjugation, but I argue against this point in Volume II of this work.

The endings of these two conjugations[57] are summarized as follows, with 'typical' examples from each conjugation following:

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There are certainly other forms which may be identified as belonging to the *-ḫi* conjugation (such as "preterites" in *-š*). These are discussed where applicable in Volume II. (Full paradigms of the three classes of the verbs of the *-ḫi* conjugation: consonantal, vocalic and 'mixed' appear in the Appendices to this work).

Table 10. The Endings of the Hittite *-ḫi/-mi* Conjugations (following Friedrich 1960)

	PRESENT		PRETERITE	
Singular				
1	**-mi**	**-ḫi**[58]	-(n)un	**-ḫun**
2	-ši	-ti	-š(ta)	-(š)ta
3	-zi[59]	-i	-t(a)	-(š)ta
Plural				
	-ụeni			-ụen
	-teni			-ten
	-anzi			**-er/ir**

1st	*šak-ḫi*	'I know'	*eš-mi*	'I am'
2nd	*šak-ti*	'you know'	*eš-si*	'you are'
3rd	*šak-i*	'he/she knows'	*eš-zi*	'he/she is'

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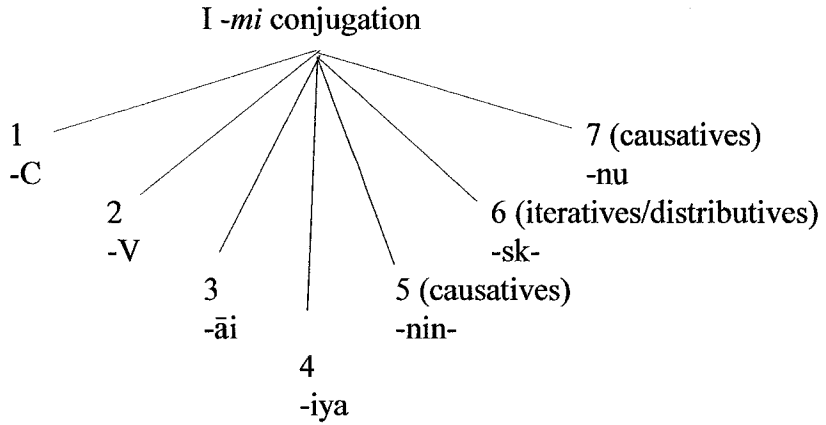
The older *ḫ* conjugation ending is not *-i* but *- é : -ḫé.* This could represent one of two things: either an early coalescence of *-a + -i > -e* or a reflection of the IE stative ending *-e.* Hittite *-a* NEED not come from IE **-o. o*-grade is common in roots (in a closed syllable āCC > *oCC), or accented open syllable *óC > aC, or *ó# > ā#. It is far more likely that the *-a* is from the *a*-colouring effects of the second laryngeal *-h_2 on the following *-e*,*-h_2*-e* > *ḫ-e* or *-ḫ-a.* (Beekes 1995:142)

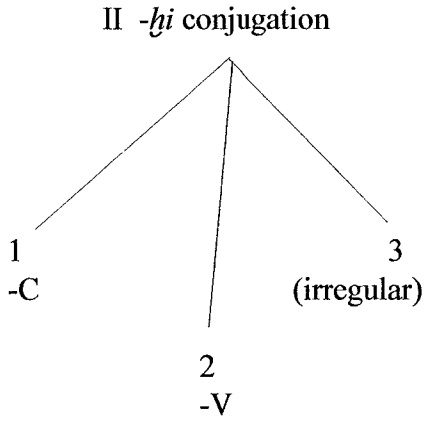
59

-t-i >t^{s}i > zi 'plain' *t* is affricated before final high front vowel; similarly, 3rd plural *-anzi* = *-ant + i.* See below for a full discussion of the difference between the 'plain' *-t* and 'aspirated' *-t* which explains the lack of affrication of the latter before high front vowels.

The two conjugations differ significantly as to stem characterisation, with the *-ḫi* conjugation distinguished by its paucity of stem-characterizations in comparison with the more productive *-mi* conjugation. I consider the increased transitivity and productivity of the *-mi* conjugation to be both an indication and direct result of its more outwardly-directed nature as the centrifugal member of this binary opposition. The following diagram illustrates the characterised stems of the two conjugations, with representative forms of each type exemplified below.

Table 11. Verbal Stems of the *-ḫi/-mi* Conjugations (following Friedrich 1960; see also Sturtevant 1927c:215)





I	1.	eš-mi 'I am'
	2.	uwate-mi 'I bring'
	3.	ḫatrā-mi 'I write' (< ḫatrāi)
	4.	wem-iya-mi 'I find'
	5.	ḫar-ni-k-mi 'I destroy' (< ḫarnink)
	6.	da-ški-mi 'I take repeatedly' (< dašk)
	7.	ar-nu-mi 'I bring'

II	1.	šāk-ḫi 'I know'
	2.	daḫ-ḫi 'I take' (< dā)
	3.	uḫ-ḫi 'I see' (< au(š))

Unlike the straightforward *-mi* conjugation (with its familiar *-m,-s,-t* endings), opinions about the origins of the *-ḫi* conjugations are controversial. The endings of the *-ḫi* conjugation are acknowledged to show strong similarities to those of the IE perfect (Luraghi 1998:183), which are themselves linked to the category of voice (Burrow 1955:316; Kuryłowicz 1964:56; Szemerényi 1996:333).

Instructive at this point is the following table of personal endings (adapted from Schleicher 1974 [1876]:684-685) showing the attested endings for various IE languages, as well as Schleicher's postulations for PIE forms. This work, done in 1876, obviously preceded the discovery of Hittite. Despite this fact, much information can be gained from Schleicher's careful work.

Table 12. Personal 'active' endings of various IE languages (adapted from Schleicher 1974 [1876]:684-685)

	Indo.urspr. (PIE)	Altindisch (Vedic)	Altbaktrisch (Avestan)	Griechisch (Greek)	Lateinisch (Latin)	Altirish (Celtic=OI)	Gotisch (Gothic)
Singular							
I. Person							
perfectum	**ma (a)**	**a**	**a**	**α**	--	--	--
primär	mi	mi	mi	μι, __	_, m	_, m	__, m
secundär	m	m	m	ν	m	m	u
II. Person							
perfectum	**ta**	**tha**	**ta, tha**	**θα (ς)**	**tī**	**---**	**t**
primär	si	si	hi, ši	σι, __	s	--	s
secundär	s	s	s	ς	s	--	s
imperativ	dhi	dhi, ___, tāt	di, dhi, __	θι, ___	tō	---	---
III. Person							
perfectum	**ta (a)**	**a**	**a**	**ε**	**t**	**--**	**--**
primär	ti	ti	ti	τι,σι, ι	t	d, th	th
secundär	t	t	ṭ	--	t	---	--
imperativ	*?*	tu, tāt	tu	τω	tō, osk. tūd	d	

It was this obvious morphological similarity which intrigued researchers in the decades following the discovery of Hittite. We know now, as Schleicher did not, that the *-a* endings of the first person singular "perfectum", seen in the daughter perfects of Sanskrit and Greek, reflected the second laryngeal of the parent language *-H_2. We know, as Schleicher did not, that an ancient heavily attested Indo-European language has a verbal conjugation which also contained this same phoneme, *-H_2 in the first person singular of a conjugation opposed to a *-mi* conjugation. We know now, as Schleicher (1876) and Whitney (1889) did not, that another of the outcomes of the phoneme*-H_2 was Sanskrit *-i* (Beekes 1988) as in *pitár* 'father' and, importantly, the *-i* ending of the first person singular *ātmanepada* ending which Pāṇini opposes to the *parasmaipada* ending *-mi* (see Table 6).

2.2. Scholarly Opinion Concerning the Source of the Hittite *-ḫi* conjugation

"No formation in the Indo-European family of languages has remained more of an enigma for historical analysis than the Hittite *-ḫi* conjugation" (Shields 1992:85). To explain the origin of this mysterious conjugation, two possibilities are traditionally advanced (Luraghi 1998:184):

1. the *-ḫi* conjugation is somehow related to the IE perfect, and
2. the *-ḫi* conjugation is somehow related to the Germanic "preterite-presents"

2.2.1. *-ḫi* conjugation links to the Indo-European perfect

The perfect was, until the discovery of Hittite (and Tocharian) "one of the most secure reconstructions in the whole IE verb: it was characterized by a special set of endings: original presential stative value, from which developed resultative, and ultimately just preterite value; [...] root vocalism *o : 0* with shifting accent" (Watkins 1998:58). "The Indo-European perfect is in every respect a unique formation [...] The vowel preceding the ending of the active singular is *-o-* (and not *-e-*) unlike what we observe in most of the other athematic forms. [...] The perfect is preserved as an autonomous formation only in Greek and Indo-Iranian, i.e., only in the oldest known and most archaic languages" (Meillet 1967 [1908]:131)[60].

However, since neither Hittite nor Tocharian showed any reflex of the (finite)[61] perfect, it was difficult, if not chronologically impossible, to derive the Hittite *-ḫi* conjugation from the IE perfect. The IE perfect showed many signs of being later, rather than earlier, than the Hittite *-ḫi* conjugation (certainly on phonological grounds: the common marker *$*-H_2$*, which has already disappeared in Greek and Vedic, is still visible in Hittite) (as in Table 7). Neither did it seem feasible to reverse the order and derive the IE perfect from

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Meillet's original work (in French) was published in 1908, before the "discovery" of Hittite.

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Tocharian shows a reflex of the reduplicated perfect participle (B *peparkoṣ* 'asked'), but that could be an independent innovation, as reduplication was not considered to be an essential feature of the earliest perfect such as would have been available before the Tocharian departure from the ancestral language.

the Hittite -*ḫi* conjugation (although that makes better sense chronologically). Presumably, both derived from an earlier common source whose features would explain the characteristics of all: Hittite, Greek and Vedic, and perhaps shed some light on developments in Latin (which, even in the earliest attestations, had already 'merged' aspects of the perfect and the aorist of the parent language into a single past).

2.2.2. The morphological similarities to the IE Perfect

It has been traditionally assumed that the Hittite -*ḫi* conjugation is in some way related to the Indo-European perfect. The similarity in endings certainly suggests that this is so:

Table 13. The IE Perfect and Hittite -ḫ conjugation endings

IE Perfect	Hittite -ḫ conjugation
-h_2e	-ḫ
-th_2e	-t^h
-e	-Ø

2.2.3. The IE perfect

The IE perfect is considered the most archaic and nominal of all the verbal conjugations: "between the perfect and the rest of the conjugation [...] we have the most

ancient and fundamental division in the Indo-European system" (Burrow 1955:294)[62]. It possessed unique morphological characteristics including reduplication (*bubudhe* < √*budh* 'wake'), ablaut (in some older roots (*vid* ~ *veda* 'I know'), reduplication and ablaut[63] (often *-o-* grade) (Greek *leloipa* > √*lip-* ; Sanskrit *cakāra* > √*kṛ* 'I did'), and unique endings, which are linked morphologically with the category of voice (Kuryłowicz 1964:56). It has been suggested that the perfect itself is a voice: "The so-called perfect active was in reality an old middle, existing side by side with the *-so, -to, -nto* middle [...] I conceive of the IE perfect as practically a Medium tantum, having the characteristic nuance of interest of the subject in the action" (Claflin 1939:158) (also Neu 1976:246ff; Szemerenyi 1996:244, nt.1).

Jasanoff (1992:132) grants that "weak consensus" among scholars has identified the *-ḫi* conjugation as a "reflex of the Proto-Indo-European perfect", thus explaining [certain *-ḫi* conjugation] alternations such as *šākk- šakk-/ šekk-* and *kānk-/ kank-* as the "familiar **o: *ϕ* ablaut of perfects like **uoid-/ *uid-* and **memon-/ *memn*". He insists that "The strongest argument in its favour [i.e. the "perfect" theory of the *-ḫi* conjugation] is the fact that the

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Others have suggested a "thematic adjective" (thus Cowgill 1979:25-39), or Szemerényi (1996:244, nt.1): "but if a nominal form at all then (in my view) an athematic root noun (of the agent) with demonstrative *-e* in the 3rd s [...] According to Schmalstieg (*FoL* 12, 1980, 354), personal endings cannot be constructed for the perfect voice 'which was completely a nominal form' and Lehmann holds much the same view (Fs. Meid, 1989, 121): it is 'well known that the IE perfect is defective [...] the singular has specific endings only in the first and second persons; the plural has adopted endings from the *mi* inflection'".

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Reduplication was not a feature of the earliest types, as shown by the Hittite evidence. Hittite *-ḫi* verb *mema* 'speak' is an exception: Sturtevant calls *mema* a "reduplicated perfect with *o*-grade" 1927c:217).

endings *-ḫi, -(t)ti, -i* can be etymologically interpreted as the perfect endings **-h_2e, -th_2e, *-e* extended by the *hic-et-nunc* particle **i*".

Burrow (1955:296) states that "The perfect [...] appears to be one of the more ancient IE verbal formations and to bear some relation to the conjugation of the Hittite verbs in *-ḫi*". He goes on to note that the relationship between the two Hittite conjugations *-mi* and *-ḫi*:

> is not at all that which exists between the present and the perfect in other IE languages [...] the endings of the *-ḫi* conjugation are comparable in some ways to the perfect endings of Sanskrit, Greek, etc. so that while the detailed relation of the two formations remains obscure, there is general agreement that some definite connection exists between them.

The following chart, from Beekes (1995:238), shows the morphological similarities clearly:

Table 14. Personal Endings of the PIE perfect (adapted from Beekes 1995:238)

PIE		Sanskrit	Greek	Latin	Gothic	Hittite
*uóid	-h_2e	véda	οἶδα	vīdī	wait	(ar-ḫi)
	-th_2e	véttha	οἶσθα	vīdistī	waist	(ar-ti)
	-e	véda	οἶδε	vīdīt	wait	(ar-i)

Beekes explains that these reconstructions are:

based on Sanskrit and Greek. They point toward *-a, -t(h)a, -e* for 1, 2 and 3 sg. in the first instance. The *-a* must have been *-h_2e*. The laryngeal is still visible in Hittite h [=ḫ SR]. Luwian has -ha [=ḫa SR]; Hitt. *-un* comes from elsewhere [The"elsewhere" is the *-mi* conjugation. I have not included the preterite forms here: SR]. *-th_2e* also explains the aspiration of Sanskrit (**uoid-ta* > Gr. **oistha*; the *th-* of Greek is unclear. [64]

Note that the third person singular had only the *-e* endings at this point[65]:

1sg. *-h_2e* : 3sg. *-e* is confirmed by Skt. *jagáma : jagāma* ; in 3sg. -g^{w}o*me* the *o* > *ā* according to Brugmann's Law, in 1sg. - g^{w}o*h_2e* this is not the case. The roots ending in laryngeal have 3sg. *-au* in Sanskrit, for example *dadáu*, of which the explanation is still uncertain[66].

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Sic: the "*-th-* of Greek" clearly attested in the second singular Greek perfect ending -Θe is certainly Θ [th = aspirated dental stop, with the aspiration ultimately from *-H_2*) which contrasts with the unaspirated voiceless stop τ. See my arguments for this development, below, specifically §5.11.

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And most likely no ending at all at the earliest stage (as in Table 16, which follows). The vocalic characterization probably started in the third person singular and spread from there.

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The reference is to the regular correspondence between Greek *o* in an open syllable and Sanskrit *ā*. Although evidence of this sort seemed at first an exception to Brugmann's insightful observations, the discovery of Hittite, and the evidence of a laryngeal element *-H_2* of the first person singular which closed the syllable and blocked the operation of the Law actually reinforced the validity of the early observation.

Once Hittite was discovered, it was the obvious similarities between the endings of the Hittite *-ḫi* conjugation and the perfects of Greek and Sanskrit that provoked conjecture as to their shared origins. Lehmann exemplifies the various endings and proposes their common source (1993:174), reproduced below (Table 15), exactly as it appears in the source. Some explanation of the symbols which Lehmann uses is necessary. Despite their graphic (and ultimate diachronic identity) the h that marks the Pre-IE first person singular form is not phonologically identical to the h that marks Hittite first person singular form: they are at different stages of development (pre-IE, PIE pharyngeal > velar fricative (and secondary aspiration) of Hittite. In Lehmann's words, "At an earlier stage these three endings were *-ha* < *-he*, *-tha* < *the*, *-e*. (The *h* here indicates the Proto-Indo-European laryngeal in contrast with its use in Hittite for a velar fricative.) [...] In Pre-Indo-European, the third person singular would have had a zero ending." Similarly, the second singular endings show evidence of the transitional stage from a full pharyngeal phoneme to the aspiration of the voiceless stop in Sanskrit and Greek. It is this aspiration which "protects" the second singular Hittite *-t* from undergoing the affrication seen in the *-mi* conjugation third singular ending *-zi* (= t> t^s/_i).

Table 15. The endings of the IE perfect, Hittite *ḫi* verbs and their common source

	Sanskrit	Greek	Hittite	PIE	PreIE
1sg	véda	oîda	sak-hi	-ha	-h
2sg	véttha	oîstha	sak-ti	-tha	-th
3sg.	véda	oîde	sak(k)-i	-e	-O

Similar to the original value of the IE perfect, the Hittite *ḫi* conjugation, as does its sister *-mi* conjugation, clearly represents a present tense. This is again consistent with the nature of Hittite as reflecting the original character of the parent language, as the IE perfect originally had present value (Burrow 1955:297; Kronasser 1956:189; Szemerényi 1996:338) only later undergoing the development into a past. Szemerényi (1996:338) states that at the most archaic level "the difference from the 'present system' of the historical period lay not in the tense but the mode of action: the *-mi* verbs expressed action, the *-ḫi* verb a state [...] there were even then two voices: the voices of action and the voices of state".

2.2.4. The Relation between the IE perfect, the "middle" voice, and the Hittite *-ḫi* conjugation

Luraghi (1998:183) echoes the common opinion: "there are similarities between the *-ḫi* conjugation and the IE perfect; on the other hand, the *-ḫi* conjugation can also be compared with the IE middle". Both Kuryłowicz (1964:56) and Burrow (1955:316) point as well to the strong link between the IE perfect and the categories of voice, the latter noting that: "The active endings of the perfect are in the singular identical with the oldest forms of the middle endings". Szemerényi (1996:333) remarks both on the egregious character of the IE perfect endings and their ancient similarities to middle morphology: "the perfect endings appear to stand isolated in the IE system. They are, however, closely related to certain *passive-middle* endings [...] Alongside these, however, there are clearly more archaic forms"

[in -ē], which further established the link between the perfect and the "passive-middle" at the most archaic level which we can reasonably access. We will return to this point in more detail below in the discussion of the element *-i*. These links are very clear when we add the evidence of the Sanskrit *ātmanepada* endings to Lehmann's (1993:174) chart (from which the endings presented in Table 16 are adapted):

Table 16. Table of forms including Sanskrit *ātmanepada*

	PreIE	PIE	Hittite	Sanskrit Perfect	Sanskrit *ātmanepada*	Greek
1sg	-h	-ha	sak-hi	véd-a	-i	oîd-a
2sg	-th	-tha	sak-ti	vét-tha	-thas	oîs-tha
3sg	-O	-e	sak(k)-i	véd-a	-ta	oîd-e

Kuryłowicz (1964:70) says that "There must have been in I.E. originally two different procedures of forming the perfect: either apophony of the root vowel (e >o) or reduplication". Reduplication is acknowledged not to have been an essential feature of the original perfect (Burrow 1955:343)[67], which implies that apophony was. Indeed, apophony is understood to be a common feature of the earliest type of "monosyllabic, biphasal athematics" (Shields

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"These preterite-presents which are pure perfects in both form and meaning, never show reduplication [...] This clearly indicates that Germanic is based on a dialect from which, as early as the Indo-European period, reduplication was absent or could be absent" (Meillet 1967 [1908]:133, 134).

1992:90). (See also Kimbal (1999:58) concerning the connection between plene writing and ablaut in *-ḫi* conjugation verbs.)

2.2.5. A voice role for *o*-grade?

This basic, ancient, distinctive and shared correspondence between the *o*-grade of the first person singular forms of the IE perfects of Sanskrit and Greek and the Hittite *-ḫi* conjugation, suggests that *o*-grade itself may have had voice function and value (this has been suggested, as by Claflin 1939 and Neu 1976). Justus (1982:291-328) notes the correspondences of the *-ḫi* verb *šak-* 'know' with PIE **woid-/*wid-*, both semantically and with reference to ablaut patterns. She provides support for the possibility that *o*-grade does indeed have a voice function, suggesting the possibility that Hittite *šak(k)* reflects the *o*-grade stative perception counterpart to an (earlier?) transitive active *e*-grade **sek-*, 'cut'. Jasanoff (1978:47) says that "The agreement of three IE traditions in associating persistent **-o-* with the middle voice is too striking an idiosyncrasy to be accidental". Both in Germanic and Tocharian, persistent **-o-* grade in the thematic middle contrasts with the alternating thematic vowel of active forms (Jasanoff 1978:47ff). There are two exceptions to this rule (*o*-grade in middle rather than active) that Jasanoff cites are Baltic and Anatolian. He notes (1978:48) that this feature in Baltic "has no parallel in Slavic and may have a morphological explanation. He says "The thematic verbs of the *ḫi* conjugation show persistent **-o-* in the active [sic] as well as the middle".

Latin offers some evidence for the voice value of lengthened grade:

iacēre 'lie'	vs.	iacere 'throw'
pendēre 'hang, be suspended'	vs.	pendere 'suspend, weigh out'[68]

2.3. Links to the Germanic-Type preterite-present?

Luraghi (1998:184) mentions a group of archaic verbs in Germanic, which have been described by Eichner (1975) and, following him, Ramat (1998). These are the Germanic "preterite-presents" (Ramat 1998:403ff, with Meillet's (1967 terminology), so called because they "have the form of a (strong) preterite but the meaning of a present" (Ramat 1998:404,405)[69]. These verbs are "directly derived from Indo-European and seem to express more aspect than tense: e.g. Goth. *wait*, OEng. *wāt*, OSax. *wēt*, OHG *weiz* 'I know' and Skt *vēda,* Avest *vaēδa,* Gk. (w)*ôida* 'I have seen' (cf. Lat. *vīdī* 'I know' as a resultative" (Ramat 1998:405). These "preterite-present"-type verbs often (originally) have modal value. After they assume a temporal (rather than aspectual) meaning (as by the addition of tense particles), their prior form is understood as past in opposition to the MARKED present (see Sturtevant 1933:240).

This group of verbs shows morphological similarities to the IE perfect and the Hittite *-ḫi* conjugation. It "continues and extends the IE vowel system based on ablaut (apophony,

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See Bammesberger (1974) for some examples of these stative verbs in Baltic.

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A good example is *kiš-ḫa* 'I shall become'. There are numerous others exemplified in Volume II. They will be noted as they occur.

vowel gradation) of the root vowel" (Ramat 1998:404)[70]. The "weak" verbs (which I associate with the *-mi* conjugation) show what Ramat identifies as a "Germanic innovation"-- the dental preterite (cf. Hittite "dental preterite"). (Note that the preterite marker of the *-mi* conjugation is *-t*.)

One can clearly see the semantic and morphological parallels of the Germanic "preterite-presents" to *-ḫi* conjugation verbs in Hittite: in early texts, many of the forms in *-ḫa* have clear present tense value. Often there is a modal sense. (Because of these similarities, I adopt Meillet and Ramat's term "preterite-presents" for verbs in *-ḫa* with present tense or modal value in Volume Two of this thesis.)

Based on chronological parallels between the *-ḫi* conjugation verbs, the IE perfect and the Germanic "preterite-present", one is led to propose that *-ḫa* was the original *-ḫ* conjugation ending in Hittite, a first reflex of the (Pre-)PIE ending *$*-H_2$. After the addition of the *hic-et-nunc* tense particle **-i,* vowel coalescence would have resulted in *- ḫe*[71], as in Sanskrit, where: "The primary middle endings of Sanskrit arise in the first place, as in the active, from the addition of *-i* to the secondary [= chronologically primary/earlier] endings: bhárata + i > bhárate" (Burrow 1955:316). See the chronology of Hittite endings outlined and

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But see Hewson and Bubenik (1997:216) for discussion of this point.

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The oldest *-ḫi* conjugation ending (if we omit *-ḫa*) is not *-ḫi* but *-ḫe*. There are other explanations for this vowel, such as an early stative in *-e*, added to the ending *$-H_2$*, ,which could have produced BOTH the original Hittite ending *- H_2e >-ḫa* or the third singular forms in *-e* .

exemplified in Table 1.

Both Jasanoff (1978) and Sihler (1995) note the similarities between the perfect, the "preterite-presents" and the *-ḫi* verbs of Hittite, and their shared archaism. Outside of Greek and Indo-Iranian, the stative perfect has left "substantial traces in Germanic, where pretero-presents such as Go[thic] *wait* 'I know' (= G[ree]k οἶδα, Ved[ic] *véda*), *man* 'I intend') (= G[ree]k μέμονα. Lat[in] *meminī*), *ga-dars* 'I dare' (= Ved[ic] *dadhárṣa*) constitute an archaic category of considerable descriptive importance" Jasanoff (1978:14). Sihler also discusses this point:

> The discovery that Hitt[ite] had a paradigm (the *ḫi* verbs) agreeing very well with the IE stative in the matter of endings and ablaut grade of the root, but without reduplication as a regular or even characteristic feature of the stem, has tipped the balance of evidence in favor of the relic status of unreduplicated **woyd-*. But in truth, even before the discovery of Hitt[ite][72], the Gmc. 'preterite-present' verbs – properly appraised – had pointed in the same direction: these either never had reduplication or else lost it, but as they are obviously among the most basic vocabulary, it is much likelier that they never had it [..] there is a stronger argument still: the unlikelihood –the virtual impossibility– that an item like 'know' would be in the vanguard of innovation. [the verb 'know'] has one of the most conservative paradigms in the IE languages, even rivalling the verb 'be' when it comes to retaining inherited details of inflection that differ from the regular paradigms of the language (1995:569).

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So Meillet, writing in 1908: "The Germanic preterite is in large part derived from the Indo-European perfect, as is shown by the vocalism and final consonants of the singular (1967[1908]:133, 134).

2.4. A Common Source for both the IE perfect and the Hittite *ḫi* conjugation?

Perhaps the most likely scenario, and the one assumed in this work, is that all three formations, the so-called "medio-passive" (as in Table1), the Hittite *-ḫi* conjugation and the IE perfect arose from a common source. Adrados (1981:28) sums up the common scholarly opinion[73] that :"The middle voice and the perfect are derived from a common Proto-Indoeuropean ancestor: the perfect arose in Post-Anatolian IE with polythematic inflexion" (this would be Adrados' Stage III, later than Lehmann's Pre-Indo-European, as it is reflected in Hittite).The suggestion that one can be derived from the other must be abandoned: "there are too many differences between the middle voice (Anatolian and Post-Anatolian) on the one hand and the Indoeuropean perfect on the other. [...] The *-o-* vocalism of the Indoeuropean perfect and its radical nature [...] is found once more in the Hittite *-ḫi* inflexion; the lengthened vocalism does not appear in the latter; as far as the middle is concerned, the *-ḫa* inflexion has the same vowel degree as the active; there is nothing in Indoeuropean comparable to the *-ḫi/-ḫa* opposition; the systematic grammaticalization is lacking in Anatolian and is obviously recent (cf. Van Brock 1964); the meaning << state derived from a past action >> is missing; on the other hand, there is not always identity between the Hittite middle voice and the middle voice of the rest of Indoeuropean [...] To sum up, there are too many differences simply to think that the perfect goes back to an earlier

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Adrados, in his bibliography, cites such scholars as Puhvel (1970), Meid (1971, 1979), Cowgill (1975, 1979), Kuryłowicz (1979) to which I add Lehmann (2002) and Puhvel (2002).

date to the separation of Anatolian from the rest of Indoeuropean" (Adrados 1981:30).

2.4.1. The shared source of the IE perfects and the Hittite *-ḫi* conjugation

What was this "shared source"? For the answer to this question, we return to the discussion in Lehmann (2002) of the binary split between "active" and "stative" groups of verbs that is characteristic of pre-PIE "active" language. The same type of split is assumed for early IE by Neu (1968; see also Gamkrelidze and Ivanov (1995:256ff), also Sihler 1995:445)[74]. Most striking is the Hittite parallel with the oppositional system in Finno-Ugric, where not only the morphological markers, but the semantic value of the opposition are virtually identical. Greenberg (2000:67) cites the contrast "m as active versus middle or passive k, m as active versus stative k". This type of opposition is also characteristic of the Ibero-Caucasian languages (see Maslov 1985:8, who cites the Kartvelian and Abkhaz-Adygian groups as examples).

Neu identifies the original split in the verbal system of PIE (Frühindogermanisches)

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Sihler (1995:445) refers to two groups as "Stative and Eventive verbs". I repeat the essential points of his analysis: "The inflection of PIE verbs was divided along functional lines into two types, which might be called stative and eventive. The former denotes states [mostly in the IE perfect], for example 'know', 'remember', be afraid', 'prevail', 'hate', 'be dead', 'be aware'. [...] The other, much larger, class includes things that happen, arrive at conclusions, bring about or undergo changes, and so on: 'learn', 'fly', 'throw', 'get full', 'look for', 'find' 'kill', 'break', die'. In PIE the two types differed in how their stems were formed, what endings were used, and in their functional categories (the nuances traditionally known as *voice*, for example, contrasts in the eventives but not in the statives)".

as two "diatheses"[75], Diathese Aktivum ('Handlungsform') vs. Diathese Perfektum ('Zustandsform') as in Table 17. The earliest split is between injunctive (modal) forms, the next step involves early characterization with tense morphemes :

Table 17. The Verbal system of Early Indo-European (after Neu 1968b:154,155)

Stadium I

INJUNCTIVUS

	AKTIVUM (Handlungsform)	PERFEKTUM (Zustandsform)
Sg.	1. *-m	*-ḫo
	2. *-s	*-tho
	3. *-t	*-o
Pl.	1. *-m	*-masto
	2. *-te	*-dhu̯o
	3. *-nt	*-or

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Szemerényi (1996:338) states that at the most archaic level "the difference from the 'present system' of the historical period lay not in the tense but the mode of action: the *-mi* verbs expressed action, the *ḫi* verb a state [...] there were even then two voices: the voices of action and the voices of state."

Stadium II

INDICATIVUS

	AKTIVUM (Handlungsform)		PERFEKTUM (Zustandsform)	
	Präsens	Nicht-Präsens	Präsens	Nicht-Präsens
Sg.	1. *-m-i	*-m	***-ḫa**	***-ḫo**
	2. *-s-i	*-s	*-tha	*-tho
	3. *-t-i	*-t	*-a	*-o
Pl.	3 *-nt-i	*-nt	*-ar	*-or

Many linguists have drawn attention to the characteristic archaic structure of the statal class, the "poverty of their paradigms compared with paradigms of dynamic verbs, and their proximity to nouns [...] words which denoted state were not originally verbs at all, but represented a separate part of speech (a kind of 'category of state')[76]. Later, they were drawn into the verbal system, sometimes even being incorporated into the paradigm of the

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Szemerényi (1996:255) discusses the "stative" which, "on the basis of certain formal and semantic peculiarities" has been postulated "in recent times"as a further "voice" for IE. The evidence for such a postulation is "provisional" and seen "only (or primarily) in the 3rd person: compare, for instance, OInd. *bruvē* 'is called, named' (stative) with (*upa*) *brūtē* 'calls on, invokes (for himself)' [...] Rix thinks that the distinction is also demonstrable in the 2nd person and reconstructs the following parallel systems":

Middle	2	-so	3	-to	6	-nto
Stative	2	-tha	3	-o	6	-ro

semantically and etymologically related verbs of action as forms of the perfect" (Maslov 1985:8)[77]. Thus the IE perfect would reflect the stative side of an original active/stative split (Neu 1968a and b, 1985:285), originally with the sense of a stative/adjectival present (relating to a past action). Puhvel notes the typological similarity of the -H conjugation of this early system to the Semitic stative ("permansive") (2002:101) and links the Hittite *-ḫi* conjugation to the same source, identifying it as a "stative perfect[78] whose present tense meaning is emphasized by the addition of deictic **-i* (adverbial tense particle)".

On this point, consider the many semantic doublets (perfect/med.tant.), of the type μαίνομαι 'rave, be in a frenzy' with μέμονα 'be full of zeal'. As Jasanoff (2003:43, 44) observes:

> Although the pluperfect and the modal forms of the perfect were morphologically active, the ancient and derivational ties of the perfect are with the middle. Many examples can be found of originally stative perfects correlated with present and aorist middles. Thus, for examples, Greek ὄλωλα 'I am lost' is in functional terms the perfect of ὄλλυμαι 'I perish' (aor. ὠλόμην) rather than of ὄλλυμι 'I destroy' (aor. ὤλεσα); πέποιθα 'I trust' belongs with πείθομαι 'I obey, am persuaded' (aor. ἐπιθόμην) rather than with πείθω 'I persuade' (aor. ἔπεισα). So too in Vedic, where *mamára*, *sasāha* are the perfects, respectively, of *márate* (*mriyate*) 'dies' and *sáhate* 'conquers'.

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See Puhvel (1970) for counter-argument on the nominal origin of the IE perfect.

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However, there is a logical fallacy in calling this a "stative perfect", if indeed the "perfect" is later than the *-ḫi* conjugation, and if both come from an earlier common source. Such characterisations therefore, need to be reexamined.

2.4.2. High self involvement signalled by *-H_2

The IE perfects and the Hittite *ḫi* conjugation would both have emerged from the "stative" *-H_2 (Neu's *-*ḫ*) side of the split: their common link being that both, in **opposition** to the *-m* conjugation, show a higher involvement of the subject. The perfect would be the more "nominal" or " adjectival" member, *describing the physical and mental disposition of the subject* (Lehmann 2002:81). Parallel to the "active" *-m* conjugation, the -H_2 conjugation would also involve an "active" or "agentive" type of verb, but be distinguished from the *-m* conjugation by being *geared to activities which somehow involve the special interests of the subject*. Thus, the uniting factor of the two derivatives of the "stative" conjugation would be that both pertained to the special interests of the subject: the perfect describing states or dispositions (of a human subject), the -H_2 added to mark such activities which are geared to the special interests of the subject or which engage the sentient subject's cognitive powers. This implies that the original split was indeed one of voice; hence the 'voice' nature of the morphologically similar descendants: the perfect (as already in Claflin 1939 and Neu 1976) and the Hittite *-ḫi* conjugation.

But if this early opposition was one of voice, how are we to establish this? How is the opposition marked? With respect, Neu's terminology AKTIVUM (Handlungsform) vs. PERFEKTUM (Zustandsform), as well as his reconstruction fails to fully capture the crucial factor implicit in all the data: there is a profound and fundamental difference between the first person singular and all other members of the paradigm, and between the first person singular of the *-m* conjugation and the first person singular of the -H_2 conjugation. Whereas

the endings of the first and second person are (ultimately) from personal pronouns, the third person endings are deictics: demonstrative pronouns, or adverbials (including the *hic-et-nunc* *-*i* and the stative*-*e*). These elements were likely added first to the third person (either singular or plural) and spread thence to the other two members of the paradigm.

This suggests two things: (1) like the -*m* conjugation, the *-H_2 conjugation originally had no vowel. (2) the roots were already characterised by ablaut for diathesis: *e*-grade in the more eventive -*m* conjugation, *o*-grade in the *-H_2 conjugation (with reflexes in first person singular perfects and Hittite -*ḫi* conjugation). This accords with what we know of early grammatical distinctions being made in the root, not by the later addition of a "thematic vowel". Justus (1982:301, 302) describes the earliest formal opposition between bases: "Formally, oldest Indo-European verbs show *e:o* vowel alternation in the root as in **weid-* :**woid-* :**wid-* 'see: know' [...] and three sets of inflectional endings designated 'active, perfect, middle'". Hittite shows evidence of having reached only this early stage: "thematicization", which is a significant factor in all IE languages, is not a feature of Hittite. At a later stage, as again described by Justus (*ibid*): "Active and middle forms may in addition belong to either of two conjugations, thematic (with 'theme' vowel -*e/o*-) or athematic (without theme vowel). Active and middle verbs of both conjugations take similar person endings, while perfect 'active' forms are unique. Perfect endings *-*a* (or *-H_2-*e*) *-*tha* (**tH-e*), *-*e* (*-Ø-*e*) of the first, second, third persons singular and *-*r* of the third person plural contrast with basic person endings *-*m, -s -t -nt* of both active and middle. Deictic *-*i* makes present active forms (*-mi, -si, -ti, nti*) while middle *-*o* or *-*o-i* forms present middle

(**-moi, soi, -toi, -ntoi*)". Athematic actives, like perfects, often have singular : plural ablaut (**woid-* vs. **wid*). All this morphology belongs to a later date: only fully worked out in Late PIE, not in the pre-PIE situation that we see in Hittite. So let us take the next step that is evidenced by Hittite.

To these opposing roots characterized by ablaut grade, a "suitable" pronoun would appear first post-posed and then cliticized to the appropriate root: *-m* to the eventive *e*-grade, the *-H_2 to the stative *o*-grade. The suffix would be predictable from the root already characterised for diathesis: centrifugal in the eventive *-m* conjugation, centripetal in the stative -H_2 conjugation. The configuration (root-final) *-H_2 would result in the *-i* seen in the earliest "secondary" endings of the *ātmanepada* endings of Sanskrit as well as the Hittite forms in *ḫa* (< *-H_2), which show early present tense or modal meaning (this analysis assumes that the final vowel is an artifact of the Hittite orthography and the impossibility of writing a word-final *-H_2). In this way, the Hittite forms would correspond both in form (without a vocalic ending) and meaning (modal) of early injunctives as in Sanskrit.

The next step, the addition of a vocalic suffix, would also show a split for conjugation. The *hic-et-nunc* tense particle **-i* would be added to the *-m* conjugation (resulting in *-mi*, as above), and relegating the forms in *m* to the preterite. In the *-H_2 conjugation, on the other hand, in keeping with its descriptive character, the "stative" *-e* would be added (as in Puhvel's third person example above). This configuration, *-H_2e would produce the endings of the Sanskrit perfects (*-a* < *H_2-*e*), the Greek perfects (-α < *H_2-*e*) and the early Hittite forms in *ḫa* (< *H_2e) (thus Melchert (1994:52) PIE *-h_2e is "the

regular first person singular ending"), often with present tense meaning in early documents.

The later addition of the *hic-et-nunc* tense particle *-*i* to the Hittite -*ḫ* conjugation, (imported from the -*mi* conjugation) would result by vowel coalescence in *ḫa* + *i* > *ḫe,* the earliest form of the -*ḫ* conjugation.

Again, this analysis suggests two things: that the original suffix appended to the first person singular forms of the "stative" conjugation was not *-H_2o (as proposed by Neu, Cowgill, Kurlyowicz) but *-H_2e as argued by Beekes (1995:238); Melchert (1994:52); Jasanoff (1992:132).

2.5. Some remarks on the final *-*o* of the first person singular of Neu's "Perfektum"

Any good linguist, observing the most reliable and fundamental principle of comparative linguistics, the regularity of sound change, would, as do Neu, Cowgill and Kuryłowicz, propose *-H_2o, based on the final -*a* vowels of Sanskrit and Greek. However, as I will argue here, this reconstruction is based on phonology only, and does not give full shrift to the important and unique semantic and morphological position of the first person singular in early formations (including the IE perfects, the Latin deponents, the Sanskrit *ātmanepada*, and the Hittite -*ḫi* conjugation). On phonological grounds alone it is not possible to tell whether the final -*a* vowels of the Sanskrit and Greek first person singular perfect come from *H_2o or *H_2e as "the outcome of *H_2o was identical to that of *H_2e" (Sihler 1995:46) and PIE **a* and *H_2e fall together in Greek and Latin (Sihler 1995:44). Despite their reliability as scientific guides, the principles of sound change cannot be applied

across the board, without taking other relevant semantic, morphological and lexical factors into account. Consequently, I would not accept any analysis which reconstructs an ancestral suffix *-H_2o for the suffixes seen in the first person singular perfect forms of Greek, Sanskrit, or the Hittite -*ḫ* conjugation, for the following reasons.

2.5.1. Why -*o*-? The regularity of sound change

As early as the 1860's, linguists observed that sound changes did not happen haphazardly, but rather followed regular patterns and correspondences. These were so regular that they were referred to as "laws". It was this valuable insight, more than any other, that "laid the basis for comparative linguistics as we know it today" (Beekes 1995:54). It had long been noticed for instance, that where Greek had an [*o*], Sanskrit regularly had an [*a*] :

Greek *néphos* 'cloud'	=	Sanskrit *nábhas* 'cloud'
Greek *ostéon* 'bone'	=	Sanskrit *ásthi*

If one assumes the regularity of such correspondences, even exceptions could be explained. For instance, Greek *gónu* 'knee' corresponds to Sanskrit *jā́nu* 'knee'. Here, the long *a* of the Sanskrit corresponds to the *o* of Greek. This "exception" is itself rule-governed: the long *a* of Sanskrit appears when the *o* in Greek is syllable final, a "regular irregularity" known as Brugmann's Law. On such principles, the following forms of the perfect appear to show some violation of the *Lautgesetze*:

Sanskrit	1st sg. perfect	*tatána* 'I stretch(ed)'	Greek	*tétona* 'I stretch(ed)'
	3rd sg. perfect	*tatā́na* 'he stretch(ed)'	Greek	*tétone* 'he stretch(ed)'

Whereas the *internal* root vowel correspondences are expected (Skt *a* = Gr. *o*) in the first person singular, (Skt *ā* = Gr. syllable-final *o*) in the third person singular, something does not match in the final, suffixal vowels: the final *-a* in Sanskrit demanded a final *-o* in Greek. The solution was provided by the laryngeal theory, which not only solved the apparent "violation" of the regularity requirement, but enabled other correspondences to be identified, which otherwise would have remained doubtful. "The problem was solved when it appeared that the 1 sg. *-a* [of Sanskrit] derived from *$*-h_2e$* [...], that is to say, from a 'laryngeal', a consonant, followed by an *-e*. Now there was no *o* any longer at the end of the syllable" (Beekes 1995:55).

The Greek form was not **tétono or **téton-h_2o, but *$*te\text{-}ton\text{-}h_2e$*. This fact in no way violated the laws which govern comparative linguistics: rather, it reinforced them. Because these laws require regularity, when we see a pattern which does not fit, we are motivated to seek a possible alternative explanation[79].

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Sihler (1995:46) says that many supposed cases of Greek and Latin *o* "from *$*H_2o$* are more vulnerable than generally recognized. G. ὄκρις, Latin *ocris* [..] for example, are traced to etyma in *$*H_2o$*- not because an *o*-grade is expected, but because the reconstruction will (in one view) yield the attested forms".

Speaking of the *order* of specific morphological elements that mark the "middle voice", Sihler remarks (*ibid*) that "In the system of endings [as reconstructed for the middle voice] the middle voice is marked with a vowel after the person marker. The formal patterns in this system of endings are clearest if the 1sg. midd. (L *-or* and G -μαι) can reflect *$*H_2$-o*."

2.5.2. Not *-*ḫo* but *-H_2o

My first objection to Neu's reconstructions of the first person singular PERFEKTUM (Zustandsform) INJUNCTIVUS *-*ḫo* and the PERFEKTUM (Zustandsform) INDICATIVUS present *-*ḫa* and preterite * -*ḫo* is relatively minor, and will be expanded on in the following chapter. Briefly, his orthographic representation of the PIE ending as -*ḫ* (= identical to the marker of the Hittite -*ḫ* conjugation) implies that this marker was identical in phonetic quality to the Hittite phoneme. Although they may be (and I believe are) *ultimately* identical (i.e., from the same source), his reconstruction fails to capture the evolutionary facts with regard to the parent phoneme and its various reflexes. The PIE phoneme (*-H_2) was a pharyngeal phoneme. Its reflex in Hittite was by most accounts a voiceless velar (or uvular) fricative. The pharyngeal quality of the original PIE phoneme explains many correspondences which would otherwise be mysterious (such as the outcomes -*a* and -*i*). The *evolution* of the phoneme from its original pharyngeal (vertical) articulation to its later (horizontal) articulation (as uvular or velar) is clear from the phonemic evidence both of the Anatolian family (Melchert 1994) and the Indo-European family in general (Evidence for Laryngeals 1960). It would be more suitable to replace his *-*ḫ* with *-H_2, making the reconstruction *-H_2 not *-*ḫ*.

In fact, we know that they do not. The Latin deponents with first person singular -*or* are from oH_2 NOT H_2o. Only the former would yield the -*o* to which the -*r* was then appended. In the Greek middle, there is no sign whatsoever of the original H_2 marker: the μ is an import from the "active" conjugation. Only in the perfect is the H_2 marker seen.

2.5.3. Not *-H_2o but *-H_2e

A further objection concerns the final vocalic markers which Neu reconstructs for the INJUNKTIVUS *-ḫo and the INDICATIVUS *-*ḫo* and *-*ḫa* and is more basic as it goes to the very heart of what the earliest (pre-PIE) grammatical distinctions must have been (as described in Adrados 1982, 1987,1995-1998, Lehmann 1993, and Lehmann 2002). First, the evidence of Vedic Sanskrit is that the injunctive originally had no stem-final vowel at all. This accounts for this form's ambiguous character[80] as regards categories of mood and tense. The addition of a vocalic element (the augment in Sanskrit and Greek, or the *hic-et-nunc* 'tense' particle) removes the ambiguity. The ending which Pāṇini provides as the first person singular *ātmanepada* in opposition to first person singular *parasmaipada -mi* is not *-me*, or *-e*, or *-a* (which might be from PIE *-*o*) but *-i* (which is a reflex of PIE *-H_2, which must have been originally word-final to account for the Sanskrit form: the addition of a following vowel regardless of its quality, could not do so). In order to be understood as "present tense" (= *vartamāne laṭ*) the "allomorphic" endings with which we are familiar (*-e* in the first person singular) must replace the original vowel. This suggests an exact parallel with the primary/secondary distinction in Greek and Sanskrit and implies that the *-i* ending (a reflex of word-final *-H_2) was the original (and older) ending. It was construed as preterite in opposition to the *-e*.

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Bloomfield and Edgerton (1930:76): "The injunctive [...] is identical in form with augmentless preterites of all classes. The distinction between modal value and preterite value is always hard to make; especially since the Veda abounds with preterite indicatives in quasi-modal use".

2.5.4. Not **CoC-H_2o* but **CoC-H_2e* (or**CeC-oH_2e*)

An objection to the reconstruction of a final **-o* vowel in the INDICATIVUS suffixes **-ḫo* and **-ḫa* is more involved and involves the following points:

2.5.4.1. Such a reconstruction (**-H_2o*) would not be compatible with what we know of the earliest grammatical distinctions and ablaut patterns

As expressed in the quote from Justus (1982:301) above, the earliest grammatical distinctions were made in the root, not suffixally. For this knowledge, we are again indebted to Brugmann's insights into the early language, based on his observations of patterns in the classical languages[81]. Both nominals and verbals in the proto language, as reflected in the dialects and described in the standard handbooks, are of the structure ROOT + derivational affix + inflectional inflection. Segments composed of these first two are known as "stems"

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One of the earliest distinctions he described was between finite and non-finite forms. The latter he divided into *nomina agentis* (agent nouns) and *nomina actionis* (action nouns). The *nomina agentis* are the participles, already fully developed at the oldest layers of the Proto-language (in *-(e)nt-*) and seen in most daughters. The *nomina actionis* are essentially verbal nouns – often called supines--, which would later become the infinitives in Latin, Greek and Sanskrit. Both the earliest stage (inflected verbal nouns, often heteroclitic *-r/-n* stems) and the later developments are seen in Hittite, confirming Brugmann's insight. Absence of infinitives is characteristic of OV languages ("for as complements to finite verbs infinitives can only be interpreted when the principal verb is known" (Lehmann 1993:165)). Essentially, this early opposition in non-finite forms opposed an agent and an actor. This appears to me to be the identical semantic distinction between the "active" verbal conjugation (*verba actionis* = centri**fug**al action) and "stative" verbal conjugation (*verba agentis* = centri**pet**al action). This opposition to my mind involves more a *direction* rather than a level of transitivity. In this way, a more correct opposition would be not transitive vs. intransitive (for both can be either), but a distinction based on the nature of the action with reference to the subject.

or "themes". These stems are composed of the root plus a following vocalic derivational affix, typically ablaut variants *-e/-o*. These vowels are referred to as "thematic vowels" and the nominal, adjectival and verbal forms that bear them are called "thematic". However, Hittite shows evidence of being only in the earliest stages of this type of thematization (Adrados 1982; Lehmann 2002).

Grammatical distinctions that could be made in the ROOT were primarily lexical involving (1) verb type (Aktionsart = lexical aspect); (2) basic grammatical category marked by ablaut, nominal (*-o-*) or verbal (*-e-*), (3) distinction of "activity" (*-e-*) as opposed to "state") (*-o-*) (typically described as "transitive" vs. "intransitive" but this terminology does not fully convey the relevant distinction, as I have pointed out)[82]. (4) The earliest verbal system also opposed two voices, called centripetal ("middle") and centrifugal ("active"). Although it is generally accepted that the basic grammatical distinction of verb vs. noun was marked by root ablaut, the basic verbal distinction -- diathesis (= involvement of subject) --was as well, *even before the addition of the inflectional endings for person.* These endings were added to roots already characterised by one or another of the ablaut grades, on the

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Schmidt (1977:111) indicates that the 'intransitive/transitive' distinction arises from the original active/stative, primarily on semantic grounds. As Schmalstieg (1980:171) explains: "The active verbs were implicit transitive or intransitive verbs whereas the inactive verbs were always intransitive". (This distinction is not supported by early evidence, as I have pointed out elsewhere). Klimov (1972) was one of the first to use the term "active" language to describe the precursor to ergative vs. nominative languages. In Caucasian languages, there is a tendency for transitive verbs to lose the concord between verb and goal of the action (i.e., the subject in ergative languages) and to replace this by the verb and the agent (i.e., the subject in nominative languages). Only transitive verbs are affected by this phenomenon because in intransitives there is no difference between the grammatical subject and the agent.

pattern like with like (stative with stative , active with active) outlined in Lehmann (2002) (*o*-grade root with *-H_2), *e*-grade root with *-*m*). The "person" suffix (later understood as a desinential marker) would be predictable based on the ablaut grade of the root[83].

The early language would have opposed two root types with different ablaut grades : *(C)CeC(C) vs. *(C)CoC (C) (the standard canonical root shape with -*e*- grade opposed to a characterised -*o*- grade). The evidence of archaic forms (such as the IE perfects) is that ablaut of the root as marking grammatical distinctions *preceded* distinctions (and "thematization") via the suffixed vowel. Thus *CeC vs. *CoC would have been earlier than *CeC + thematic vowel- vs. *CoC +thematic vowel: (I have omitted zero grade forms as they are not directly relevant to this discussion).

E-grade		O-Grade	
*C(C) e C(C)	*bher-	*C(C) o (C) (C)	*bhor- 'carry'
	*dheH$_1$-		*dhoH$_1$- 'put'

When PIE moved from an agglutinating to an inflecting language, the first

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Melchert (1994:52), following Jasanoff (1988:73) mentions "a special development of final *-oHe# in PIE. When the accent is earlier in the word, the final *-e of * ˈoHe is apocopated: thus thematic first person singular * ˈoh$_2$e > *-oh$_2$ > *-ō [...] However, when the accent falls on the *ó the result is *-óHu# [...} perfect third singular *d^{h}e-d^{h}óh$_1$e > d^{h}e-d^{h}óh$_1$u > Skt. dadháu (likewise the first person singular with simplification of the double laryngeal cluster: *d^{h}e-d^{h}óh$_1$-h$_2$e> *d^{h}e-d^{h}óh$_2$u > dadháu). From similar perfects to roots in final laryngeal comes Latin -*u*- perfect".

grammatical category to be marked was PERSON (Lehmann 1993:172; Shields 1992:23). These person markers would have been first located next to and subsequently attached to a root to indicate who it was that was involved in the verbal action (Schmalstieg 1980:166ff). (This would be Neu's INJUNKTIVUS stage). Originally, this involved *only* the person marker: **CeC-m* seen in the original "secondary" endings (Schleicher 1974 [1876]: 684-685), and the injunctives of Vedic and **CoC-H_2* seen in the original *ātmanepada* endings, and reflected in IE perfects).

At this very early (pre-inflectional) stage, then, *o*-grade was characteristic of the ROOT not the suffix: Both the IE perfect and the Hittite *ḫi* conjugation share this distinctive morphological characteristic of ROOT *o*-grade (Melchert 1994:33,50; Lehmann 1993:174)[84].

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The evidence of Latin deponents is that it was characteristic of only the first person singular, but before, not after the person suffix: thus

sequo-r (< *sék^{w}o-h_2- + -r as later Italic addition)
seque-ris
seque-tur

Table 18 . Root/Suffix patterns for pre-PIE "stative" vs. "eventive" 1st singular

	STATIVE		EVENTIVE	
	Centripetal version		Centrifugal version	
	ROOT	SUFFIX	ROOT	SUFFIX
1st person singular	o (C)-	-h_2	e (C)-	-m

When at a later stage a particle was added, as the *hic-et-nunc* tense particle *-*i* to the *m* conjugation, the vowel would have been added to a stative form already of the shape *CoC-H_2* (as attested in all IE daughters perfects and the Hittite -*ḫ* conjugation). Since the root vowel of the first person singular was already with *o*-grade, the addition of a theme vowel, when it was added, could not have been -*o*. A form with two full grades (*o*-grade of root and suffix) is not a typical IE form. Based on this criterion, as well as the "stative" nature of this conjugation, the likelier vowel would have been the adjectival/stative marker *-*e* to the *-H_2 conjugation (> *-H_2e). This accords with what is known of the phonological ('coloring') effects of the IE laryngeals, as well as the attested endings of the archaic IE perfects and the earliest forms of the Hittite -*ḫa* conjugation.

"Middle" endings of the second and third persons with -*o* vowels, such as -*t^ho*, -*o*, or -*to* (seen in early Mycenean and Greek endings) *would* be possible, as they would have been added to roots that did not have *o*-grade. Thus:

Table 19. Root/Suffix patterns for pre-PIE "stative" (centripetal version) roots and stems

		ROOT	SUFFIX
Centripetal version			
1st person singular		o (C)	-h_2
2nd person singular	(o-grade later generalized)	e (C)	-t^ho
3rd person singular		e (C)	-o

This pattern implies that the generalization of *o*-grade throughout the (root paradigm, as in the perfect) was later and analogously from the first person singular. We know that plural forms are later than all forms of the singular, indeed are based on singular endings. Therefore, at a very early stage, the opposition singular : plural = o : Ø (*woid- / *wid) would not be meaningful and could have been exploited to mark the opposition 'I' vs. 'other'. We also know that there was a profound morphological distinction between the first person singular and the other two persons. This pattern is seen clearly in the following data:

Table 20. The positional development and overlap of laryngeals, ablaut and stem thematization

Present "active" thematic		Latin Deponents			Present "middle"thematic		Present "middle"
IE	Greek				IE		Greek
*terp-o- H_2	térp-ō	cōn-o-r	vere-o-r	ori-o-r	*terp-/tr̥p–o-m-o-i	térp-o-m-ai	*es-m-o-i
*terp-e-s-i	térp-e-is	cōn-ā-ris	vere-e-ris	ori-i-ris	*terp-/tr̥p–e-s-o-i	térp-e-s-ai	*es-s-o-i
*terp-e-t-i	térp-e-i	cōn-ā-tur	vere-e-tur	ori-i-tur	*terp-/tr̥p–e-t-o-i	térp-e-t-ai	*es-t-o-i
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1.120

These data (non-Latin data and reconstructions from Justus 1982:304) represent a step away from the original root opposition based on ablaut grade. The **pattern**, both of first person singular *o*-grade, as opposed to *e*-grade (or, in Latin, non-*o*-grade) of second and third, is maintained (but external to the root, as in (1)-(5)). The "thematic" vowel of the first person singular is always *o* and, at this early stage BEFORE the person suffix. The Greek data show both the earlier pattern *o-e-e* (closest to the root) with the *o*-vowel of the first person singular extended throughout the paradigm in the "middle" suffixes after the person suffix. But the **earlier** (post-root) characterisation remains in the pre-person inflectional spot.

(1)	Opposition of root-based ablaut	*CeC (centrifugal)	vs.	*CoC (centripetal)
(2)	Addition of person suffix (cliticized pronoun)	*CeC-m (centrifugal)	vs.	*CoC-H_2(centripetal)
(3)	Addition of deictic particle	*CeC-m-i (centrifugal)	vs.	*CoC-H_2-e (centripetal)

(4) Transference of earlier pattern (1 *o*, 2 and 3 *e*) to post-root slot after loss of *-H_2 (as in Latin and thematic conjugations of Greek)

(5) Extension of *o*-grade (of the first person) throughout the singular paradigm of the perfects in opposition to plural forms

(6) Extension of the *o*-grade (of the first person) throughout the singular paradigm of the Greek "middle" in the post-person affix slot, but retention of the early pattern closest to the root.

1.121

1. Voice marked within root (Voice marked by ROOT in first person singular produces 1st sg-based ablaut pattern *e* vs. *o* located before the person markers *-m* vs. *-H_2*)

2. As a consequence of above, the personal paradigm of the centripetal now reflects 1. *oC-H_2*, 2. *eC-tH_2*, 3. *eC-Ø*

3. With the loss of the laryngeal, or perhaps with a move away from root-based distinctions to a more inflectional system>

4. Ablaut pattern of original is maintained, but outside the root, but still before person endings.

Further thematization repeats the root pattern, *o-e-e*, but in the suffix, and before the person markers (as in the deponents). A still later characterisation extends the (original) first person singular marker *-o-* throughout the "middle" paradigm, as in Greek. But these characterisations are clearly later, and represent much Greek innovation and "mixing" of the two early conjugations.

An implication of what I have set out here is that there was a paradigmatic opposition between the first person singular and the other two persons of the singular in the category of diathesis. This distinction is certainly clear in Hittite (hence the name of the present conjugations). Working from the paradigms outlined by Schleicher, we see a clear opposition between "active" forms with *-m* and "perfectum" forms in *-a*. Because of the archaic evidence provided by Hittite, we now know that the *-a* endings of the perfectum reflected the second laryngeal of the parent language *$*-H_2$*. Therefore, we can see, again across the board, the suffix *$*-H_2$* in opposition to the *-m*. This contrast pervades Indo-European languages: the two endings (*-mi/-ō*) are always in complementary distribution[85]. As Palmer says (1980:296) "in the contrast *-mi/ō*, the lengthened thematic vowel of the latter suggests [...] an original *-*oH*. This guides the search of the comparatist. He will look for evidence of structurally opposed *-mi* and *-H* verbal systems. This is a feature of Hittite, and it is in the *-ḫi* conjugation that a third singular *-i* is found".

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This is a counter-argument to Beekes' reconstruction with both (1995:240), albeit in the "middle". Although certain verbs may appear in one conjugation or another, the *endings* of the first person singular are never used in concert. The endings of the 2nd and 3rd persons do often appear combined, though.

There is substantial evidence for the "special" nature of the first person singular. I have already mentioned that the Sanskrit grammarians referred to the first person as *uttama* 'best', 'elevated', 'highest' (< *ud* 'up' + *tama* 'superlative suffix'). Schmalstieg (1980:102) says that the distinction is clear from the inflectional endings: "An examination of the Indo-European inflectional endings reveals a much closer relationship between the 2nd and 3rd persons than between the 1st and 2nd persons [...] Formally at least it would seem more logical to group the 2nd and 3rd persons into a single category opposing the 1st person" (Schmalstieg 1980:102).

2.5.4.2. Such a reconstruction of *H_2o for the first person singular does not accord with the phonological facts as we know them

The laryngeal element which marked the "stative" side of the split was *-H_2. This is the *a*-colouring laryngeal which colours a neighbouring -*e* vowel to -*a* (thus Beekes 1995:126: $h_2e > a$, $h_3e >$o). Melchert identifies PIE *h_2e (not h_2o) as "the regular form of the first person singular ending". *H_2 "appears not to have affected the timbre of a neighbouring *o, so that the Greek and Tocharian 1st sg. Middle endings *-mai, -mān*, A *-mār*, B *-mar, -mai* cannot be derived from *-H_2o [...] there is no evidence at all for *o*-vocalism in the 1st sg. middle ending of the proto-language" (Kortlandt 1981:125).

Nevertheless, although a suffix *-H_2o is not possible for a first person singular form, *(*o*)C(*o*)-H_2e- certainly is, and is attested (as in the Latin data above, where the *o*-vowel appears outside the root, but inside the stem before the (original) *-H_2 and the later *-r*, an Italic innovation. The type of root to which the suffixal ending -H_2o might have been added

was already lengthened grade, and would, as I have said, have resulted in an inappropriate (verbal) form **$CoC\text{-}H_2o$, even if the *o*-vowel was outside the root.

2.5.4.3. Such a reconstruction would not be in accordance with chronological developments as we now understand them (this point is related to the one above)

Following reconstructions such as Neu's, many have assumed this appended *-*o* to be the source of the final -*a* of the Hittite "middle" forms in -*ḫa*. However, on the point of the voice value of such vowels, see Adrados (1982:18,19), who accuses certain scholars (notably Kuryłowicz and Watkins, references in Adrados) of an anachronism: both assume that these vowels mark a grammatical category–voice-- which Adrados argues had yet to evolve:

> Thus, for example, the whole school of thought which follows these authors states time and time again that the -*e* or -*o* of the 3rd. sing. perf. or 3rd. sing. of the middle voice originally had a middle value. They thence draw far-reaching conclusions [...] However, -*e/o* (and -*to*) are found in numerous active forms. To give preference to the middle voice meaning over the active is just as arbitrary as the contrary. The most accurate thing one may state is that -*e/o* originally had no voice value.

Of course, as in the Greek paradigms, vowels did have (a later) voice value, but as a reflection of an earlier system, as I have explained above. Based on the chronological facts of Hittite attestations, and following the phonological and chronological arguments outlined

in Melchert's (1994) *Anatolian Historical Phonology*, I suggest that the most logical explanation for the *-ḫa* forms which precede *-ri* endings, is a development along the lines:

(1) *-H_2# (= an original --and word-final-- consonantal marker, as in the "secondary" endings of Greek and Sanskrit 'injunctives'[86]), as proposed already in Lehmann (1993:174),

(2) - H_2+*e* , the addition of a final *-e#* , possibly an analogical extension from third person singular, and probably in origin an archaic "stative", "adjectival"(or locative) marker, not associated with voice. This combination (of the "a-colouring" laryngeal with a neighboring *-e*) would produce the following ending in Hittite:

(3) *-ḫa* (originally with present-tense or modal value, but analysed as preterite upon the later adoption of present tense marker *-*i*. This development must have occurred during the Proto-Anatolian period, as it depends on changes in the IE parent phoneme *-H_2 (a pharyngeal fricative) to its Hittite value (most often described as a voiceless velar fricative). This shift happened, according to Colarusso (1997:124), "in the period of early differentiation". In other words, no such form as *-H_2*a* could have existed in the parent language: "The habit of writing h_2a and h_3o instead of h_2e and h_3e makes the morphology of

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"The injunctive forms are residues of an earlier period in which meanings of tense and aspect were conveyed by inherent value of the root or by particles rather than by [suffixal] ablaut or [derivational] suffixes [that is of the type *-n, -sk-, -s-, -y-*, etc]...] When tense came to be a category of the verb system, a further suffix, *-i*, was appended to the person markers. In the earliest Sanskrit and Greek texts, we find a contrast between endings with this suffix and endings without it. The extended endings are applied in the present. The older unextended endings, by contrast, are applied in the aorist and the imperfect [...] Because classical grammarians considered the present "primary" and the imperfect "secondary", in grammars the endings with final *-i* are labelled primary, even though they are more recent than the so-called secondary endings" (Lehmann 1993:173).

PIE less transparent and denies part of the progress made possible by the laryngeal theory (and phonological notation)" (Beekes 1988:60).

By the early Anatolian period, however, the laryngeal had both 'coloured' the neighbouring vowel to *-a* and had changed somewhat from its original value (pharyngeal to a more front value), so that whereas PIE **-H_2a* makes little phonological sense after this transition, Hittite *-ḫa* is a possibility. Although the stative marker *-e* may have undergone a certain amount of *phonological* alteration owing to its juxtaposition with **-H_2-*, the semantic sense of the "stative"would persevere. To this Anatolian suffix *-ḫa* was later added the *hic-et-nunc* particle *-i,* an import from the *-mi* conjugation (see Lehmann 1993:173). By vowel coalescence, this could result in *-ḫe* (which are the earliest forms of the first singular endings of the Hittite *-ḫi* conjugation verbs).

2.5.4.4. Reflexes of such a reconstruction (**CoC-H_2o* = suffixal **-H_2o* to an *o*-grade root) are unattested in the first person singular of daughter languages

Kortlandt (1981:125) categorically states that "there is no evidence at all for o-vocalism in the 1st sg. Middle ending of the proto-language". He emphasises that "The reconstruction of **-H_2o* forces Cowgill to assume a substantial amount of remodelling" in cases where Kortlandt sees "phonetically regular forms" (1981:125).

2.5.4.5. Such a reconstruction is not justified by the lexical and grammatical facts

It is important to note the *position* of the *-o-*, both as it relates to $*H_2$, and relation of the two together within the word. In word-initial position, $*H_2o$ does indeed result in *ḫa* (with the regular **o* > *a* correspondence) as in PIE *H$_2$owi (Kimball 1999) > Hittite *ḫawi* 'sheep' or Hittite preverb *ḫa-* 'to' from PIE $*H_2o$- (Melchert 1994:134[87]).

When it appears in word-final position, -$*H_2o$ results in the lexeme *ḫa* meaning 'also' or 'and' (Melchert 1994:8, 134). *ḫa* from *-H_2o is the *lexical* sentence connective 'also' NOT the *grammatical* marker of the 1st person singular. The lexical meaning of -$*H_2o$ > =*ḫa-* is old (though not as old as the grammatical suffix $*H_2e$ > -*ḫa* 'first singular'). Melchert considers the obligatory use of such overt markers (sentence-initial and enclitics) "to connect all but the first sentences in a discourse" to be one of the defining isoglosses of Proto-Anatolian (1994:7):

> Once again the languages vary in the specifics, but the morpheme **mõ* (marking new information, often lightly adversative[88] is pan-Anatolian, while *-*Ho* (< PIE $*h_2o$) 'also' is attested everywhere but in Lydian" (Melchert 1994:8).

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"For $*h_2o$- 'to, zu' see Hitt[ite] *ḫašduēr* 'branches' < $*h_2o$-*zd-wér*" (Melchert 1994:134). The preverb also appears in *ḫatk* 'shut' , 'cover' (see entry #28 in Volume II), from < $*h_2o$-*tk*. Note the zero grade of both roots following the (presumably accented?) prefix.

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Of course, one recognizes immediately the Vedic adversative particle *má*, Greek μή, Armenian *mi*, used with ancient injunctives.

We know that one possible source of Hittite *-*ḫa* was *-H_2e. We may now say that, given the context in which is attested (as a grammatical marker of the first person singular of IE perfects, first person singular throughout the Anatolian family), it is the *only* possible source of Hittite -*ḫa as a grammatical marker of the first person singular.*

2.5.5. Semantic links between the IE perfects, middle voice and the Hittite -*ḫi* conjugation

In this section, I address the point of semantic tangency between the Hittite -*ḫi* conjugation and the PIE stative and the perfect. Scholars agree that the -*ḫi* conjugation aligns well with the IE stative on a formal level: both share the characteristic endings and *o*-grade of the root, but, they claim, they do not show any functional similarities. Shields (1992:85) agrees that "No formation in the Indo-European family of languages has remained more of an enigma for historical analysis than the Hittite -*ḫi* conjugation." He quotes Cowgill's (1979:25) remarks that while stem shapes and endings correspond well "the functions and lexical constituencies of the two formations correspond very, very poorly".

Despite the clear and obvious **morphological** links between the -*ḫi* conjugation, the IE perfects, the "secondary" *ātmanepada* endings in Sanskrit, and the "middle" in Greek or Vedic Sanskrit (provided in tabular form in Appendix VI), the semantic point of tangency between them is problematic. What relationship do all these forms have to the archaic "stative" conjugation? What is the *semantic* significance of the widely-acknowledged *morphological* resemblances including root *o*-grade of the first person singular in both the

perfect and the *-ḫi* conjugation and (most clearly) in the endings of the first person singular in both?

The answer is contained in the question: *the first person singular*. I repeat the remarks of Schmalstieg (1980:172) whose import may now be clear: "...the oldest layer of Indo-European can easily be understood without the notions of active, passive, transitive, intransitive [...] There are merely different ways in which the various participants in an action may [...] be connected with the verb". That the morphological opposition is clearest in the first person singular provides an important clue to the semantic associations between the IE perfects, the Hittite *-ḫi* conjugation and the ancestral perfectum. Perhaps we have overlooked the obvious because it is so obvious, or again, since we are looking at a system from a great time distance.

The "states" betokened by the IE perfect were of two main types (Lehmann 2002:77ff, following Delbrück Gdr. 4 417-418, and 178-213): psychological states (of humans) and bodily states (of humans). The middle in all dialects indicates "more intensive participation by the subject". Stepanov (1992:160) discusses the characteristics of *tantum*-type verbs throughout the IE family. He says: *Perfecta tantum*: in Homeric Greek verbs, these predicates correspond to "state of the body" or "state of the mind". The *media tantum* group must have been associated originally with human subjects:

> If a sentence has as its subject an "active entity" (man, animal, wind, river, water, fire, etc.) the predicate is taken from the *activa tantum* class. If, however, the

"active entity" is specifically and emphatically human, the predicate will be chosen from the *media tantum* class (Stepanov 1992:161).

What did these various classifications reflect, or tell us about either the nature of PIE verbal systems, or of the age of such distinctions?

> The change in Proto-Indo-European deep structure from active to nominative-accusative is reflected in the shifting of the dominant classification from nouns to verbs.[89] The verb thus evolved the binary transitive/intransitive distinction, in replacement of the fading active/inactive taxonomy of the noun. If so, the stage described here coincides with the transition and temporary coexistence of the two classifications.
>
> Another explanation, however, is possible. As a complicating factor the category "animate personal" may have arisen. It doesn't seem to be pure chance that the **disagreement of the two classifications is most prominent when in a sentence emphasis is laid upon the characteristics of subject as "human", "personal", that is, this subtype of subject is opposed to all other active subjects** (Stepanov 1992:162). [My emphasis:SR]

In this way, the "stative" is a sub-type of "active" (in the sense of animate actor) used for indicating personal human subjects.

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There are three things to note with regard to this point:

1. Hittite's "gender" distinction *could* be argued to be based more on human (common) vs. non-human (neuter), rather than "finer" distinctions based on inner-human splits between masculine/feminine).
2. IE Perfect is very "nouny"(*o*-grade) and adjectival. This feature is reflected in Hittite *o*-grade verbs of the *-ḫi* conjugation. For this view, see Cowgill 1979:33ff.
3. Many verbs of the *-ḫi* conjugation are "denominatives" / factitives (verbs derived from nouns/adjectives).

2.5.6. Misunderstandings of early categories

It is also possible that we have failed to understand certain important aspects of these ancient binary splits. This is the point of view that Sihler (1995:566ff) takes. He discusses three "erroneous" views concerning the nature of the PIE stative, all of which are of central importance to the thesis presented here:

1. That the original meaning was "present state resulting from a previous action". In fact, he says, and his contention is strongly supported by the Hittite evidence I present here, many of the "statives" involve no such "precedent action or experience". He cites such verbs as 'is brave', 'hates', 'yearns for', 'owns, has', 'fears, 'understands', etc. The common factor in such verbs is, as he says, not necessarily previous experience. Clearly, all these verbs do have a commonality, but it is not necessarily "previous experience": rather, all describe human activities (typically, emotional or cognitive).

2. That the endings of the PIE stative align with the endings of the "middle" (by this, he means forms with *-ri*). "In reality, most of the endings of the perf[ect] align with the eventive ACTIVE endings, as the 3sg. *-*e* (perf.) which bears the same relationship to the *t*-less 3sg. eventives [...] that the 1sg. *-H_2e bears to the eventive them[atic] *-H_2".

Here, the issue of terminology is central: the "eventive ACTIVE" conjugation which he describes as being morphologically closer to the PIE stative is of course the Hittite *-ḫi* conjugation, which I am claiming represent the ORIGINAL "middle" voice, with the "middle" ending later, derived, and thus, as Sihler points out, less congruent with the original stative. It is the Hittite *-ḫ* conjugation with its characteristic ending (< *H_2) and *o*-grade

which is to be identified with the archaic "stative" conjugation and the IE perfect.

3. That the meaning of the perfect was typically intransitive (as in Homer and Vedic). This simply is not true. The counter evidence to this position is immense, and of obvious antiquity. Sihler cites **woyde* 'knows' and **memone* 'has in mind' (again, note the semantic sense of human activity); this thesis provides many others.

Despite these comments, Sihler says "there is no functional similarity" between the PIE stative and the *-ḫi* conjugation, considering the *-ḫi* conjugation, like the *-mi* conjugation, to be "ordinary presents". Nor, he claims, is there any lexical agreement: he cites, as an example, the root **dheH*$_1$ 'put' "which in IE is the type and model of the aoristic/eventive root, in Hitt. inflects as a *-ḫi* verb" (Sihler 1995:566).

These criticisms are quite easily answered: the fact that the *-ḫi* conjugation is a present tense is not the issue: in Greek and Sanskrit, both "middle" and "active" verbs may be present tense (λύω 'I loose', λύομαι 'I ransom, redeem'; *pacati* 'he cooks', *pacate* 'he cooks'). Nor is the issue of characterized stems especially relevant at the stage of Hittite development, which reflects a stage when stem thematization was in its infancy (Lehmann 2002; Adrados 1982). Note, however, that (what *may* be) the "aorist" marker *-š-* appears as the preterite (tense) marker of the *-ḫi* conjugation. The issue of why the reflex of PIE 'put' would inflect as a *-ḫi* verb in Hittite is far more subtle, and depends on distinctions of value, action type and involvement which are in many ways culture specific. I argue throughout Volume II that the verbs which belong to the *-ḫi* conjugation are those which reflect values in which PIE society was highly invested.

The clue to the earliest semantic distinctions between the two conjugations must lie in the elements that mark this opposition ('unmarked' active subjects vs. highly human or personal active subject) in the first person singular, *-m* and *-H_2* (= Hittite *ḫ*). This in turn will lead to a focus on shared meaning of the forms which share the distinctive *-ḫ* endings: the IE perfect, the Hittite *ḫa* and *ḫi* forms, and the later "middle" forms in *-ḫari:* namely a highly involved, typically human, sentient agent (either as a "descriptive"= statal (adjectival form), or as an "eventive" centripetal-type. The archaism of Hittite, which preserves the early functions of this Pre-IE binary split, allows us a glimpse into this early system.

CHAPTER THREE

THE SOURCE OF THE INFLECTIONAL ENDINGS OF THE HITTITE ḪI/MI CONJUGATIONS

3. 0. Introduction

Most authors are now in agreement that the personal inflectional endings are the result of grammaticalization processes: they originated as once independent personal pronouns which eventually became cliticized to a verbal stem (Givón 1976; Schmalstieg 1980; De Groot and Limburg 1986; Bubenik 1993). Bomhard (1996:93) says flatly that inflectional endings "can be nothing else but agglutinated personal pronouns".

The idea that inflectional elements arose from what were originally independent words is by no means new. The essentials of the theory of grammaticalization, "evolutive typology", were first put forward in the 18th century by Condillac (1746); the notion that "every formative element goes back to some previously existing independent word" was expostulated by Whitney in 1889, and reiterated by Meillet in 1912. In recent times, the most prolific proponent of the process whereby inflectional verbal agreement markers arise from once independent pronouns has been Talmy Givón (1976:154-160; 1984:353-385). The theory is encapsulated in his now famous line "Today's morphology is yesterday's syntax".

This diachronic process, common and well attested in many languages and language families, typically involves a series of developments which may be summarized as follows:

1. independent pronoun
   ∨
2. unstressed pronoun
   ∨
3. cliticised pronoun
   ∨
4. verbal inflection = "Frozen syntax"

A concrete example of the process Givón describes may be seen in the following examples from Archaic Turkic (from Menges (1968:142), in Bubenik (1993:176)). The example illustrates the grammaticalization process which resulted in the contemporary Crimean Qarajīm form *barά+m* 'I am going, will go':

(1)	*men*	independent pronoun 'I'
(2)	*bar-á-men*	independent pronoun post-posed to verbal noun
(3)	*bar-á-man*	post-posed pronoun shows clitic status by undergoing vowel harmony
(4)	*bar-a-mán*	movement of stress indicates status of verbal suffix
(5)	*barά +m*	phonological material lost from suffix as it becomes an agreement marker

3.1. The importance and chronological primacy of the category of person in the Early Inflectional Stage.

As I indicated above, the category of PERSON was among the first to be marked on the verb. Thus Shields (1992:23): "As Indo-European moved from a pre-inflectional structure

to an inflectional structure, one of the earliest inflectional oppositions which emerged involved the grammatical category of person". He goes on to argue (1992:23, 40) that the most ancient layer of person marking on the verb showed not a three way, but a binary split[90]: first person ('I' = personal) vs. second+ third ('not-I' = impersonal)[91]. Thus the *original* opposition was between the first person "I" and the "not-I" as in the following "standard paradigmatic type" of the most archaic inflectional pattern:

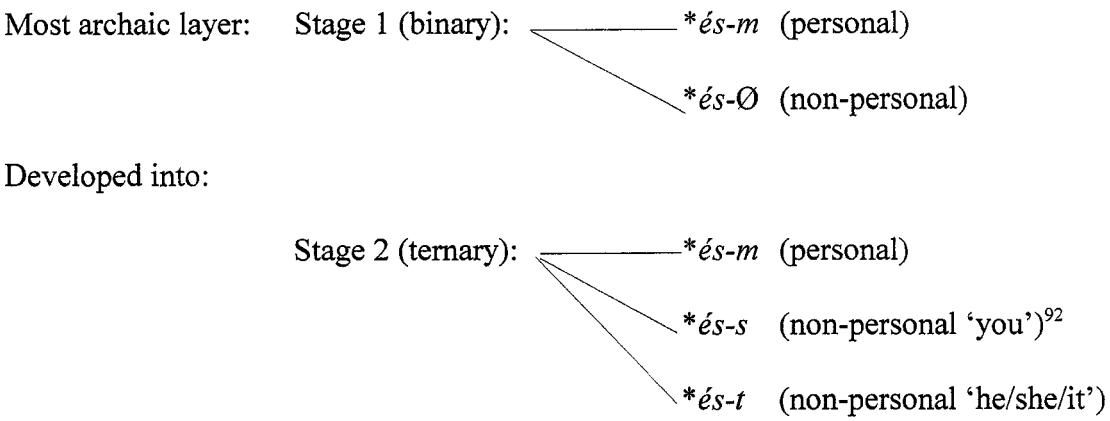


Figure 2. The Stages of IE person desinence (adapted from Shields 1992:24)

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See also Watkins (1962:105) "the rigid paradigmatic structure for the three persons of the singular [...] belongs only to the latest period of Common Indo-European, and was completely achieved only after the separation of the dialects". See also Shields 1997.

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Schmalstieg comments that this distinction is echoed acquistionally: "One assumes that for the child one of the most important steps in cognitive development is the understanding of the difference between the self and the rest of the world" (1980:102).

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Cf. the 2nd person singular Greek and Latin as generalising the impersonal 'one'. Both the non-personal 2nd person and the non-personal 3rd person usage represent an "anybody but" 1st person singular.

That Hittite shows much confusion of second and third person singular markers is strong evidence of the originally "mixed" and as yet not fully differentiated nature of the "not-I" (= any person but 1st) categories. These morphological facts are consistent with the scenario outlined in Adrados (1982) and Lehmann (2002) for pre-IE. Significantly, although this type of "contaminated" ending occurs often and regularly in the second and third persons, it is not a feature of the first person. The endings which derive ultimately from these two stems are always in complementary distribution (e.g., athematic *-mi* vs. thematic *-ō*, perfect **-h_2e* > *-a* vs. active *-mi*, Hittite centrifugal *-mi* vs. centripetal *-ḫi*. There is no evidence (of which I am aware) that combines both first singular markers (such as e.g. ***-ma*, **-mō, or ***-mḫ*) in any voice, tense or mood in IE (pace Beekes 1995:240, who reconstructs "transitive *-mh*$_2$" in opposition to an "intransitive" *-*h_2 for the first person singular "middle" endings. See also Schleicher's (1876) reconstruction of an *-m* for the "perfektum", reproduced on page 87, on no comparative evidence whatsoever. Note Beekes' vocalic patterns, however: his reconstruction of suffix *-o* for the second and third persons only (NOT the first) agrees in this respect with what I have proposed here.

3.2. The opposing consonantal elements *-m* and *-ḫ*

Postponing the discussion of the origins and identity of the rightmost marker (**-i*, *-e) temporarily, let us first turn our attention to the consonantal elements *-m-* and *-ḫ* which form the morphological opposition in the two present conjugations of Hittite. If we identify the *-m-* as a first person desinence arising from the cliticisation of some variety of a first person

personal pronoun, we are led to the conclusion that it is from the *accusative* case of that pronoun, as *every form* of the accusative case personal pronoun in all daughters shows this formant = bilabial nasal *-m*[93]

Table 21. Accusative case of 1st person personal pronouns (from Szemerényi 1996)

Vedic	Old Latin	Greek	Hittite	Gothic	OCS
mām	**mēd**	**ἐμε**	**a**mug	**m**ik	**m**ene

Pronouns are acknowledged as the source of the most archaic of *inflectional* elements. As well, these most ancient of lexical elements were the first to be characterized (i.e., before nouns) for case distinctions. The earliest case distinctions appeared to be, again, binary: direct (nominative) and oblique(accusative, dative, genitive, etc).

Kuryłowicz (1964:183ff) states, as regards chronology, that the distinction

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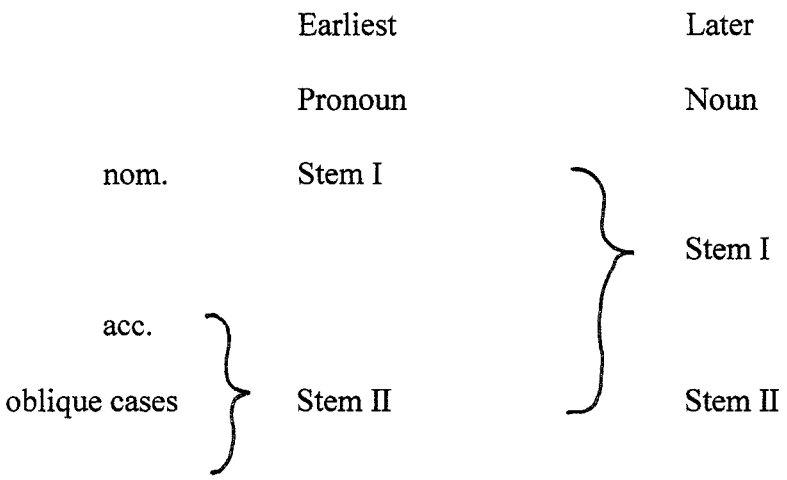
93

Serebrennikov (1986:81) quotes Illič-Svityč (1976:48-51) as indicating that the same formative appears at an even more ancient stage: "the Nostratic formative *-m supplied the accusative singular of animate nouns in Indo-European [...] The accusative singular of animate nouns was the primary function of *m in Indo-European". Serebrennikov (1986:67ff) reinforces the extremely archaic nature of many of these grammatical markers and emphasizes that any material relationships between grammatical formants are to be taken very seriously. Such grammatical elements are rarely borrowed, and tend to be stable and to represent the most archaic features of a language. In the same volume Dolgopolsky (1986:34) lists some fifteen of the "most stable sememes" used to establish and gauge relationships between languages; at the very top of the list is the first person marker. Although the oblique marker **m* is indicated to be a "verbal desinence of the [...] first person pronoun (in all oblique cases), Dolgopolsky hedges on the nominative form (*eg(h)ōm) which he says "appears [...] to have resulted *from the addition* of a deictic element".

nominative : accusative was first grammaticalized in the pronominal system, showing two opposing stems, one for the nominative, another for the obliques (including the accusative).[94]

This contrast is described and diagrammed by Kuryłowicz (1964:183):

> There is a chronological difference between the noun and the pronoun as regards the distinction nom.:acc. The personal pronouns *egh/me, *tu/te, *uei/nos, *iu/uos, had different stems for the nom. and the accusative at a period preceding the rise of an opposition of gender (neuter:animate) in the noun. In the noun the stem-form of the oblique differs from that of the nom.-acc.:



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This type of heteroclitic paradigm is very characteristic of PIE. Lehmann (1994:157) comments on the pervasive nature of this split, and implies its archaism "the personal pronouns display the shift of stems between the nominative and the accusative that we find in the first person of the earliest languages [...] a similar shift is found [...] in the so-called r/n stems, e.g., Hittite *watar* gen. *wetenas*".

Given the binary split which we observe in the first person presents of the two Hittite conjugations, and acknowledging the ancient pronominal stem split between non-oblique (nominative) stem and oblique (all other cases, including the accusative) stem, and further acknowledging the pronouns as the source of the person desinences, I will follow the principle of "Occam's Razor" and "assume the simplest system consistent with the facts". The post-root element which occurs in the same morphological slot in the *-ḫi* conjugation as does the *-m* element in the *-mi* conjugation (post-root, pre-tense suffix) is the reflex of the Indo-European second laryngeal *$-H_2$, preserved in Hittite as *-ḫ*. I suggest that this element is a cliticised first person pronominal, whose source is the *other* stem: the nominal stem. (On what grounds would an alternative conclusion be argued? Why assume a different marking strategy or source for this element?).

Below are given the nominative case forms of the first person singular pronouns of several of the oldest daughter languages (see Sihler, Beekes, Luraghi, Lehmann).

Table 22. Nominative Case of the 1st first person personal pronouns

Vedic	Old Latin	Greek[95]	Hittite	Gothic
ahám	**ego**	**ἐγώ**	**uk**	**ik**

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According to Luraghi (1998:180), Greek and Latin forms correspond to the emphatic form of the Hittite first person pronoun *uk/ga, viz.* a pronominal element plus particle *-a.*

This opposition between direct (nominative) case pronouns of the first person and the less direct (oblique) case pronouns represents the basis of the archaic oppositions of Hittite verbal conjugations. The *-m* marker is a cliticised form of the *oblique* (= accusative) case first person singular pronoun. The *-ḫ* marker would then be a cliticised form of the *direct* (= nominative) case first person singular pronoun. The happy confluence of a typological rarity remarked on above (nominative case clitics) and archaism (preservation of laryngeals) permits a glimpse at this very early opposition attested in the Hittite present conjugations.

The fact that Hittite opposes *two* first person singular present forms allows us to determine what the semantic distinction the opposing pronominal elements conveyed. The *direct* first person singular nominative case cliticised pronoun *-ḫ* marks the more *direct* involvement of the subject in the verbal activity. This is the centripetal ('seeking the center') voice which is opposed to the first person singular *oblique* case cliticised pronoun *-m* which marks centrifugal ('fleeing the center') voice. The centrifugal voice is the unmarked member of the opposition; this may account for its increased productivity.

3.3. The suitability of pronominal elements as voice markers

Bybee points out that, of all the categories that may be encoded on a verb (tense, aspect, mood, voice, number), because voice describes the orientation of nominal arguments to the verb, it may be coded on nominal (or pronominal) elements, as well as on verbal constituents:

> In the reflexive, reciprocal and middle, the subject both performs the action and is affected by the action. Voice, then, is relevant both to the verb and to its arguments. It is not surprising, then, that voice may be morphologically coded on the NPs of the sentence, on the verb, or on both (Bybee 1985:20).

3.3.1. The relevance of having *two* pronominal markers for voice

It is clear that both the *-m-* and the *-ḫ-* of the Hittite present tense conjugations are person markers, both marking first person singular. What distinction does the differential **case** marking imply? Since the central notion of the "middle" voice is the role and level of involvement of the participants, what is the result of having not one but two first person singular markers? How might they differ in function?

In his hierarchy of speech act participants, Beavon (following Frantz 1981) points out that first person pronouns are higher-ranked than second or third, and second person pronouns are higher-ranked than third (1986:177). In his discussion of elements which are most likely to appear as an agent, Dixon provides the following hierarchical scale (with highest likelihood leftmost, least likelihood rightmost):

1st person	2nd person	3rd person	Proper	human	animate	inanimate
pro	pro	pro	noun	noun	noun	noun

←----------

Figure 3. Potentiality of agency scale (animacy hierarchy) after Dixon (1979:85)

Thus, a [+ human] [+animate] noun is more likely than a [+animate] noun to appear as a agent, a proper noun more likely to appear in this role than a common [+human] noun, a personal pronoun likelier still, with the first person pronoun highest on the 'accessibility to agent' scale. In other words, the first singular pronoun, in that it combines the features [+animate] [+human] [+personal], is the *most* likely to be construed as an agent, and all that that implies (i.e., intentionality, cognition, deliberation, etc). Hittite has not one but TWO first person pronominal markers; not one but two first person singular present conjugations. Following the scale outlined above, the morphological opposition would produce the following type of animacy hierarchy, from an over-differentiated 1st person singular (nominative - *ḫ* vs. oblique *-m*) to the 3rd plural, which happens to be *-r*.

1st person direct <1st person oblique <2nd person <3rd person [...] 3rd person plural (-r)

If the parameter to be marked is **personal involvement** (i.e. 'self' voice, *ātmanepada*), the marker of choice would be the direct case pronoun, post-posed, then eventually cliticized, to the verbal root. Here intersect four parameters: pronominal case, person, gender and number. The most intimate, the most animate, the most involved, is the *direct* case first person singular pronoun "I" (even more than the oblique case first person singular pronoun). At the opposite pole, the least involved, the most impersonal is the third person plural "they". This, of course, has voice implications.

3.4. Paradigmatic extremes and their relation to "medio-passive" *-r* in Hittite

Languages which do not have a passive, as was the case in pre-IE and IE, sometimes use the third person plural as a "virtual passive". This strategy is relatively common cross-linguistically. In many African languages, including Maasai and Godié (as in example (19) below) which lack a passive, the use of a third person plural pronominal is "equivalent to a passive voice form" (Tucker and Bryan 1966:149, 424)[96].

(19) **wa** yʌ -ɔ bɔtɔ

they PERF-him hit

'He was beaten' (Literally, 'they hit him' (Marchese 1986:241)

Hittite, as other archaic IE languages, originally had no passive. In the course of developing such a category, I suggest that the third singular plural marker *-r* was first employed (in the Pre-IE period, and in Hittite) as just such a "virtual" passive, or impersonalizing device, in opposition to the overcharacterized and highly personal first person singular forms. Such a strategy would have started in the third person and spreading elsewhere, first as an impersonalizer (in the early stages of Hittite), and eventually coming to have voice value (in the later language). Kortlandt (1981:131) calls such an analogical

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See Tucker and Bryan (1966:149, 424) for numerous examples from a wide variety of African languages (Zande, Pambia, Nuer, Lango) of the 3rd person plural used as a "passive equivalent" in languages that do not possess a formal passive. See Greenberg (1959) for Maasai.

spread "beyond doubt". By such means could the semantic distinction 'level of involvement' be conveyed by use of markers at the paradigmatic extremes:

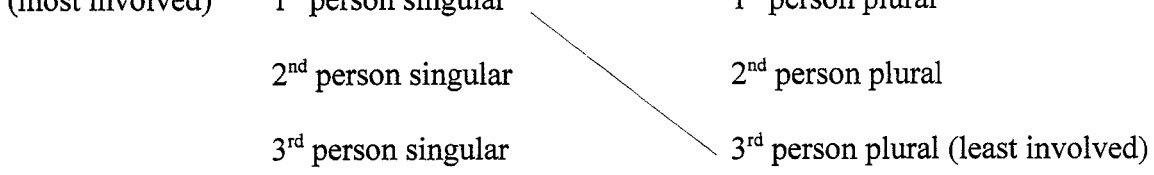


Figure 4. Paradigmatic opposition of person markers exploited as voice (personal involvement) markers

This goes a long way toward explaining what are typically termed "mediopassive" forms in Hittite, as well as the *-r* marker in Latin deponents. Under this scenario, *-r* would be an archaic impersonalizing device, already available even in the Pre-IE period, and shared as an isogloss by the peripheral daughters, Tocharian, Latin, Celtic and Hittite, but with slightly differing values in each. In adopting this position, I agree in essence with the opinion of Shields (1994:92):

> my position is similar to that of Jasanoff (1977, p.167, n.22), who conjectures that *-(*e*)*r* was an original Indo-European active[97] third person plural marker

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"Active" requires comment. On the basis of relic forms with this suffix, Yoshida (1992:363, 371) identifies the *-r* ending as the third person plural of the *-ḫi* conjugation in the Early Proto-Anatolian Period. Only later did the marker spread from the *-ḫi* to the *-mi* conjugation.

which was later generalized to the middle voice to create the third person plural marker **ro* (< **-r* plus the third person singular middle suffix **-o*)[98], cf. Lehmann 1974, p.103, Adrados 1975, p.605: e.g., Ved. *áduh-ra*[n] 'they milked'). From there, it was subject to further extension, motivated by the tendency for the third person – both singular and plural, cf. Kuryłowicz 1964, p.149-150 – to impose its form on the rest of the paradigm. The appearance of the desinence **-r* in the third person singular (e.g., Hitt. mid. *-ari*, OIr. dep. *-thir*) was perhaps motivated, too, by its frequent collective value, allowing it to be reinterpreted as a singular.

Just as the paradigmatic extremes can be exploited to indicate the level of involvement, in a system which has *two* possibilities for "most involved" (i.e., first person singular– a pronoun which is never used as an indefinite pronoun), the distinction between the two must be highly marked as well. In this case, an extreme phonological distinction would be advantageous. The opposition, both in the pronominal system, and in the verbal system of Hittite does involve such extremes:

-m	vs.	-ḫ
front bi-labial voiced nasal stop		back velar/uvular voiceless fricative

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Shields may be in error here: Adrados in a later work (1982:18,19) points out that these vowels did NOT in fact have voice value.

This strategy is fully in agreement with principles of marking theory, as outlined by Jakobson and the Prague School. Important semantic distinctions should be marked in a highly distinctive way by morphemic elements that are not easily confused.

Especially important in this context are the remarks of Greenberg (2000:67), who describes an identical situation in the Eurasian phylum, one of IE's nearest neighbours. Here, the two markers of first person singular in this group of languages were *-m* and *-k*. He says that wherever two first person markers appear, "the general contrast is *m* as ergative, versus absolutive *k*, *m* as active versus middle or passive *k*, and *m* as active, versus stative *k*." Greenberg as well acknowledges the unique nature of the first person to this type and stage of early distinction, indicating that "A contrast of this kind between *m* and *k* seems to be attested only in the first person singular". Reinforcing the typological parallel of the Uralic languages with the Hittite system, Greenberg (2000: 67, 68) notes that in the "third-person singular the subjective conjugation has zero, whereas the objective has an overt ending. This is a typological characteristic found in many languages; statives have zero third-person subjects, while actives have an overt third-person marker". In this regard, it is the Hittite *-ḫi* conjugation with its *t*-less third singulars which forms a parallel to the "stative" conjugations and to the subjective conjugations of Hungarian.

To review: in the very early stages of the parent language (most probably the late Pre-IE stage, as in Lehmann 2002), we have two pronominal stems, one oblique, one direct. These two opposing pronominal stems are the sources of the first person desinences seen in the Hittite *-mi/-ḫi* opposition. If this is the case, then one must conclude that the nominative

case marker, which is seen in the laryngeal marker -*ḫ*- of the -*ḫi* conjugation involves a more direct diathesis than does the oblique case which is seen in the -*m* of the -*mi* conjugation. In order to argue such a position successfully, I would have to establish the phonological similarity of elements which mark the opposition. Arguing for the identity of the *m* seen in the accusative case pronoun of Table 21 and the -*m* which appears in the thematic conjugations of IE and the athematic Hittite -*mi* conjugations is relatively straightforward, and, I would say, generally accepted. It is more difficult to argue for the identity of the Hittite direct case pronoun *uk*- with the ending of the *ḫ* conjugation. I will provide the details of my argument in the next two chapters.

CHAPTER FOUR

THE FIRST PERSON NOMINATIVE CASE PRONOUNS OF IE

Meillet (1967 [1908, 1922]:41) "irregular forms are those that are most proper for establishing a reconstructed language".

4.0. The first person nominative case pronouns of IE

By way of introduction, Tables 21 and 22, representing the two cases of the 1st person pronouns are repeated here, juxtaposed and expanded for the reader's aid.

Table 23. Direct and Oblique Case of the 1st first person personal pronouns

	Hittite	Vedic	Avestan	Greek	Latin	Gothic	Germanic (Galleus)
Nom	ú-uk	ahám	azəm[99]	ἐγώ	ego	ik	ek
Acc	am-mu-uk	ma-ám/-mā	mąm	ἐμέ -με	mēd	mik	-----

4.1. PIE 'I'

It is generally agreed that the pronouns show a great deal of "irregularity" in morphology. They do not conform to many of the expected patterns and reconstructions posited for IE. I repeat: "Items and patterns that do not agree with the productive patterns in

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See page 153, nt.103 for discussion of the Avestan form.

a language may be residues of an earlier stage" (Lehmann 1993, 2002:21).

Sihler (1995:370ff) devotes an entire section of his New Comparative Grammar of Greek and Latin to a discussion of the "peculiarities" of the IE personal pronouns. He notes that pronouns are reconstructable for the first and second persons only. The third person paradigms "differ importantly from group to group and are specialized deictics, not really personal pronouns at all in the sense that the 1st and 2nd persons are, or in the sense that 3rd person pronouns are in languages like French or English. The parent language presumably had a 3rd person paradigm –it is indispensable in fact, in oblique cases" (Sihler 1995:370). Additionally, in each paradigm, the stem for the nominative is different from the stem for the oblique form (as in Kuryłowicz 1964:183, below).

Commenting on the "bewildering variety of forms" for the first person singular, Sihler says that "The similarities are obvious, but the precise paradigms of the parent speech are very difficult to reconstruct" (1995:369). Proposing such a form has proven to be an intractable problem since Brugmann (1904:407-413). Lehmann (1993:157) goes as far as to say that the "first-person form for the nominative of the proto-language cannot be reliably reconstructed, for the dialects vary between evidence for *$eg(h)om$ and *$eg\bar{o}$ ". He suggests that even these early forms may be bi-morphemic, with suffixes attached to an earlier simple form *eg^h (remarkably similar to the Hittite first person nominal pronoun *ek-*, which was, according to Benveniste (1953: 259), the original form of the pronoun, with the *u* later).

As can be seen in Table 23, many of the pronominal forms both of the nominative, but more so the accusative, case, are clearly bi-morphemic. They appear to be composed of the *original* pronominal element and a particle. So Vedic *ah-am, ma-am* = pronoun + particle[100]; so Hittite *uk-, am-uk* (note the syntactic reversal here: particle + pronoun); so Gothic *ik-, m-ik,* with the same syntax as Hittite. Sihler says (1995:375) that the second person pronoun Vedic *túvam* (written *tvám*) < **tū-óm*) "is very commonly monosyllabic in the RV, which is easily explained as the redactional replacement of earlier **tū́* with *tvám* (*tū́* occurs freely, but only as an adverb 'pray!, do!, then' [...Av[estan] has both *tū* and *tuə̄m*, the latter disyllabic". Ghosh (1977:136ff) commenting on "the liberal use of particle *-am* in "pronominal flexion" says that this particle is clearly a later addition: "The cognate languages clearly show that the Indo-European word for "you" was **tu-*: cf. Greek *tu* (Doric), Latin *tū,* etc. This *tu* (=you) may still be found in Rgvedic passages like *á tū́ gahi prá tú drava.* The particle *tu* in the Gāθās of Avesta may everywhere be taken to mean 'you'." (Rasmussen (1999:258) also refers to an earlier period "when **tu* still existed").

Here is the passage to which Ghosh refers[101]. I have reproduced it because of its

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This phenomenon is seen in other persons such as *tuv-am,* whose bisyllabicity is observable from Vedic evidence (Vedic *tvam* is often disyllabic, only later becoming monosyllabic *tvam*) (Szemerényi 1996:213). Ghosh (1977:136ff) claims that this particle is clearly a later addition: thus túbhyam, máhyam should be read as *túbhya máhya* (m.c.). Nominatives plurals *vayam, yuyam* are later as well, analogically from elsewhere.

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Monier-Williams (1998:449) analyses this element as a particle meaning 'I beg', do, now, then'. The item in the Vedas is never sentence initial, often appearing as here in Wackernagel's position. The (emphatic?) meaning of second person singular 'you' is clear

succinct poetic parallelism, where in each phrase, the element appears in Wackernagel's position, reinforcing the two imperatives:

(20) *á tá gahi prá tú drava*

'Pray (thou) come [to us]; pray (thou) speed forward [toward us] [RV 8.13.14a][102]

Ghosh (1977:136) says that "in the case of *áham* this particle [*-am* < IE-**om*] had been attached to the original stem **eĝh-* already in the Indo-European period, as is proved by Lat. *egom-et*". He adds in a footnote (*ibid*, nt. 1) that "The exact nature of the consonant element cannot be determined. Had it been aspirated the Greek form too should have retained the aspiration. Had it been unaspirated there should have been no aspiration in Sanskrit".

If we want the original form, of course, we would have to remove the particle to get to the monomorphemic starting point. We must depend on the Hittite evidence to take us from that point.

Many of the "traditional" reconstructions were made without the benefit of Hittite and the resulting "laryngeal theory". Sihler says that the Greek (ἐγώ) and Latin (*ego*) may

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enough in this passage, which has two imperatives *gahi* 'enter deeply thou', *drava* 'speed thou'.

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This and all subsequent references to the Rig Veda are from *Rig Veda: A Metrically Restored Text with Introduction and Notes,* (eds). Barend A.Van Nooten and Gary B. Holland. 1994. The numbers and letters which follow individual citations refer to divisions of particular lines as indicated in this edition. For instance, RV 8.13.14a refers to Hymn number 13 from the Eighth Book of the Rig Veda, the first of four sections of line fourteen.

only be "unproblematically combined in the (pre-laryngeal) PIE etymon *$e\acute{g}\bar{o}$. But *-$\bar{o}$ does not accord with Go[thic] *ik*, which like all the Germanic forms requires a short final vowel originally [...] and still further off-target are Ved[ic] *ahám*, Avestan *azəm*"[103].

The laryngeal theory brought some possible solutions, but even with these, problems remained. A form *égoH, which would explain Greek and Latin has "too many full grades to be a genuinely ancient form" (Sihler 1995:369).

Sihler (1995:369, 370) posits a proto-form of the shape *$e\acute{g}om$, which is composed of $e\acute{g}$ plus - *om first person. This would suggest that the*$e\acute{g}\bar{o}$ seen in the Greek and Latin forms is a "remodelling, presumably independent, of a reanalyzed *eǵom on the pattern of the dominant 1st verb ending -$\bar{o}$." Sihler's reconstruction suggests the possibility that there was some dialectal variation, between the original (older) form *$e\acute{g}$ and the form with the suffixed particle *$e\acute{g}om$. This last form would have been double marked (perhaps for emphasis?) by the use of *both* first person markers, nominative $e\acute{g}$ 'I' + accusative -*om* 'I'+

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Meillet (1967:43), noting the closeness of Indic and Iranian, says that "the simple application of a few rules of phonological or morphological correspondence permits the transformation of, for example, a passage of the Avesta into an almost correct Vedic text. The vocabularies of the two groups coincide almost completely. Thus, instead of *k_1 [Meillet's symbol for ḱ, in PIE a "voiceless dorso-palatal stop" (Mallory and Adams 1997:xxviii)] which provides the initial sound of the word 'heart' in all the other Indo-European languages (Arm.*sirt*, [...] Gr. καρδίᾱ and κῆρ, Lat. *cor*, OIr. *cride*, Goth. *hairto*), Sanskrit and Iranian have the reflexes of a voiced aspirated stop; thus Skr. *hṛ́d-* and *hṛ́dayam*, Av. *zərəd-* and *zərəδaēm*, Pers.*dil* [...] No other Indo-European language comes even close to showing so complete and consistent a set of similarities to any one of the Indo-Iranian languages as they show to one another" . This being the case, I will not discuss the Avestan evidence below. It should be noted that Avestan *z* = Sanskrit *h*.

'me' = 'I myself'. The left-most element would be the direct (= nominative) case, the rightmost would be the oblique (= accusative) *-m*. (According to Luraghi (1998:180), Greek and Latin forms correspond to the emphatic form of the Hittite first person pronoun *uk/ga*, *viz.* a pronominal element plus particle *-a.*)

Hamp (1970:229) makes the suggestion that "Instead of starting from *eǵoH (ἐγώ) and positing loss of the final syllable, we start from *eǵH". I find this an eminently sensible suggestion, and will pursue such an analysis here. Thus, following Hamp (1970), Sihler (1995) and Lehmann (1993), I am assuming a proto-form of the shape VC (i.e., without the later post-posed particle). This would explain the shape of the many of the oldest forms Hittite nominative pronoun (*uk* 'I'), and the initial syllable of Vedic (*ah-am* 'I') and would be reflected in Gothic *ik-*, Old English *ic-* ("OE c was /k/", with certain exceptions. See Sihler 1995:27), OHG *ih*[104], and, importantly, *ek-* which appears on the Gallehus horn, the oldest Germanic document we have (AD 325)[105].

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With a caveat that "the scribal practises of OHG mss vary greatly with period, region, and (apparently) the training of the individual scribe", Sihler (1995:28) indicates that OHG *h* had "two functions. First it stands for a consonant, [h] or [χ], as in *horn* 'horn', *slahta* 'slaughter'[...] Second, it was used as a consonantal diacritic: *th*, found only in the earliest mms, was [θ] or [ð] (the latter sometimes actually spelled dh). *Ch, kh* are equivalent, and originally stood for /k$^{\chi}$/ but postvocalically this early became /χ/ (as in NHG Bach) and alternates with *hh, h*, and, rarely, *chch*". See Levin (1995:31) for the suggestion that the original sound in *cornū*, the Latin cognate for *horn* was "emphatic" –i.e. velarized. Note the equivalent phrases Latin *cornū taurī* 'horn of the bull', Greek κέρας ταύρου.

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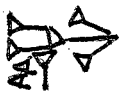
An argument *could* be made that the pronominal form *ek*, unlike *horna* (*h* < **k*) has resisted Grimm's Law. First person pronominals are acknowledged to be the "most stable" of lexemes (Dolgopolsky 1986:34).

Ek	Hlewagastiz	holtijaz	horna	tawido
I	Hliugast	of Holt	horn	made

Figure 5. Inscription from Galleus Horn (Lehmann 1993:60)

Assuming a proto-form for the first person singular nominative case form of the shape *VC(?) 'I', our task is somewhat simplified (at least syntactically). However, numerous difficulties remain, mostly phonological. In order to have a clearer idea of what each form represents, I will discuss each in turn, starting with the Hittite evidence.

4.1.1. Hittite *uk/g-* 'I'

Although the Hittite, Greek and Latin forms all contain an element with the same place of articulation [velar] and the same manner [stop], the voicing of the final element of Hittite nominative singular first person pronoun *ūg/k* 'I' cannot be determined with certainty. "The Akkadian syllabary adopted by the Hittites is [...] not perfectly consistent in the spelling of stops. In VC signs the contrast between voiced and voiceless stops is never indicated" (Melchert 1994:13). The sign used to spell 'I'  can be interpreted as either *uk* or *ug*. (Although Melchert (1994:111) says that only voiced stops occur word-finally, giving as example *ūg* 'I'). In the matter of aspiration of this element, the sources are silent. The fact that before a front vowel, Hittite velars did not undergo affrication (which explains why the centum/satem split is not observed in Hittite) suggests that some element was 'protecting' the velar from the effects of a following high vowel.

According to Melchert (1994:7), the vowel of *ūg* 'I' (nominative case) is analogically extended from 2nd singular nominative **tū* 'you' (accusative **tu* 'you'). Benveniste (1953:259) considers **eg* to have been the original form.

4.1.2. Greek ἐγώ 'I' (< ἐγ + - ώ < *-om*)

There is no doubt that Greek γ was a velar (contrasting in place with β (bilabial) and δ (dental)). However, in the matter of voicing, the "Greeks, like the Romans, are silent about the distinction between voiced and voiceless consonants" (Sturtevant 1940 [1920]:59). Nevertheless "there is no doubt that the difference was present in Ancient, as it is in Modern Greek" (*ibid*). Greek γ is described as a "voiced plosive" (=stop) (Allen 1987:29) (but see below). However, phonetically, we cannot be certain of the voicing of γ in the pronoun: the addition of a -VC particle as a suffix would have had the affect of voicing an original voiceless element. Greek was sensitive to phonotactics, as is evidenced by cases, such as Attic inscriptions, where the "preposition ἐκ is sometimes written as ἐγ before β or γ, as in ἐγ βουλῆς or ἐγ Γαργητιν (Sturtevant 1940:59). Therefore, in this particular form (V-C-V environment), we cannot say with complete certainty that the original particle in Greek was not voiceless.

Nor can we comment with certainty as to whether γ was aspirated or not. Thrax identifies voiced plosives β δ and γ as μέσα, that is 'midway' between aspirated and unaspirated phonemes. That is, as we saw for the voice parameter, these voiced plosives have some features of the aspirated sounds, and some of the unaspirated.

There is even some evidence that Greek γ[106] was undergoing a certain amount of spirantization, as witness its omission in Boeotian ἰώ = ἐγώ. However, the spirantized pronunciation of γ "did not become the standard in Attic or Hellenistic Greek for some centuries" (Sturtevant 1940:87). Atkinson dates the change from the "third century B.C or earlier" (1933:44), as does Levin (1995:287, nt.327): "by the 3d century B.C. - if not earlier - the Greek γ was no longer anything like [k'] but simply a voiced plosive or beginning to be fricativated [sic], and that the Hebrew ק was now more like the voiceless plosive κ". The situation is further complicated by the fact that early Latin renders Greek aspirated stops, such as φ, as simple stops *p*, "only later as *ph* (e.g. *Pilipus, Philippus*) but never in classical Latin times as *f,* which would have been appropriate for a fricative pronunciation" (Allen 1987:22).

Although the "typical" source of Greek γ is *ĝ or *g (palatalized or plain g), Greek γ shows the following correspondences:

1. Greek γ can be rendered by Hittite *-ḫ-* or *-ḫḫ-* : "for the gamma rendering of Anatolian intervocalic laryngeals cf. e.g. *ḫuḫḫa-* : Lyc[ian] χuga-: Κουγας (HED 3:357). Latin -g- also participates in this alternation with Hittite *-ḫ-*: thus: "culture

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Of course, not only γ, but all the voiced stops were eventually fricated; all presumabaly underwent an intermediary stage of spirantization. How long it lasted, or whether some phones were more vulnerable to these processes, we cannot say with complete certainty. See Bubenik (1989:188ff) for an excellent overview of this issue.

word" *laḫan(n)i-* 'flask' in Greek λάγυνος, Latin *lagōna*

2. Greek γ can correspond to Hittite k-k me-**ik-ki**-iš 'large' Greek μέγας 'large'

3. Greek γ corresponds in some very old lexemes to Sanskrit -h-:

Greek	Δι(Ϝ)ος	θυγάτηρ 'daughter of Zeus'
Sanskrit	divō	du**h**itar/ḥ 'daughter of heaven'

4. Greek χ [kh] can also equal Hittite *ḫ* (Schmidt 1983:343-344)[107]

Greek χ can as well equal Akkadian Ḫ. Two examples (from Levin 1995:397,398) will show this correspondence, as well as linking Hittite *ḫ* to Hittite *k*:

Akkadian maḪri (š) 'before' corresponds to Greek μέχρι (ς) 'until'[108]

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We must keep in mind that phonemic laryngeal elements of the parent language were being adopted and adapted by speakers who were losing, or had lost, these elements. After the disappearance of these original elements, the only observable evidence of their former existence would be indirect evidence (vowel colouring), or a reflex or approximation of what had become, essentially, "foreign sounds". How would a language incorporate into its own phonemic system this type of element?

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Levin (1995:398) suggests that this is a compound word, borrowed into Akkadian "from the prehistoric IE of the region, rather than a borrowing in the opposite direction. To be sure, the ATTESTATION in Akkadian is a great deal earlier, but that fact is hardly decisive. Although the more advanced civilisation of Mesopotamia (in the third and second millennium B.C.)

Greek ‘άχρι(ς) (Iliad 17.599)

The last word, identified by Levin as the locative case of the noun hand χείρ (in zero-grade[109]), provides a clue to the link between the two previous words, as well as linking both to Hittite *keššar* ‘hand’ (Tocharian A *tsat* ‘hand’ remains a puzzle).

In the example below, remarkable not only as an example of Grassmann’s Law of dissimilatory aspiration, but also as what Levin (1995:164) calls “a likely point of contact reaching into the early historical period” (before Solomon’s temple in Jerusalem was built, and mentioned in Joshua (11:19), we see the following correspondences.

5.	Hebrew	הַחִתִּי ha Hitti^{y}	‘Hittites’	(in Joshua 9:1)
	Greek	οἱ χεττᾶιοι	‘Hittites’	

Levin (1995:165) says that the Hebrew consonant ח (in the Hebrew word for Hittite) “can hardly represent a velar or post-velar in the language of [the Hittites] themselves, but

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must naturally have diffused many vocabulary items into the outlying areas, this argument loses its force when applied to a particular word whose meaning in Greek ‘until, up to’ differs appreciably from the Akkadian meaning ‘before’. The IE morphological analysis of μέχρι, as originally signifying ‘into the hand of’, would allow a somewhat divergent semantic development within prehistoric Greek and Akkadian”.

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The zero grade is explained as resulting from the Aeolic component of Homer’s literary dialect –“Aeolic being noted for RECESSIVE accent at or near the beginning of every word” (Levin 1995:398 nt.67)

rather a guttural (pharyngeal)."

This example (again from Levin) shows a four way parallel between the Hebrew ח the voiceless laryngeal -ḫḫ- in Hittite, the aspirated velar stop χ [kh] in Greek and, interestingly, an aspirated velar stop (!) in Latin:

Hebrew ha Hiwwi^{y} = Hittite aḪḪiyawa = Greek ᾽Αχαι(Ϝ)οί = Latin *achāuī*

4.1.3. Latin *ego* 'I'

Latin had two velar stops: voiced g and voiceless k (=c) (k and c are different graphic variants of the same phoneme). According to Sihler (1995:21) "In the earliest Old Latin epigraphy, the symbols C (‹), K and Q (Ǫ) were all employed for both /k/ and /g/, the choice being determined by the vowel following: Q stood before rounded vowels (EQO 'ego'), C before front vowels and consonants (FECED 'fecit', CRATIA 'gratia') and K before A". This leaves open the possibility that the [g] of the form *ego* is simply an allophonic variant of /k/ before the vowel /o/: EQO = ejk^{h} 'I' + -ow > [ejgow] . In other words, the original sound, before the addition of the particle, may have been a voiceless velar. Further than that, we cannot comment. (Although Sturtevant points out that Latin loan words in Greek always represent g by γ, regardless of the following sound).

The comments of the Latin grammarian Terentianus concerning the differences between these two velars is informative:

c pressius urget; dein hinc et hinc remittit,

quo vocis adhaerens sonus explicetur ore.

G porro retrosum coit et sonum prioris

obtusius ipsi prope sufficit palato

'C strives to press both sides of the tongue more closely against the teeth,

and then relaxes the pressure on both sides

so that the sound of the following vowel may be produced in the mouth.

G, on the other hand, causes a closure father back

and produces the sound of the former letter, somewhat dulled,

near the very roof of the mouth'

(Terentianus 6.331. 195-198, cited in Sturtevant 1940:164))

Atkinson says that the situation vis-a-vis voicing was at opposite poles for Greek and Latin: whereas "The voiced stops γ, δ, β were articulated with some strength and the unvoiced stops κ, τ, π weakly according to the statements of the Greek grammarians. This was in contradistinction to Latin where the contrary was the case, and we find transliterations from one language to the other in which the voiced stop in one language is represented by the unvoiced in the other and vice versa" (1933:44).

The Latin evidence is far less clear, but intriguing as it concerns several very old verbs of "impeccable PIE pedigree" (Sihler 1995:148). It is difficult to tell, solely on the basis of Latin orthography, whether a stop was aspirated or not (Buck 1952:118 in note

93).[110]

4.1.4. Sanskrit *aham* 'I' (*ah-* + *-*om*)[111]

According to the Sanskrit phoneticians, Sanskrit /h/ is *kaṇṭhya* ('articulated in the throat'). The fact that the other sounds belonging to the *kaṇṭhya varga* 'velar set' include k, kh, g, gh, ŋ, inclines one to assume a simple velar place of articulation (see also Katre 1987:6). However, since Pāṇini indicates that it is made in the same place of articulation as the vowel /a/ (Book I, Chapter 1, Verse 10) (Sharma 1987 II:14), a more back articulation is suggested, perhaps pharyngeal (so Cardona 1976:206, who describes *h* as a voiced pharyngeal fricative (*ūṣman* 'hissing').

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See Watkins (1962:37nt17) for a lengthy, although somewhat opaque, discussion of the peculiarities of some of these verbs whose final consonant is a velar fricative: "the root final consonant of the verb stem [of such verbs as *trah- , *weh-, *lak- *spek-], which in Italic was the velar fricative /x/ ... *trahō* and *uehō* are the only two verb stems in Latin where the stem final consonant is the voiceless velar fricative /x/ (henceforth written *h*, to avoid confusion with x = /ks/): **trah-*, **weh-*.

"We would have the following forms by the regular phonological treatment of Latin:

*trah-	*trah-s	*trah-to	→	trah-	*trăx-	tracto-
*weh-	*weh-s	*weh-to	→	ueh-	*uĕx-	uecto

Compare:

*lak-	*lak-s-	*lak-to	→	(-liciō	-lĕxī	-lectus)
*spek-	*spek-s-	*spek-to	→	spec-	spĕx-	specto

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See Beekes (1969:180) on the correspondence between Greek ἐγώ and Sanskrit *aham* which he calls "unclear".

Thanks to the detail and precise rules laid out by the Sanskrit phoneticians, who were very aware and sophisticated in feature analysis, we are relatively certain of the synchronic voicing and aspiration qualities of /h/. Given the rules outlined by Pāṇini, replacement of a word initial *h* must be by the palatal which is, feature-wise, most like it. By I.1.50, this would be *jh*. Like the original *h,* it is both voiced and aspirated. Thus, synchronically, Sanskrit *h* is to be understood as a voiced (or murmured) fricative [ɦ] (Rogers 1991:346).

However, given what we have said previously about the effects of the addition of the particle on the original consonantal element, we should carefully consider the possibility that we may not have the complete picture. Sanskrit *h* is said to be identical to the second element of the Sanskrit aspirated stops: *ph th kh, bh, dh, gh* (etc.), where "the combination occlusive + H may produce an aspirated occlusive [...] It was in this way that the whole category of surd aspirates arose in late Indo-European (Burrow 1955:87). This is, according to Burrow (1955:87), the most significant trace of the IE parent laryngeal $*H_2$ that may be observed in Sanskrit. However, $*H_2$, is a voiceless element. Sihler (1995:168) referring to Indo-Iranian says "$*H_2$ [...] makes a preceding voiceless stop into an aspirate, thus **sti-stH_2 -enti* 'they stand' (root **steH_2-*) > Ved. *tiṣṭhanti*; and they count as a consonant for the purposes of Brugmann's Law [...] thus **te-top-H_2e* 'I burn' > Ved. *tatápa* 'I suffer'(expected **tatápha* leveled), vs. 3sg. **te-top-e* > Ved. *tatā́pa* 'he suffers'(root **tep-* as in L *tepidus* 'warm') ". This is how the Sanskrit grammarians described the aspirated phonemes of Sanskrit: as a combination of a stop and a following perceptible *h*-sound. So Misra : "the alternation of aspirates and non-aspirates in some cognates is explained as the result of a following

laryngeal sound" (1968:42,43). He cites the following correspondence by way of example *qh (voiceless velar stop + laryngeal) > Sanskrit *kh*, Greek *kh*, Hittite *k* (*ibid*:36). So Sturtevant (1930b:150) "a voiceless stop sound before $\underset{\sim}{\text{ə}}_2$ became an aspirate".

Ghosh (1977:136ff) commenting on "the liberal use of particle *-am* in "pronominal flexion" (including *tu-am* (< *tvam*), *ah-am*) says that this particle is clearly a later addition: "The cognate languages clearly show that the Indo-European word for "you" was **tu-*: cf. Greek *tu* (Doric), Latin *tū*. This *tu* (= you) may still be found in Rgvedic passages like *ā́ t ū gahi prá tú drava* (8, 13,14)". Rasmussen (1999:258) also refers to an earlier period "when **tu* still existed". The particle *tu* in the Gāθās of Avesta may everywhere be taken to mean "you", and its regular enclitic position renders support to the view that it is nothing but the original Indo-European pronoun. The particle *-am* (< *Indo-European *-om*) had been attached to it however at least as early as the Indo-Iranian period, cf Avestan *tvəm*. In the case of *áham* this particle had been attached to the original stem. He goes on to say that many of the *-am* forms are later: he claims *túbhyam, máhyam* should be read as *túbhya máhya* (m.c.). He adds that Latin forms *tibi, mihi* don't have nasals. Nominatives plurals *vayam, yuyam* he claims are later as well, analogically from elsewhere.

Lehmann (1952:108) says that "The chief allophone of /h/ may be most readily determined from its reflexes in Skt.; /p t k/ plus /h/ became Skt. /ph th kh/. Since these reflexes fell together with unvoiced reflexes of PIE /b^h d^h g^h/, the reflex of /h/ must have been similar to the unvoiced aspiration of these phonemes. I conclude that the chief allophone of /h/ was [h]; the friction was presumably produced in the larynx, but it may have been

produced in the pharynx".

The evidence of archaic Greek orthography indicates the same source for the aspirated phonemes of Greek. Greek inscriptions (before the introduction of the sign for χ) show KH (that is, a voiceless stop followed by a distinct, strong aspiration, similar to the strong aspiration in Hindi) δασέα 'rough, shaggy' in the terminology of both Dionysius Thrax and the "pseudo-Aristotle *De Audibilibus* (c. 200 B.C.)" (Palmer 1980:207). Allen says χ is "an aspirated plosive [kh]...[which] in Greek inscriptions tends to be confused with κ (e.g. χιτε = κεῖται)" (1987:24). The Sanskrit aspirated phonemes were aspirated stops [ph th kh = p^h t^h k^h] NOT fricatives. Unlike their Greek counterparts, such sounds as ph (= Greek φ), th (= Greek θ), kh (= Greek χ), never developed a later fricative pronunciation. To this day, borrowed words from languages which have the phonemes /f, θ, x/ are rendered in Hindi by /p^h, t^h, k^h/:

(21) English *film* Hindi *p^hilm*

Farsi *fikr* Hindi *p^hikr*

Hamp (1970:229), in an article discussing some of the peculiarities of IE proto-form for 'I', makes the following remarks concerning the "unexpected" *-h-* in the Sanskrit form: "In Indo-Iranian, however, it seems that, in addition to vocalising in this interconsonantal position the aspirate quality of the laryngeal united with the velar to produce Skt. *h*. Yet this *h*, rarely commented on in this connection, is itself rather unexpected". (But of course, not

so unexpected, if we posit the parent phoneme as having features both of back place of articulation and aspiration).

Although the "typical" source of Sanskrit *h* is considered to be **ĝh*, Sanskrit *h* shows the following correspondences with Greek γ, Greek χ, and Hittite -kk-:

1. In a lexeme denoting 'strength' both physical and mental (Mallory and Adams 1997:124)) : Vedic *sáhate* 'overcomes' *sáhas* 'victory Tocharian AB *sāk* 'hold oneself back' Greek ἐχυρός 'firm, strong', and in the suffixed forms: Hittite *šakkuriya* Vedic *sáhuri* 'victorious'

2. Sanskrit ***hánuḥ***[112] 'jaw' (or 'cheek' a 'particular part of a spearhead'): Greek **γένυς** 'jaw', Latin ***genus*** 'jaw': Gothic ***kinnus*** (whence English 'chin')

3. Sanskrit ***mahā*** 'great':Greek **μέγα** 'great', 'large'

4.1.5. Germanic *VC

The Germanic forms are most syntactically similar to the Hittite in showing the nominative pronoun only, without an additional particle. The earliest evidence of the Galleus horn has an *e*-vowel with the velar stop *k*.

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The name of the most celebrated of the divine monkeys is Hanumat ('having large jaws').

4.2. Summary of correspondences

In summary of these possible correspondences, we get the following reflexes and correspondences of the second laryngeal PIE $*H_2$:[113]

Table 24. Correspondences of Hittite ḫ : Hittite k/g: Greek γ : Greek χ : Greek k : Latin g: Latin ch : Sanskrit h

PIE $*H_2$ >	Hittite ḫ/ḫḫ	~	Hittite g/k	[velar stop]
PIE $*H_2$ >	Hittite ḫ/ḫḫ	=	Lycian χ	[voiceless uvular fricative]
PIE $*H_2$ >	Hittite ḫ/ḫḫ	$=	Lycian x	[velar or uvular stop]
PIE $*H_2$ >	Hittite ḫ/ḫḫ	$=	Greek γ	[voiced velar stop]
	Greek γ	$=	Sanskrit h	[voiced velar/pharyngeal fricative]
>	Hittite ḫ/ḫḫ	=	Greek χ	[aspirated velar stop [kh]
	Greek χ	=	Akkadian Ḫ	
Akkadian Ḫ	= Hebrew ח	=	Arabic خ	
>	Hittite ḫ/ḫḫ	$=	Latin ch	[aspirated velar stop [kh]
	$=	Latin g	[voiced velar stop]	
	Latin k	$=	Latin h	[where orthographic element h indicates a voiceless velar fricative]

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Here, the symbol > means 'becomes', symbol = means 'is equivalent to' and the symbol $= means 'can equal' or 'is attested as alternating with'.

CHAPTER FIVE

THE MORPHOLOGICAL MARKER OF THE HITTITE -ḪI CONJUGATION

5.0. First person singular marker -*ḫ*

5.1. What is Hittite -*ḫ*?

"*de la morphologie avant toute chose*"

Mallarmé (paraphrased)

There is no morphology without meaning

John Hewson (paraphrased)

"A thorough understanding of historical phonology depends crucially on one's interpretation of morphology"

H. Craig Melchert (1994:1), following Pedersen (1938:13)

Hittite texts represent the most archaic documentation of an Indo-European language that we have. One of the advantages of the great age of these texts is the clear evidence of the laryngeal[114] phonemes of the parent language. We cannot hope to understand the nature of the early voice opposition without understanding the laryngeal element which is opposed

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The name *laryngeal*(*s*) was given to these phonemes because of their assumed similarity to the phonemes of the Semitic languages. At the time when this name was suggested, there was, in the absence of Hittite, no direct evidence for them.

to *-m* in the first person singular.

I am assuming three laryngeals for the parent language[115] : $*H_1$, $*H_2$ and $*H_3$. Since it is the PIE phoneme $*H_2$ which resulted in Hittite *ḫ*, I will concentrate my discussion primarily on the diachronic and synchronic qualities of this particular laryngeal and its reflexes in the Anatolian family.

Let us first deal with the difficult issue of orthography. Many authors, when representing Hittite *ḫ* do so using an English *h*, which is phonetically either a voiceless glottal fricative, or a voiceless vowel (Rogers 1991:43).[116] Anyone who works on a computer (rather than writing out a manuscript by hand), knows the reason for this: it is a simple convenience to avoid the tedious process of assembling the correct symbol by character selection, overstriking, etc. However, I have chosen to take the more difficult path and represent the Hittite sound as *ḫ*[117], as I feel that it more accurately conveys the phonological character of the Hittite sound in a way that English *h* does not.

Synchronically, the Hittite sound, represented orthographically either singly *-ḫ-* or

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Other estimates range from one (Szemerényi 1967) to eight (Puhvel 1984; Paddock p.c.). The majority of scholars (Watkins 1998:40; Beekes 1995:124; Beekes 1988:60) work with the three provided above (often with vocalic allophones for each Beekes 1969:8), but four is also possible (Colarusso 1997).

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English *h* when it appears mid-word "is neither voiced nor voiceless. It is made with an adjustment of the vocal cords, called **murmur**" (Rogers 1991:43).

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To be consistent, I will also use the symbol *š* to represent Hittite /s/, although there is no reason to assume any pronunciation other than [s] for this sound in Hittite.

doubly -*ḫḫ*– (the latter being eight times as common as the former[118]), is generally believed to have been a voiceless fricative either velar [x], uvular [χ][119] or perhaps pharyngeal [ħ][120], similar in phonetic quality to Arabic ح – close to the sound of the final velar fricative in German *Bach* but with more forceful "throat-clearing" (Sihler 1995:30). Phonetically, it probably represents either [x] (a velar fricative), [k^x] (velar affricate) or [$k^{ḫ}$] (the laryngealized parallel to the phones k' (palatalized velar), k^w (velarized laryngeal). Its strongly velar quality is attested to severally[121], suggesting the possibility that it was (at least at some stage of its development) an aspirated velar plosive [kh/gh] (Melchert 1994:21).

Hittite -*ḫ*, such as appears in the -*ḫi* conjugation, is a reflex of one of the laryngeal phonemes

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This observation which is generally described as "Sturtevant's Law" may have a phonetic rationale: Al-Ani (1970:76) commenting on the stop consonant clusters of Arabic says: "Voiceless single stops in medial position are generally longer than the voiced ones–duration 110-130 msec for the aspirated ones and 100-120 msec for the unaspirated ones. When they are medial and geminated there does not seem to be much difference between aspirated and unaspirated voiceless stops. The durations are from 300-350 msec."

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Understanding the laryngeals of IE as having developed from "uvular obstruents", Kortland (2001:4) reconstructs three laryngeals as **q1*, **q2*, and **q*3. The second element marks first person singular of his "transitive middle".

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I say synchronic, as I believe that it can be established that the endings of the (older) -*ḫi* conjugation provide evidence of a (pre-IE) diachronic process at work in the Hittite phonological system, which was already complete in other (later) IE daughters. This process had as one result the formation of the aspirated phonemes of Greek and Sanskrit (with vestigial evidence in Latin). Because this process is central to some of my arguments, and in evidence in the morphological elements of the -*ḫ* conjugation ending (but not in the -*m* conjugation endings), I have devoted an entire section of this Chapter to it (see § 5.11).

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Bryce notes that the Hittite sound is often transcribed as kh (1998:4).

of the Indo-European parent language, specifically the second laryngeal $*H_2 = *h_2$ (Melchert 1994[122]; Kimball 1999; Watkins 1998; Puhvel 1984; Kronasser 1966 and many others[123]).

> The term laryngeal is applied (loosely) to a set of h-like sounds in the proto-language, of not entirely specifiable phonetic value. It is probable that they belonged to the natural class of 'gutturals' now recognized by phonologists working on Semitic languages (Watkins 1998:40).

Watkins emphasizes the effect that the various IE laryngeals could have on neighbouring vowels. He notes that "the basic rules affecting laryngeals are two: (1) H-coloration, and (2) H-loss:

> (1) H-coloration. Laryngeals h_2 and h_3 had the property of coloring (lowering,

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Melchert (1994:21)"The Akkadian syllabary has a series of signs for a consonant conventionally transliterated as *ḫ*. The sound in Akkadian is apparently a voiceless velar fricative [...] In Hittite words *ḫ* reflects the PIE "laryngeals" $*h_2$ and $*h_3$.[in word initial position] Orthographically, *ḫ* patterns like the stops with contrastive -*ḫḫ*- and *ḫ*– between vowels [...] In the attested cuneiform languages the synchronic contrast is ...between a fortis pharyngeal fricative /H/ realized medially as a geminate -*ḫḫ*- and a contrastive lenis pharyngeal fricative /h/ which occurs medially as *ḫ*".

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Puhvel (1960a:1) reviews the important landmarks in the development of the laryngeal theory, from Saussure's original brilliant insight, through Møller's (1879:151, nt. 1) work on the Indo-Hamito-Semitic connection (which Puhvel refers to as "an antiquarian shop or skeleton-studded closet") to Kuryłowicz (1927) and onward into recent and ongoing studies. See also Beekes 1988 for a more recent overview.

backing or rounding) an adjacent vowel *e* and only that vowel to *a* and *o* respectively; h_1 had no coloring effect. The results were

$h_1e = h_1e$

$h_2e = h_2a$

$h_3e = h_3o$

...(2) H-loss. At a later period, beginning in the protolanguage and continuing into the dialects, the laryngeals tended to become lost, with different phonological consequences in different environments and according to dialect" (1998:41). The second laryngeal proved to be the most durable and survives as a phoneme in Hittite. It is identified with Hittite -*ḫ*".

5.1.1. A brief overview of the IE laryngeals, specifically PIE *H_2 > Hittite -*ḫ*

Melchert describes the parent phoneme *H_2[124] as a "tense/voiceless pharyngeal fricative [ħ]" (1994:47). Although the parent phoneme has been lost in all daughter languages but Hittite, several effects of this phoneme may be observed in Greek and Sanskrit[125]. *H_2 has the power to aspirate a preceding stop (Eichner 1980:150ff), and is

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*-h_2 is simply an orthographic variant of *-H_2. No phonetic difference is implied.

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As in the ending of the second singular perfect in Greek -θα. The Greek shows an exact

considered the source of the aspirated stops of both Greek and Sanskrit (Pedersen (1926); Kuryłowicz (1935); Sturtevant (1928b:163), (1930b:150: "a voiceless stop sound before $\underset{\circ}{\text{ə}}_2$ (= $*H_2$) became an aspirate"); Sihler (1995:168); Beekes (1988:62, 63); Allen 1987)[126].

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parallel to Sanskrit and to Hittite here: In the second person, the marker was voiceless dental stop *t* + laryngeal [= *t* + H_2]. The laryngeal would later, as in Greek and Sanskrit, develop into the aspiration which would become in combination with the stop the aspirated phoneme t^h. The earliest value of this sound was an aspirated stop NOT the later fricative pronunciation of Hellenistic Greek [θ]. "The Greek aspirates [...] θ, φ, χ were true aspirates, that is, voiced stops followed by a distinct aspiration [...] The Romans transcribed the Greek aspirates, first by t, p, c, then more exactly by th, ph, ch. Eventually θ, φ, χ became fricatives [...] There are indications that this change took place at an early period in some dialects, e.g., in Laconian where a fricative θ is to be inferred from its representation by σ. But in standard Attic and the κοινή the pronunciation as fricatives did not prevail until sometime in the early centuries A.D. The significant transcription of φ by Latin *f*, instead of *ph*, is not found till the 1st cent[ury] A.D, and is not usual until the 4th cent[ury] A.D." (Buck 1952:118).

On the other hand, the change from a full laryngeal to aspiration must have been very early. Colarusso (1997:124) locates the shift from pharyngeal to true laryngeal "in the period of early differentiation". Some of the IE "laryngeals" became "true laryngeal glides" causing "source feature effects", including "glottalization" (voicing), both voiceless and voiced aspiration. In Hittite, only indirect evidence of this transition stage is available: in the (proposed) aspiration which protects the second singular ending in the *-ḫi* conjugation from affrication ($t^h \not> t^s$ / __i/y). Whereas the 'plain t' of the third singular *-mi* conjugation does undergo this process (t > t^s / __i/y, already in Proto-Anatolian period (Melchert 1994:62).

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This idea was first advanced by Pedersen (1926:48 note 1) and, following him by Kuryłowicz (1935:53-54). Both traced the source of the Proto-Indo-Iranian phonemes **gh* and *ǵh* from a PIE sequence of stop plus laryngeal phoneme. Pulju (1997:396) however notes that "since the voiced stops were the least frequently occurring of the three Indo-European stop orders, it is not too surprising that the total number of examples of voiced stop plus laryngeal yielding voiced aspirate is fairly small". Sihler (1995:168) referring to Indo-Iranian "$*H_2$ makes a preceding voiceless stop into an aspirate, thus **sti-stH₂ -enti* 'they stand' (root **steH₂-*) > Ved. *tiṣṭhanti* ; and they count as a consonant for ... Brugmann's Law ... thus **te-top-H₂e* 'I burn' > Ved. *tatápa* 'I suffer'(expected **tatápha* leveled), vs. 3sg. **te-top-e* > Ved. *tatāpa* 'he suffers' (root **tep-* as in L *tepidus* 'warm') ".

There is evidence that this aspiration process was operating in Hittite. It would explain the fact that the *-t-* ending of the second singular *-ḫ(i)* conjugation, unlike the *-t-* of the third person singular *-m(i)* conjugation, does not palatalize before the *hic-et-nunc* tense particle *-i*: the aspiration "protects" the *-ḫ(i)* conjugation second person singular ending[127]. This is evidence for a contrast (possibly in the Proto-Anatolian period) between aspirated /p^h, t^h, k^h/ and unaspirated /p, t, k/ phonemes in Hittite, similar to the same contrast in Greek aspirated stops (φ [ph], θ [th], χ [kh]) vs. unaspirated stops (π [p], τ [t], κ[k]), and Sanskrit (फ [ph], थ [th], ख [kh]) vs. unaspirated stops (प [p], त [t], क [k]). This would also explain the lack of palatalization of the velars before front vowels (Sturtevant (1933:31); "As Lehmann has shown, kh is not palatalized before e i.y. [...] This is most smoothly explained by seeing in the aspiration an earlier consonant which intervened between k and the vowel or semivowel" Puhvel (1960:14). This again would be a contrast between k^h and *k*.

Colarusso (1997:124) locates the shift from pharyngeal articulation of the parent phoneme (*H_2 a "tense/voiceless pharyngeal fricative [ħ]") to a "true laryngeal" happened "in the period of early differentiation"[128]. Some of the original laryngeals became "true

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For this insight, I thank Harold Paddock.

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This must have been very early indeed. Gamkrelidze and Ivanov (1995:758) say that "Anatolian names from a document dating to the end of the third or beginning of the second millennium B.C. show unambiguously that the separate Anatolian languages had already undergone a very long period of individual development by that time, in addition to the separate development of Common Anatolian after its split from Proto-Indo-European".

laryngeal glides", causing "source feature effects", including "glottalization" (voicing), both voiceless and voiced aspiration, and the colouring of a nearby *-e* to *-a*.

(2) $*H_2$ also resulted in *i* in Sanskrit and in Avestan[129] (Beekes 1969:8,9):

PIE	$*ph_2ter$ 'protector'	>	Sanskrit *pitár* 'father'	(Beekes 1988:62)
PIE	$*trh_2no$-	>	Sanskrit *tīrṇá* 'crossed'	(Beekes 1988:65)
PIE	$*g^wenh_2$	>	Avestan *jani* 'wife'	(Beekes 1988:67)
PIE	$*$-h_2	>	first singular middle (secondary) ending *-i*	

Sanskrit aorist *akri* 'I have done' Avestan *aojī* 'I have said'

(Recall that it is this *ātmanepada* ending *-i* which is opposed to the *parasmaipada -mi* by Pāṇini.)

PIE $*$-ih_2 > nominative singular feminine

Sanskrit *devī* 'lady, goddess'; Avestan *vaðvī* 'maiden'

Phonologists will immediately note the seemingly contradictory effects here: $*H_2$ is known as the "a-colouring" laryngeal. Yet it clearly resulted as well in a high front vowel. These apparently "contradictory effects" are explained by the feature constricted pharynx [+CP]

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Levin (1995:278) *-i-* is a "valid Sanskrit counterpart to the Semitic laryngeal consonant".

"with its low, strong F_1": this is the "pharyngeal signature in which an acoustic assimilation produces the opposite effects of an articulatory assimilation (Colarusso 1981). Pharyngeals have a formant structure with a low and powerful first formant. This gives the impression of a high front vowel. At the same time they are made with tongue root retraction and often with tongue lowering, which results in approximation of the epiglottis over the adytus (opening of the larynx). Such pharyngeals [...] produce low vowels by articulatory assimilation" (Colarusso 1997:125).

Pāṇini of course could have no way of knowing the source of the endings which he opposed to the *-mi* endings. Schleicher could have no way of knowing the source of his *perfektum*. We may now unite both: the *-i* ending which is the marker opposed to the Sanskrit *-mi* voice is an early reflex of $-H_2$ (Beekes 1988).

The literature concerning the number and quality of the laryngeal elements is vast, confusing and sometimes controversial. There is even disagreement on how to represent various elements graphically: "For reasons of convenience it would be useful if scholars could agree in some measure on the symbols to be used for discussion of the laryngeals" (Hamp 1960:55). The following is a brief overview that will serve to clarify certain of the properties of the laryngeal outlined above.

5.2. Previous attempts to identify the phonetic status of Hittite -ḫ

Hittite -ḫ < PIE *H_2

Phonology of H_2

"As to the value of H_2, nearly everyone who has written on the subject is of the opinion that it is some sort of fricative. Opinion is divided as to whether this fricative was velar, uvular, or pharyngeal" (Schleicher[130]1994:25). In the "velar" camp, Schleicher locates such scholars as Sapir (1938), Sturtevant (1942), Lehmann (1952), Lindeman (1970) and Bomhard (1979); he notes that "uvular/pharyngeal" is the choice of Sweet (1880), Couvreur (1937), Keiler (1970), Schmitt-Brandt (1967) and Beekes (1989). Based on its *a*-colouring effects, H_2 must have been at least as far back as uvular, possibly even pharyngeal.

Puhvel (1960:165) states that it is "common knowledge"[131] that Hittite -ḫ is a reflex

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Charles, not be confused with August Schleicher (1876). For the references cited in this paragraph see Schleicher 1994.

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A bit of wishful thinking on Puhvel's part, I fear. Even a brief sortie into the literature will establish that no two authors agree on either the phonetic status or the method of recording this element. There are apparently as many phonetic descriptions of this element as there are authors discussing it. As well, the graphic representation of the element varies widely. In addition to the signs listed above, it has been represented variously as "a single non-committal X"- "any laryngeal"or *H "any voiceless laryngeal" (Hamp 1960:55). Authors regularly use the orthographic variants *H_2 / *h_2.

of a voiceless velar laryngeal (which he writes as A_2 (*op cit* :171)). Cowgill's (1960:93) "guess" is that the element was a "non-distinctively voiceless velar spirant [x]", which he writes as *A. Other scholars identify the element with the second of Kuryłowicz's four laryngeals, -$ə_2$, regularly written as -h_2 or -H_2 (Saussure's A= "by then recognized as a consonantal element", with Hittite -$\underline{h}$ (Watkins 1998:40)).

Bomhard (1996:90) insists that "extremely good correspondences" between Afroasiatic and Indo-European, allow the "probable phonetic values" of the laryngeals to be confirmed. Although "for the sake of argument" he considers, with Kuryłowicz, the most probable number of laryngeals to have been four, he goes on to posit what, to my mind, are essentially two. He identifies *H_1 as a glottal stop /ʔ/ [similar to Hebrew א('alef), *H_4 as a voiceless laryngeal fricative /h/, while *H_2 "was probably the voiceless and voiced multiply articulated pharyngeal/laryngeal fricatives /ħh/ and / ʔh/, and *H_3 was probably originally identical to *H_2". Neu admits that "über dessen phonetischen Charakter [of the -Laut] noch heute Unklarheit herrscht" (1968b:127). Watkins (1998:40) as well grants that the quality of these elements is "not entirely specifiable", although they seem to resemble the Semitic gutturals.

Perhaps the best review of this "Procrustean bed of etymological conjecture" may be found in Keiler's (1970:47-56) review entitled "Semitic Parallels to the Indo-European Laryngeals". I provide only the relevant highlights here, which bear directly on this thesis. He reiterates the observation of both Couvreur and Messing who have both "pointed to the compensatory lengthening of a preceding vowel by a laryngeal [...] as is the rule for

Akkadian in general" (*ibid*:54).

5.3. What similar systems can tell us about IE laryngeals and Hittite Phonology

Keiler (1970:61) notes that "the closest available parallel phonemic system" from which we can garner "phonological generalities of structure" about the Indo-European laryngeals is Arabic.[132] Such comparisons are valid as they

> permit general typological statements such as one can claim that (1) given any phonemic system with similar phonemic contrasts, one could state necessarily that they will show such general phonological features; or (2), which is more important for IE, given any synchronic set of such alloph[o]nic features, one could assign them to this set of phonemic contrasts. Concerning h and ʕ, then, the inherent effect of vowel-color distortion which these sounds pattern with [...] there is a causal, not accidental relation between these sounds and the kinds of effects they produce on adjoining vowels. The allophonic range of IE *e* adjacent to laryngeals as a synchronic fact can be understood by positing for the laryngeals H_1, H_2, and H_3 the values h, ḥ, and ʕ, or better, the distinctive feature matrices associated with these sounds, which at the same time subsume[...] necessary physiological and acoustic parameters [...] Thus IE H_1 (h) can be said to have had no effect on adjoining vowels, while both IE H_2 (ḥ) and H_3 (ʕ) produced *a*-color and *o*-color respectively (Keiler 1970:68).

Such comparisons establish that certain effects (such as the 'colouring' of certain vowels by certain laryngeal features) have a causal, not accidental rationale, and may be

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With the caveat that this approach is "complicated by [...] great dialectical differences and [...] a lack of precise terminological and methodological apparatus". Nevertheless, the four laryngeal phonemes posited for Proto-Semitic are "more or less faithfully preserved in most modern Arabic dialects, even today" (Keiler 1970:48); this continuity suggests that we are not too far off the phonological mark in elucidating one with the other.

validated by consulting a linguistic system with similar contrasts.

5.3.1. A good parallel to the IE laryngeals: The Pharyngeal Consonants of Arabic

By way of background, "Pharyngeal consonants are made by moving the root of the tongue back so that it is closer to the pharyngeal wall [...] Most people cannot make a complete pharyngeal closure, so only fricatives are found [...] The symbols are [ħ] for the voiceless fricative and [ʕ] for the voiced fricative. Arabic has a glottal stop as well as voiced and voiceless pharyngeal fricatives [...] Pharyngeals can be specified as [dorsal] and [low]" (Rogers 1991:210). Arabic as well has both velar and uvular stops, both voiceless, as well as voiceless velar and voiced uvular fricatives (Al-Ani 1970:29, 34, which see for descriptions of allophones of these phonemes).

Using a feature matrix, Keiler identifies the IE laryngeal $*H_2$ as having the features [+ flat], [+ tense]. This double marking, he suggests, is responsible for the fact that this particular laryngeal perseveres when the others either fall together or disappear altogether (also Colarusso 1997:124)[133].

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Kaiser (1989:52) suggests that "the IE triad of stops was actually [using the alveolar set] T̲ , T D (where the strong T̲ might have been an aspirated Th)".

Table 25. Feature Matrix for PIE laryngeal phonemes (after Keiler 1970)

PIE Laryngeals	H_1	H_2	H_3
flat	-	+	+
tense		+	-

Once again, we owe a debt to those who have gone before:

> Jakobson has already gone far in incorporating the [diverse motor movements involved in emphatics] into the distinctive feature of flatness, although he did not at the time discuss fully the relationship between motor movement and acoustic result, nor did he extract those typological features of emphasis for the different classes of emphatic sounds, typological in the sense of predictable for any phonemic system in which the contrasts occur. While the phonetic implementation of the flatness feature can either be the increased rounding of the lip orifice or retracted tongue position, i.e., velarization, which is necessarily concomitant with some degree of pharyngeal constriction resulting from the pulling back of the tongue, the acoustic feature is in any case the resulting increased length of the front oral cavity. The acoustic cue of the flatness feature is according the downward shift of the second formant of the adjoining vowel" (Keiler 1970:63).

Keiler's remarks are informative on the point of the fate and outcome of the laryngeals and I quote him at length:

> It is safe to assume, depending on the particular IE dialect, either a partial or complete falling together of the IE laryngeals before their total disappearance from the IE languages, and after the contrast flat/plain (or after the vowel colouring effects) had been established as part of the IE vowel system. For Indo-Iranian one can postulate a merging of $\underline{H}_1/\underline{H}_3$ vs. $\underline{H}_2$, i.e., a distinction between the original (marked) tense laryngeal ($\underline{H}_2$) and the remaining

> laryngeals, **since only the former produces the Indo-Iranian voiceless aspirates.** Now in terms of the physiological and acoustic features underlying H_2 (vs. H_3), once the flat (vs. plain) distinction ceased to be operative for laryngeals, i.e. the particular pharyngealization associated with these phonemes, H_2 would be simply a laryngeal spirant [Sanskrit *-h-*], since the tenseness of H_2 was at least partially laryngeal aspiration (with concomitant flatness for the earlier stages of IE). Sequences of voiceless stop and the reflexes of H_2 in Indo-Iranian would correspond phonetically to the reflexes of the IE voiceless aspirate phonemes (1970:89-90).

Based on Keiler's analysis, I propose that *k* and *ḫ* are two allophones of what was at this early stage a complex, multiply articulated phoneme (Appendix VIII). "Multiply articulated" phonemes are a feature of most reconstructions, certainly in the "velar series"[134], which has k^w (labialized velar voiceless stop), *k'* (also written k^j = palatalized velar voiceless stop), as well as "plain" *k*. The aspirated phonemes may be analysed in the same way, as, for instance, k^h (laryngeo-velar voiceless stop).

There is much evidence that these multiply articulated phonemes (e.g., C^C), began as a cluster, a series of two full consonants (e.g., CC), with various outcomes in the daughter languages. (This idea was first advanced by Pedersen (1926:48 note 1) and, following him by Kuryłowicz (1935:53-54). Both traced the source of the Proto-Indo-Iranian phonemes **gh*

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Watkins (1960:237ff) emphasizes that it is of utmost importance to integrate "the laryngeals into the whole phonological structure, and establish [...] their relation to the other, well established consonantal units, such as the velars". He insists that we must acknowledge the "significant structural relations between /x/, /k/,/ γ/ and /g/".

and *$\acute{g}h$ from a PIE sequence of stop plus laryngeal phoneme[135]. A sequence of stop + laryngeal is the source of the aspirated phonemes of both Sanskrit and Greek. To this day, the aspirated phonemes of Sanskrit are considered to give equal value to each element. In Greek, especially in older evidence, a sequence of voiceless stop plus H (KH, TH, PH) is common (Sihler 1995:18, Palmer 1980:207). In both Thera and Melos, digraphs were used to represent voiceless aspirates: πh, κh, and the redundant θh. The downgrading of the second phoneme to a secondary articulation (i.e., k^h, t^h, p^h) doubtless allowed for confusion between the aspirated and unaspirated stops, and paved the way for the frication of these sounds in Hellenistic Greek. In the Anatolian family, labio-velars often appear (in Hittite) as sequences of two consonantal phonemes (Sturtevant 1933:67, 68); Luwian evidence also shows sequences of phonemes: *kw* (Mallory and Adams 1997:461). At least in some period of the "evolution" of a complex sound, both elements are on an equal footing.

The evidence of the aspirated phonemes of Sanskrit and Greek also suggests that the aspiration (a secondary articulation?) originated as a full laryngeal consonant. The laryngeal C eventually became 'suprasegmentalized' to, essentially, a secondary articulation, appearing as aspiration of the primary dental/alveolar stop articulation. This phoneme then contrasted with the dental stop that did not have a secondary articulation, "plain" *t/d*. There is good supporting evidence for this type of diachronic phenomenon (i.e., CC > C^C) involving the

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Pulju (1997:396) however notes that "since the voiced stops were the least frequently occurring of the three Indo-European stop orders, it is not too surprising that the total number of examples of voiced stop plus laryngeal yielding voiced aspirate is fairly small".

reflexes of labialized/normal members of the [k/k^{w}] series of archaic PIE. Sihler (1995:153) says that [k^{w}] seems to have been distinct from [kw]; both phones "scan the same" but *kw* "gives a double consonant medially" (Sihler 1995:159), as for example *ek'wo- > Sanskrit á**śv**as, Avestan a**sp**a, whereas *k^{w}*, "gives a single consonant" (*ibid*), as for example *sek^{w} > Greek ἔ**π**ομαι, Latin se**qu**itur. He notes (*ibid*) that "Greek is the only centum language [...] attesting a contrast between reflexes of *k'w and *k^{w}".

Another outcome of a "complex" sound is that one element is lost, the other stays. Although the loss of the laryngeal (in all but Hittite) is common, this is not always the case. Gamkrelidze and Ivanov (1995:20 nt.25) point out that in a series derived from stop + laryngeal, it is sometimes the stop that is lost, whereas the laryngeal (or at least its reflex), remains: "In Sanskrit, *dh* is an unstable sound which tends to lose one of its features (usually stopness)." Example *hita* < **dhita* 'good'; *grha* < **grdha* 'house'.

Regularly, one of the C's of a series CC becomes the primary articulation, the other secondary: C^{C}. As with the CC phonemes, reflexes of a complex sound could go either way. Examples of this type are common:

(23) *g^{w} > g or w from PIE **bheug^{w}***

Hittite ḫu**w**a 'flee'

Latin fu**g**io 'I flee' (Loss of velar stop)

Greek φεύγω 'I flee'

(Loss of labialization)

Concerning such reflexes, Meillet says : "It is easy to see how k^w can lose its labial quality and become *k*; the phenomenon occurs in each of the Western dialects under certain conditions; indeed, one of the Celtic dialects, Gaelic, has only c (i.e., k) as representative of the original Western $*k^w$ (1967 [1908]:69). In a similar development, he notes that in Common Celtic, a voiced aspirated $*g^wh$ is represented by *g* (Meillet 1967:72). (See also Martinet 1956).

$*k^w$ goes the 'other' way as well : $* k^w > p$. Thus Latin *quinque* but Greek πέντε, Welsh *pimp*, (cf. German *fünf*, English *five*) with the *p* from the secondary articulation (labial). Cf also Latin *coquīna* (which must be from $*k^w$ .. k^w 'cook') and Latin borrowed from Oscan *popīna* (see Martinet 1956). In the Latin word, the first *k* has lost the velarization (most likely a type of dissimilation), the second maintains it. In the Oscan word, both reflexes are from the secondary labialization. See also Lithuanian *kepu* 'bake'(< $*pek^w$-), which has the velar stop and the labial stop (from the place feature of the secondary articulation). See also Bennet (1969) for numerous examples of Pre-Germanic /p/ for Indo-European /k^w/.

As the Greek and Welsh evidence show, the secondary articulation of what has essentially become a glide is realized as the closest obstruent place allophone. So if we consider that at some point in its articulatory evolution (from a vertical (i.e., in the throat) to horizontal (i.e. in the mouth) articulation[136]), the secondary *ẖ* has become a laryngeal glide,

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Al-Ani (1970:59) quotes Peterson and Shoup (1966:29,30) for the definition of these terms: "A vertical place of articulation is defined as "a set of anatomical locations from the palate

its closest realization as an obstruent being uvular fricative [χ], velar fricative [x], or velar stop [k]. On the pattern velar stop + secondary articulation, I propose to add a third set of PIE velars, a pharyngeal set, with reflexes parallelling the other velars:

PIE		Possible reflexes/outcomes		
*k^{w}	>	k	kw	w (p)
*k^{j}	>	k	kj	j (š)
*$k^{\underline{h}}$	>	k	$k\underline{h}$[137]	$\underline{h}$ (k)

Under this analysis, the elements that mark the first person nominative case pronoun of Hittite *-k* and first person singular of the Hittite *-ḫ* conjugation are ultimately the same element, or are realizations of one or the other part of a complex or multiply articulated phoneme.

There is no doubt that Hittite voiceless velar fricative *ḫ* alternates orthographically with voiceless velar stop *k*. I cite here several attested correspondences. Others may be found in Kronasser (1966:98ff):

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to the glottis, inclusive". In contrast, a horizontal place of articulation is "from the lips to the uvula, inclusive".

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To reiterate: it is at this stage that palatalization in Hittite is blocked by what is in essence an aspirated phoneme. "As Lehmann has shown, kh is not palatalized before e i.y.[...] This is most smoothly explained by seeing in the aspiration an earlier consonant which intervened between k and the vowel or semivowel" Puhvel (1960:14).

Table 26. Table of Hittite *ḫ* ~ *k*.

^{D}*Ka-taḫ-ga-aš*	~	^{D}*Ḫa-taḫ-ḫa-aš*			A god's name (StBoT 16:49)
Ka-a-ru-na	~	*Ḫa-a-ru-na*			Name of a town[138]
Katti	~	*Ḫatti*			Name of the country
ḫameškant	~	*ḫamešḫant*			'spring'
kilammar	~	*ḫilammar*			'gatehouse'
ḫazgara	~	*ḫazqara*	~	*ḫazḫara*	'maiden'
iškuna,	~	*išḫuna*			'stain'

The alternation occurs in a wider Anatolian context as well, significantly in the endings of the first person singular (preterite)[139], all from PIE *-h_2e (Melchert 1994:52,258)), which I have noted above, but repeat here:

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This alternation and the next example are from the Enkomi cylinders, attributed to a certain "Sarru-ziti, fils de Yakubi, du pays du Ḫana" (Faucounau 2000:61) (that would be Jakob, king of Canaan), the language of which Faucounau calls "créole sémito-anatolien". On this cylinder, many Hittite and Luwian words may be deciphered, including "*ḫukka*, avec dissimilation du second *ḫ* en *k*" (Faucounau 2000:64).

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The Etruscan middle voice marker *xe* also = Hittite *-ḫi* (Georgiev 1981:235, who invites a comparison of Hittite *wedaḫḫun* 'I built' with Etruscan 3rd person singular preterite *vatie-xe* calling it one of the "most important Etruscan-Hittite correspondences" (1981:240)). Note also that Hittite *mekki* 'much' corresponds to Etruscan *mex*.

Hittite	Palaic and CLuvian	HLuvian	Lycian	Luvian
-ḫa	*-ḫḫa / -ḫa*	*-ḫa*	*-χa/-ga*	*-ḫa*

Note: Lycian χ = Hittite *ḫ*, both attested reflexes of $*h_2$ (Kimball 1999:121). Thus from $*-h_2$ come : a voiceless uvular fricative [χ] in Lycian *χava* 'sheep' Hittite *ḫāwi* 'sheep' < $*h_2owi$ 'sheep', and the first person singular preterite ending of Lycian *-χa* (< $*h_2e$, as well as voiced velar stop [g] as in the first person singular preterite ending of Lycian *-ga* (< $*h_2e$) (Kimball 1999:123).

Puhvel (HED 1:267) mentions the following inter-Anatolian correspondences (but see Melchert (1994:196):

Hittite *aku-* 'drink'	vs.	Palaic *ahu* 'drink'
Hittite *maninkuwant-* 'short, close'	vs.	Luwian *mannahunna-* 'short'

The same alternation is seen in Hurrian and Hattic, the non-Indo-European languages of the indigenous populace. Although Melchert (1994:9) says that "there is no evidence that these languages had any effects on Hittite phonology" comparisons of similar patterns and alternations in the two languages may have value (Melchert 1994:22). See also Speiser (1940:319) who notes parallels in orthography between Hurrian and Hittite. Thus: "Alternation of k and ḫ is attested both in Hattic (Hatt. *Kattaḫḫa, Ḫatagga, Ḫataḫḫa* 'queen') and Hurrian (Hurr. *kešḫi, keški, ḫešḫi* 'throne') (Gamkrelidze and Ivanov 1995), ***Kušši-***

Ḫarbe vs. ***Gušši- Ḫarbe*** vs. ***Ḫušši- Ḫarbe*** 'a personal name'(Speiser 1940:332).

Commenting on these alternations, and others like them, Sturtevant (1933:72) suggests that "Hittite *h* may have been an aspirate [kh]. The god-name *Katahas* is once written *Ḫa-tag-ga-aš* (KBo 4.10.2.2.) and once *Ḫa-taḫ-ḫa-aš* (KUB 6.45.2.60) [...also Kronasser 1966:96, who provides *Kadaḫḫaš* ~ *Ḫadaḫḫaš* ~ *Ḫatakgaš*...] . The unique É *ki-lam-ni* (KUB 11.23.5.18) may belong with the frequent É *ḫilamar*. Several geographic names containing *h* have been identified by various scholars with later names containing *k*, *g*, or *kh*."[140]

In this way, under the 'banner' of the parent second laryngeal, we may unite the voiceless velar stop of *ūk-* 'I', with the marker of the first person singular centripetal conjugation *ḫ*, as the *m* of the accusative pronouns marks the centrifugal conjugations. The phonological nature of the second laryngeal itself, reflected grammatically in the first person singular of the *ḫ* conjugation (a fortis, voiceless fricative), provides the clue to the various manifestations of the direct case pronouns of Sanskrit *h* (a voiced pharyngeal spirant (Cardona 1976:206), Hittite *k* (a voiceless velar fricative), Greek γ (a voiced velar stop), Latin *g* (a voiced velar stop), Gothic *k*, Galleus *k* (a voiceless velar stop), OHG *ç* (a voiceless palatal fricative), and has reflexes in first person singular forms throughout the Anatolian, the wider IE family and beyond.

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Greenberg (2000:59) says that the "relationship between velars and laryngeals is well known. There are a number of forms that require a proto-form with *k* alongside of *H* [i.e., a laryngeal]". He cites Latin *costa* 'rib', Russian *kost'* 'bone', Hittite *ḫastai* 'bone'.

With this in mind, consider the possibility that the same phoneme *-H_2 as a marker of 'I' deixis appears in

1. First person singular nominative case Tocharian A *ñuk* 'I' (a form which has never been "satisfactorily explained" (Winter1960:180)
2 First person singular present Tocharian A *tākā* 'I move'.
3. First person singular nominative case in Gothic *ik* 'I'
4. First person singular nominative case in German *ich* [Iç] (a palatalization and re-frication of *k*)
5. First person singular of Greek κ perfects (as the origin of the κ which is later extended to all persons)

The Greek κ perfects are a small (21 or so verbs) and ancient group of perfects whose beginnings "antedate the dialects" (Petersen 1928:275). Sturtevant (1940) in an early paper in *Language* proposed that the -κ - (which resulted from a sequence of a root-final laryngeal plus suffix *-*Ae*, i.e., a sequence of two laryngeals, the second of which is *H_2), originated in the first person singular and then spread elsewhere throughout the paradigm[141].

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There is a simpler explanation: Evidence from modern studies argues for the validity of *k* as an approximation of type of voiceless velar laryngeal (*ḫ*) which appears as a phoneme of Arabic. Discussing the "treatment of the Arabic phonemes in the loanwords borrowed by Tigré", Leslau (1956:125) indicates that Tigré, which does *not* possess this phoneme, shows a -*k*- where the Arabic has a (*ḫ*). Thus "Ar. *ḫ* = Te. *k* : *'ākər* "end" (Ar. *'āḫər), käbär* "notice" (Ar. *ḫabar*)." Therefore, a language such as Greek which was reproducing the

However, according to Cowgill (1960:141):

> His explanation of the Greek verbs with k-suffixes in the aorist and the perfect requires that the *k* originated in the 1st singular perfect of roots ending in two of his four laryngeals, where the combination of the root-final laryngeal with the ending *-Ae resulted in Indo-European *ka̲.

Cowgill rejects this scenario on the grounds that, in his opinion, it is "practically impossible that the *k* could have spread from here to other persons of the perfect active singular". In other words, his objection is based on the unlikely nature of an analogical spread from the first person singular marker[142]. Nevertheless, Burrow (1955:316) offers hard evidence that this is precisely what does occur in Sanskrit, and, by implication, in the parent language:

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original voiceless velar laryngeal phoneme *h̲* which marked the first person singular of the IE perfect would very likely show a *-k-*, and it does. Hebrew scholar Rosén (1957), cited in Cowgill (1960:150), "adopts k̲ as a freely available laryngeal reflex".

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According to Kuryłowicz's 'Laws of Analogy', analogical spread is typically from third to other persons, and I am not convinced by Burrow's scenario for the final *-e* of the middle ending. The spread could have been either way: most likely this is the stative ending, which spread from third to other persons. However, I am concentrating on a system where the first person singular is of utmost importance; hence the possibility that one of its markers -for instance, the κ in Greek – first and originally a feature only of the first person, could spread throughout the paradigm, especially once its function as a voice marker has been lost.

> The primary middle endings of Sanskrit arise in the first place, as in the active, from the addition of *-i* to the secondary endings: *bhárata* + *i* > *bhárate*. Corresponding to the *-e*, Greek has *-αι*. This vocalism is most simply explained as due to the ending of the 1st person (*-Ha* + *i* > *ai*) from which it spread by analogy to the other persons. In Sanskrit this final *-e* appears in all primary forms, but its presence in the dual and in the first and second persons of the plural is due entirely to analogy, and these are to be regarded as the latest parts of the system.

Buck also mentions the possibility of analogical spread from the first person singular: discussing the origin of the Latin perfect endings, he says that the second person singular form *istī*(earlier *istei*) "is to be analyzed as *-is-tī*, as also 2pl.*-is-tis*. The first part belongs in origin to an *s*-aorist stem[143], the same which underlies the other tenses of the Latin perfect system. The second part is from the 2sg. perf. ending *-tha* (Skt. *-tha*, Gr. -θα) remade into *-tei, tī*after the analogy of the first singular (Buck 1952:296). He also notes that the evolution "along similar lines" of the Latin *uī* perfect which he says is "peculiar to Latin" (though not Italic, so Buck 1952:294), and the κ perfect, which is peculiar to Greek. The evidence is that both derived from an earlier common form which would account both for the similarities and the differences. [[*d^he-$d^hóh_1$-h_2e> *d^he-$d^hóh_2u$ > dadháu]]. First singular perfect *ī*earlier *-ei*,

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A possibility that Hewson (p. c.) considers "unlikely", suggesting rather the verb **es* 'be' as source.

is from IE *-ai*, represented in Sanskrit 1sg perfect middle *-e* (*bubhudē*)[144].

5.4. PIE *eĝH revisited

Melchert reconstructs two laryngeals for Proto-Anatolian (see Table 5): voiceless /H/ and voiced /h/. Initial */h_3 / is a lenis voiced fricative */h/ in PA, distinct from the fortis voiceless */H/ which was the regular reflex of */h_2/ (Melchert 1994:72). Given Melchert's rules, the reconstruction *$e\hat{g}h_2$ is problematic:

*H_2 is voiceless. By a regressive assimilation rule operating in PA, the laryngeal first devoices a preceding stop and is then lost (Melchert 1994:76). Given a protoform *$e\hat{g}h_2$, the result would be *ek-* exactly what is attested in Hittite before the vowel spread from the second person pronoun (Benveniste 1953).

Step One	Regressive assimilation of voicing:			
	Devoicing rule operates	*e$\hat{g}h_2$	>	*ekh_2
Step Two	Loss of laryngeal	*ekh_2	>	*ek-
Step Three	Analogical spread of vowel from second person			ūk 'I'[145]

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But PIE *a and *H_2e fall together, so possibly *ī* is ultimately from $H_2e + i$?

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Could the backing of the vowel ($e > u$) be a result of assimilatory effects of the following laryngeal (or pharyngealized) consonant? The notion of analogical spread of *ū* from the second person seems a semantically unmotivated, ad hoc solution. "Whenever a pharyngealized consonant occurs within a syllable the whole syllable, phonetically, is

Also, even if the proto-form had a palatal(ized) velar, e.g., either voiced or voiceless, given the pharyngeal place of the following 'laryngeal', would this not have had an assimilatory effect on the place of the velar? Why would only voicing be affected? For that matter, why do we need a velar stop at all? Is it possible that $*H_2$ with the value [kh] or [k^h] could have produced all the attested outcomes? See, for instance, the contrastive phonemes of Archaic PIE where there was a contrast between k, k^w, g, g^w (Sihler 1995:153 : "The [k] series was of the normal velar sort, and the [k^w] series had a definite labial component, manifest in all non-satem languages without exception; that it was also articulated farther back on the velum than [k] is likely, as [k^w] seems to have been distinct from [kw]")[146]. Recalling Sihler's remarks quoted above (page 184), is it not possible to make a parallel argument for Hittite *kh* or k^h, where the second element is not labialization, but pharyngealization? In this case, one would expect reflexes to be possible from both components, on the pattern of, say g^w, or from both *gw*. Thus:

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pharyngealized. This potentially makes all of the phonemes allophonically conditioned in this environment. [...] the phenomenon of pharyngealization is not confined to the syllable boundary but may or may not have an influence on the neighbouring syllable. This puts the immediate consonantal phonemes, preceding and following, in free variation, pharyngealized or non-pharyngealized. Voiced consonants in final position are in free variation – voiced or voiceless, and voiceless consonants, intervocalically, are also in free variation – voiced or voiceless" (Al-Ani 1970:30). In this way, much of the observed variation between spelling with single and double consonants may be explained as a result of the pharyngealized nature of the H2 phoneme as it moved forward to its velar articulation.

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Cf. Greek ἵππος (Doric ἵκκος), both from *e$\underline{k}$wo 'horse'.

(22) a. gw > e$\underline{\underline{k}}$$\underline{w}$o

g^w > g (Reflex of velar component)

w or p (Reflex of labial component)

b. kh > in aspirated stops of Greek (KH = χ) and Sanskrit (Ka) [kh]

k^h > k (Reflex of velar component, seen in *uk/g*)

> h (Reflex of laryngeal/pharyngeal component, seen as aspiration in Sanskrit *ah-*

CHAPTER SIX

THE MORPHOLOGICAL MARKERS OF THE SECOND AND THIRD PERSONS OF THE ḪI/MI CONJUGATIONS

6.0. Introduction

The literature concerning the elements which commonly mark second (*-s-/ -t^h-*) and third (*-t-/-Ø-/-nt-/-r-*) person throughout the Indo-European family is profuse, confusing and merits a separate treatment.[147] Here I will mention only such aspects as I deem directly relevant to the matter at hand. Many points concerning the overlap or "contamination" of second and third person endings (especially in the "contaminated" preterite *-šṭ*[148]) will be discussed in reference to the particular verbs of the *-ḫi* conjugation.

Similarly, I will try to limit my discussion to relevant links between the endings of the *-ḫ* conjugation and Greek and Sanskrit inflectional endings, mentioning the *-m* conjugation only when necessary for clarification purposes. In the first section of this chapter, I will show that the phoneme which marks the second singular of the *-ḫ* conjugation is an

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For treatments of the origin, functions and chronology of *-s* and *-t* see Watkins (1962), Shields (1992) or Sihler (1995). For the original identity of second and third persons, see Adrados (1982). For discussions of third person endings, especially *-r*, see Yoshida (1990 and 1991) or Justus (2002).

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This is a significant feature of *ḫ* verbs in such forms as *mema-šṭ* 'he/she said' where the 'sigmatic'? *š* is older, and invariably occurs *before* the *-t* preterite, an importation from the *-mi* conjugation.

aspirated dental -t^h. This element is composed, as were the aspirated phonemes of Sanskrit and Greek, of an original sequence of a stop plus laryngeal *-H_2 (see Hamp 1970); cognate second person forms with this marker may be seen in both of these languages.

Firstly, it should be emphasized that "The rigid paradigmatic structure for the three persons of the singular, *m* (*i*) -*s* (*i*) -*t* (*i*), belongs only to the latest period of Common Indo-European, and was completely achieved only after the separation of the dialects" (Watkins 1962:105). A certain amount of variation, both with the persons and between conjugations is predictable. Both the variation and the correspondences with other IE forms made be seen by investigating Hittite data.

6.1. The markers of the second and third persons, -*ḫi* and -*mi* present conjugations

Unlike the clearly delineated first person singular markers -*m* and -*ḫ*, the markers of the other two persons show a substantial amount of overlap. Thus, although the usual ending of the second person singular -*mi* conjugation is -*s,* and the second person singular -*ḫi* conjugation is -*t*, the following second person singular active endings are attested for -*mi* verbs:

6.1.1. Second person singular mixed conjugational endings (-*mi* conjugation verbs)

(23) a. *ep-* 'seize' (-*mi* conjugation)

ep-ši (*e-ip-ši*) 'you seize'

ep-ti (*e-ip-ti*) 'you seize' (Friedrich 1960:78,79; Kronasser 1966:33,389)

b. *ḫar(k)*- 'have', 'hold'(*-mi* conjugation)

ḫar-ši 'you hold'

ḫar-ti 'you hold' (Friedrich 1960:859; Kronasser 1966:412)

c. *ištamaš*- 'hear' (*-mi* conjugation)

ištamaš-ši (*iš-ta-ma-aš-ši*) 'you hear'

ištamaš-ti (*iš-ta-ma-aš-ti*) 'you hear' (Friedrich 1960:85; Kronasser 1966:402)

Similarly, although the usual ending of the second person singular *-ḫi* conjugation is *-t,* the following second person singular active *-ḫi* conjugation endings are attested:

(24) Mixed conjugational second singular endings (*-ḫi* conjugation)

wašta- 'sin' (*-ḫi* conjugation)

waštat-ti (*wa-aš-ta-*(*at*)*-ti*) 'you sin' (Kronasser 1966:535)

wašta-ši (*wa-aš-ti*) 'you sin' (Kronasser 1966:535)

6.1.2. Third singular endings

The endings of the third person are far more regular in "attachment" to conjugation than are the second person endings. Excluding the tense ending *-i,* which occurs in all

persons, the third person ending of the *-ḫi* conjugation is -Ø. The ending of the *-mi* conjugation, again excluding the tense marker, is *-t*. The following third person singular active *-mi* conjugation endings are attested:

(25) Third singular forms of the *-mi* conjugation

ep-zi 'he/she/it seizes'

ḫar-zi 'he/she/it holds'

ištamaš-zi 'he/she/it hears'

The *-mi* conjugation third singular ending is -zi [t^{s} ij]. This represents an underlying *-t-*, affricated before the high front vowel of the (primary *hic-et-nunc* present tense) particle **-i*, as well as before *-y*[149]. Thus: /t/ > /t^{s}/ / _____*-i/-y*. In the Anatolian family, this process operated only in Hittite: "As Luvian and Palaic cognates show, assibilation of *t before vocalic *i was confined to Hittite" (Kimball 1999:288). This process was operating very early, during the Proto-Anatolian period: "I tentatively assume that the affricate [ts] resulting from the assibilation of */t/ before /y/ was still a conditioned allophone of */t/ in PA" (Melchert 1994:54)[150].

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Melchert (1994: 22,54, 62,96,117,118: /ts/ < PA (ProtoAnatolian)*/t/ /__i: pres. 3rd sg. -zzi <PA *-ti)); Kimball (1999:107).

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Although Luwian has *-ti*, which must be an earlier, unaffricated form.

The third singular endings of the above examples were, underlyingly:

1.	*/ep-t-i/*	>	[ept^{s}i]	>	*epzi*	'he/she/it seizes'
2.	*/ḫar-t-i/*	>	[ḫart^{s}i]	>	*ḫarzi*	'he/she/it holds'
3.	*/ištamaš-t-i/*	>	[ištamašt^{s}i]	>	*ištamašzi*	'he/she/it hears'

6.2. The Problem

Whereas the *-t* of the third person singular *-mi* conjugation clearly undergoes an affrication process, appearing as *-z-*, as above, the *-t-* of the second person singular *-ḫi* conjugation does not. The solution I propose is that the *-ḫi* conjugation second person *-t-* and the *-mi* conjugation third person *-t-* were originally two different phonemes[151].

The clue may be found in the [Akkadian cuneiform] endings of these two forms as they were transcribed by the Hittite scribes. The scribes were transcribing a spoken language. They heard the third person ending as [*-zi*] and the second person as [*-ti*].

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See Kronasser (1966:369). His *-hi* conjugation second singular "*-ti* < **-tha*?" seems to suggest that such a possibility had occurred to him as well.

PIE		PROTO-ANATOLIAN[152]	PRE-HITTITE	HITTITE
*th			t^h -i	> -ti
	>	t^h		
*dh				
*t				
	>	t	t-i	> t^s-i=-zi
*d				

Since voicing contrasts are not functional in Anatolian, the four-way contrast is essentially reduced to a two-way contrast (aspirated vs. unaspirated stops). Thus, in Hittite:

t^h/d^h > t^h This phoneme appears in 2nd person markers and "protects" the primary articulation from undergoing affrication before following -i/-y. Thus 2nd person marker -t^h + -i > ti [t^h]-- heard and transcribed by Hittite scribes as 

t/d > t This phoneme appears in 3rd person markers and is affected by the affrication process of a following high front vowel or glide. Thus 3rd person marker -t + -i > tsi [zi], heard and transcribed by Hittite scribes as 

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Voicing was not phonemic in Anatolian: "In cuneiform Hittite the signs denoting the voiced and unvoiced counterparts do not [...] denote voice or lack thereof and one finds spellings with both the voiced and voiceless counterparts without any difference in meaning" (Held et al1987:7).

Therefore, the t> t^s/ ____ -i/-y rule was still functioning while the language had an opposition of aspirated and unaspirated stops (/t^h/ vs. /t/) (pre-Hittite period). The opposition in Hittite between the formerly aspirated stop that marks second person singular [t^h] in the *-ḫi* conjugation and the unaspirated stop that marks third person singular in the *-mi* conjugation [t] has a parallel in Greek [θ] vs.[τ] and in Sanskrit [थ] vs. [त].

This being the case, evidence of this contrast in the second and third persons of Greek and Sanskrit should be instructive.

6.3. Evidence from IE languages of an original opposition 2nd pers. *-thi/-dhi* ~ 3rd pers. *-ti/-di,* as in Hittite

If the Hittite *-ḫi* conjugation second person ending, as evidenced in Akkadian orthography, contained an aspirated dental/alveolar stop, with the third person marker its unaspirated counterpart, then we should expect to see evidence of such an opposition in other related languages. We need look no farther than the endings of the IE perfect:

> (T)he 2sg. ending, Ved. *-tha*, Av, -θa, G -(σ)θα, has traditionally provided one of the best pieces of evidence for a PIE aspirated series of voiceless stops [...] in accordance with which it has often been reconstructed as *-*tha*. More likely is some such shape as *-tH_2e, the H_2 accounting at once for the *a*-vocalism guaranteed by G and for the aspirated stop of PInIr. That reconstruction, however, leaves the G -θ- unaccounted for. (A development

of G -θ- from H_2 has been entertained [...]) (Sihler 1995:570,571).

As I have pointed out in the preceding chapters the aspirated phonemes of Greek and Sanskrit are claimed to have derived from a sequence of $*tH_2 > t^h$. Greek theta (-θ-) phonetically [t^h] (aspirated *-t-*) is in opposition to -τ- [t] 'plain' *t*. In Greek, Sanskrit and PIE, this was a phonemic contrast. (In English, these two are conditioned allophones of /t/). The Hittite evidence indicates that, at some point in the pre-history of Hittite, there was also a phonemic contrast between aspirated and unaspirated stops.

Not surprisingly, some of the best morphological evidence for this opposition comes from the three sources most closely associated with the second person: namely, Imperatives, other Modals (including Subjunctive, Optative, Precative, etc), and the category Dual. This latter category is especially interesting since it has been suggested as a possible source of the "In.Ir. distinction between primary **-tha* and secondary **-ta* (Ved. *-tha* and *-ta*, Av. *-θa*, *-ta*)" (Sihler 1995:464).

6.3.1. Evidence from Imperatives

"Various IE languages use INDICATIVE 2sg. forms as imperatives[153], either routinely [...] or sporadically PIE **-dhi*, Ved. *-dhi*, *-hi* (a weakening of *-dhi*), Av. *δī*, *dī*, OCS

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This usage is a significant archaism: Hittite also regularly uses second singular indicative forms as imperatives. Such forms will be pointed out as they occur in Volume II.

dī, G *-θι*. ... It was formed only to athem. stems – eventive and stative alike..." (Sihler 1995:602,3). Examples include:

(26) Sanskrit **viddhi**, Greek **ἴσθι**, **Ϝισθι**, OCS **věždĭ** 'know!' (< ******wid-d/thi*)

Vedic **ihí** , Greek **ἴθι** 'go!'

Greek **φαθί** 'speak', **ὄρνυθι** 'rise', **στῆθι** 'stay!',

Vedic **dehí**, Greek **δίδωθι**, OCS **daždĭ** 'give!' (< dedH-d/thi)

Vedic **edhi** 'be', **pāhi** 'protect!', **vāhi** 'blow!', **jahi** 'kill!'(imperative of **hánti** '(< ***g^{w}hn̥-d/thí**))

The Sanskrit imperative ending *-hi* , the so-called "weaker" form of the imperative suffix *-dhi*, generally follows a root ending in a consonant, with *-dhi* following a root ending in a vowel (Goldman and Sutherland 1980:185). Note the phonological parallelism here between the 'weaker' variant [h] and the 'stronger' counterpart (-dh) [d^h]; Sanskrit *ahám* 'I' could be construed as showing the 'weaker' allophone [h] with the 'stronger' form *kh* [k^h] of the parent language seen still in Hittite first person singular *-ḫ* [kh].

Again, the Hittite evidence is pivotal: Sihler indicates that "Hittite has a 2sg. imperative in *-t* in one form *i-it* 'go!', and in the *nu*-stems, as *pár-ku-nu-ut* 'make pure', *(a)ar-n-ut* 'bring!'" (see other examples, such as *li-e na-aḫ-ti* 'do not be afraid!', under entry #75 *naḫ-* 'fear'). "It is tempting to see in this a reflex of **-dhi*" (Sihler 1995:603). The explanation provided above would allow us to do so.

In the Vedas, there are several attestations of *-si/e* appearing as a modal second singular (Bloomfield and Edgerton 1930:104, 105; Palsule 1978:228) often alternating with the imperative suffix *-hi* (< *-dhi*). These archaic forms may be significant in an explanation of the *-s-* which appears in second 2nd person forms both in Greek and in the Latin perfect second singular *-isti* (about which more will be said below). Attested Vedic uses of *-si* (where *-hi* would be expected) as 2nd person modal (imperative)[154]:

(27) śaṃ ca vakṣi pari ca vakṣi

'in it thrive thou well and thoroughly' (Bloomfield and Edgerton 1930:104)

(28) asmábhyaṃ jeṣi yótsi ca [RV 1.132.4d]

'fight thou for us and be victorious'

These aberrant forms (*vakṣi, jeṣi, yótsi yakṣi, etc.*) apparently puzzled the ancient grammarians: Although Palsule (1978:228) admits the possibility that Pāṇini (3.4.87-8) "has provided for such Vedic *-si-* imperatives", he adds that there is "a complete absence of any Vikaraṇa [morphological analysis] in these forms." The *-si* replaces the expected ending *-hi*, often in verbs belonging to the *ad* class (an athematic *gaṇa* containing many archaisms). "Alternately, such forms have been also looked upon as formally Imperatives with a

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I cite but two: there are numerous others (see for instance RV 1.13.1c, RV 3.14.5c, RV 3. 15.5c), all used in the context of praise hymns.

chāndasa retention of *-si* in the place of *-hi*." (The meaning is that this is a Vedic anomaly. Such anomalies often reflect an older state of affairs).

Attested Vedic alternations between *-si* and *-hi* second person singular imperatives:

(29) stuto yāsi (RV yāhi) vaśān anu (Bloomfield and Edgerton 1930:105)
'Praised, O Indra, go after our desires!'

(30) dhiyā na vājān upa māsi (SV māhi) śaśvataḥ (Bloomfield and Edgerton 1930:104)
'You don't bestow perpetually rewards/treasures by thought/meditation'

Bloomfield and Edgerton (1930:105) also cite "a couple of cases in which forms in *se* interchange with imperatives in *dhi* (*hi*). It is possible that the *se-* forms are modal (imperative, or subjunctive?) middle forms corresponding to the actives in *si*, but the forms are isolated and ambiguous". They suggest that a possible form which fits this designation may be *dhiṣe* in the following:

(31) víśvā ádhi śriyo dhiṣe [RV 10.21.3e]
'assume all glories!'?

What these *chāndasi* forms make clear is that, in the old language, the second person

suffix *-dhi/-hi* alternated with a suffix *-si/e* as a second person form. These Vedic variants show an early morphological alternation of person markers of the original binary eventive/stative split (i.e., *-t*^{h} (centripetal) vs. *-s* (centrifugal)) This could suggest a possible source for the *-s-* of the Latin perfect second singular *i-s-t-i.* The *-t-*, in turn, I suggest is cognate with the aspirated *-t-*, evidenced in Hittite. The Latin form would be thus a "blending" of both suffixes.

6.3.2. Evidence from Sanskrit personal endings

Below are given the "normal endings" of Sanskrit including those of the modal subjunctive and optative (the Vedic precative follows the pattern of the optative) (from Whitney 1967:208ff)

Table 27. Contrast of aspirated and unaspirated dentals in Sanskrit

a. Primary Endings

	parasmaipada			ātmanepada		
	s	d.	p.	s.	d.	p.
1	mi	vás	más	é	váhe	máhe
2	si	**th**ás	**th**á	sé	ā́**th**e	**dh**vé
3	ti	**t**ás	ánti, áti	té	ā́**t**e	án**t**e, á**t**e

b. Secondary Endings

1	am	vá	más	í	váhi	máhi
2	s	**t**ám	**t**á	**th**á́s	á́**th**ām	**dh**vám
3	**t**	**t**ám	án, ús	**t**á	á́tam	án**t**a, á**t**a, rán

c. Perfect Endings

1	a	vá	má	é	váhe	máhe
2	**th**a	á**th**us	á	sé	á́**th**e	**dh**vé
3	a	á**t**us	ús	é	á́**t**e	ré

d. Subjunctive Endings (Whitney provides no accents)

1	āni	āva	āma	āi	āvahāi	āmahāi
					āvahe	āmahe
2	asi	á**th**as	a**th**a	ase	á́i**th**e	a**dh**ve
		as		āsāi		**ādh**vāi
3	ati	á**t**as	an	ate	á́i**t**e	ante,an**t**a
		at			ā**t**āi	ān**t**āi

e. Optative Endings

1	yá́m	yá́va	yá́ma	īyá	īváhi	īmáhi
2	yá́s	yá́tam	yá́**t**a	ī**th**á́s	īyá́**th**ām	ī**dh**vám
3	yā**t**	yá́tām	yú**r**	ī**t**á	īyā**t**ām	īrán

As the bolded items show, there is a clear opposition of aspirated dental/alveolar in

the second person, with its unaspirated counterpart in the third. This opposition seems especially pronounced in the dual, and in the *ātmanepada* voice, as well as in the modal forms which are considered among the most archaic.

6.3.3. **Evidence from Latin perfect endings** (From Sihler 1995:586ff)

Commenting on the second person singular both in Latin and Greek, Allen says that since there is no prohibition against *s* appearing word-final in either language, this element is seldom lost in this position. Accordingly, as in this chart from Allen (1836:257):

	Indicative	Subjunctive
Present	dicis	dicas
Imperfect	dicebas	diceres
Future	dices	--------
Pluperfect	dixeras	dixisses
Future Perfect	dixeris	

The appearance of the *-s-* in the second singular paradigm of the Latin perfect is problematic. Sihler (1995) provides the following paradigm and comment:

1	-ī	<	-ei	<	*-ai	<	*-h_2e+ -i
2	-istī	<	-ta or -sta	<	*-[is] tai	<	*-th_2e+ -i

3 -it < -ei [t] < * -ed < *-e + -i

-ī, earlier *-ei* < **-ai* (in Falisc. PE:PARAI = peperī 'gave birth') "has a history parallel to Hittite *-ḫi*" (Sihler 1995:570). However the second person endings are more difficult. "The -is- [...] has so far resisted satisfactory explanation [...] The possibility of an inherited 2sg. including an **-s* ... is a further source of uncertainty" (Sihler 1995:587, 588).

It is possible that these Latin forms are showing not a mixture of second and third endings of the same conjugation, but rather the same type of fluctuation between the two conjugation second singular endings as seen in the Sanskrit data above. There apparently was a great deal of "cross-pollination" between the person endings of the centripetal (*-H_2, -t^h, -Ø*) and the centrifugal (*-m, -s, -t*) conjugations. This could account for the adoption of the centrifugal person endings in Greek (especially first person -μ), once the voice function had been taken over by the vowels. Another example of "mixed" endings in Latin second person plural might be relevant: Latin *-tis* is from **tes* (-te +s), in which the *-s* of the corresponding singular form has been added to the **te* seen, for example, in Greek φέρετε. "In the [...] perfect indicative, we find another syllable affixed - *ti*; and *dixis-ti*, not *dixis*, is the word for 'thou saidest'. It may be difficult to fix the value or origin of this syllable; but it may be compared with the Homeric forms φῃς-ΘΑ, ειπῃς-ΘΑ, εθελῃς-ΘΑ, and the common form οισ-ΘΑ (= οιδασ-θα*)" (Allen 1836:257).

6.3.4. **Evidence from Greek personal endings** (Palmer 1980:295, 298):

	Active endings		Middle endings	
	s	p	s	p
2	-σι/-*h*ι	-τε	σοι/*h*οι	-(σ)θε
3	-τι/-σι	-ντι-(ν)σι-ατι	-τοι	-ντοι

The Greek evidence is informative on the salient point of the "confusion" of *-s-* and *-t-* as markers of second and third person: sometimes *-s-* marks second, sometimes third, and vice-versa .This is a common characteristic of PIE daughters[155], and may be totally unrelated to the issue at hand (or may be analogical). However, it could account for the sigma in the Greek second plural middle, but other possibilities exist. For instance, Shields (1992:38) suggests that the "appearance of *-s in both second and third person function is [...] a result of the original unity of these two."[156]

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However, complications involving 2nd/3rd personal endings go much deeper than overlap in the category "person". Also involved in such overlap are the categories of "number": singular/plural, of "conjugation": active/stative), or of "tense": primary/secondary: "The endings of the subj. are a mixture of primary and secondary in the RV, but in the 2sg. and 3sg. only" (Sihler 1995: 593).

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In (the relatively limited number of) roots ending in a dental/alveolar, phonological processes could account for the appearance of -s- in forms marked with this suffix. However, this could not account for the widespread nature of *s* in combination with *-th*, -θ, etc.

Proto-form	Step 1 *woid-tha	'you (plural) know'
	Step 2 *woit-tha	(assimilation of voicing d > t)
	Step 3 *wois-tha	(dissimilation of manner t > s)

6.3.5. Evidence from Greek dialects

Greek dialectical evidence is enlightening for the possible original identity of second and third person endings and for interactions between -t- and -s- in third person singular. Dialectical changes developed late: Palmer (1980:80) describes the "change from τι to σι [which] occurred toward the end of the period when the Last Palace at Pylos was being constructed". Also a "major isogloss in Greek dialectology is the affrication (or "assibiliation") of *-ti* to *-si* (δίδωτι/σι)" (Palmer 1980:70). On this process, Hooker (1980:54) says: "The most important innovation, in contrast to the archaisms already noted, is seen in the treatment of original *ti, especially at the end of a word. The original sequence **ti* was retained intact in West Greek dialects, but in East Greek it became si. Before the decipherment of Linear B, it was unknown when this change took place in the East Greek dialects. Since the script everywhere shows final *-si*, never final *-ti*, the change must have taken place at least as early as 1400."

These cognate forms establish several important points:

1. The original identity of the second and third persons as a category 'other' (= 'not I'), reflected in the confusion in marking between the two persons, in opposition to the first person singular. This is strong, albeit indirect, evidence for the unique character of the first person singular.
2. A contrast exists throughout the family between aspirated dentals marking second person (imperatives, injunctives, dual forms, plurals) and unaspirated dentals marking third person, as in the Hittite data.

3. The aspirated form appears in the second person of the perfects, the Greek middle plural endings (in contrast to the active unaspirated), the Latin perfect (in opposition to the third singular originally with no dental marker at all), and throughout the Sanskrit *ātmanepada* forms, in contrast to the unaspirated *parasmaipada*.

These morphological similarities in second person forms establish a further morphological link between the IE perfects (including Latin), archaic modal forms, "middle" endings of both Greek and Sanskrit, the original "secondary" *ātmanepada* forms, and the endings of the Hittite *-ḫi* conjugation. The similarities between *both* the first and the second person of these disparate groups give further evidence that all may be united as ultimately from the centripetal side of the original binary split as in Neu's paradigms in Table 17.

The marker of the third singular Hittite *-mi* conjugation is 'plain' *t* (cognate with τ in Greek, and *t* in Sanskrit). Describing the Sanskrit third singular endings, Whitney says: "The active primary ending is **ti**; the secondary, **t**; [...] The primary middle ending is **te**, with **ta** as corresponding secondary. [...] In the perfect, the middle third person has, like the active, the same ending with the first namely **e** simply" (Whitney (1967:205ff)[157]. The *-t*

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As pointed out above, the first person singular of the *ātmanepada* conjugation is (before the discovery of Hittite) egregious "The primary middle ending, according to the analogy of the other persons, would be regularly **me**. But no tense or mode, at any period of the language, shows any relic whatever of a **m** in this person; the primary ending, present as well as perfect [...] is **e**;" (Whitney 1967:205. This *-e*, of course is the "replacement" which Pāṇini directs for the original ending *-i* (from $*\text{-}H_2$). To Whitney, without the benefit of the discoveries which the passage of time would bring, the primary middle ending of the first person singular looked identical to the third person, which, in fact, it was not. The point here is that the

appeared in both the "active" and "middle" paradigms (but with different vowels: *-ti* marking *parasmaipada*, *-te* marking *ātmanepada*. This indicates that Sanskrit, like Greek, had done quite a bit of both morphological and syntactic remodelling of the "middle", importing person markers from the "active" conjugation, and exploiting earlier vocalic patterns in the marking of voice[158]. Although the *-t* occurs regularly in Sanskrit marking third singular, there is a small (15) and very old group of relic verbs in Vedic. These verbs are distinguished by having no marker whatsoever in the third singular. "In the Vedic language there occur some [3rd person singular] forms without the *-t-*, the terminations being identical with that of the first person as in the perfect: *duhé, śayé, śṛṇvé*, etc. In view of the Hittite middle formations of the third person type *eša, kiša*, [...] this type must be regarded as ancient and not as an importation from the perfect system" (Burrow 1955:311). It is these forms which show a strong morphological link to the Hittite *-ḫi* conjugation, as showing an *-e* appended to a third singular form with no other ending (Sihler 1995:688). Compare Vedic *śáye* < (**ḱey-oy*) 'he is lying' with Vedic *śére* 'they are lying down' (**ḱey-roy*) (Sihler 1995:462,463) vs. *śéte* 'he is lying down'.

Sihler adds that the *-ta* which appears in Hittite as primary ending *arta* 'stands up', *kitta* 'lies' is equivalent to the Sanskrit secondary ending. "Rare forms without the *-t*

Sanskrit forms already show a certain amount of characterisation (stative *-e* in the third person singular).

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So Sihler (1995:472) "Most of the PIE middle endings of the eventive verbs are derived from the active endings". See also his remarks on the remodelled Greek perfect middle (1995:577).

corresponding to the presents". It is these *t*-less forms which should be linked to "stative" forms in *-r* (an ending which Sihler (1995:572) considers "the *t*-less equivalent of **-nt*), and thence to the *-ḫ* conjugation.

6.4. Third person plural endings

"In both PIE and the daughter languages there is more complexity in the history of the 3pl. than in all the rest of the endings put together" (Sihler 1995:465)[159]. In the parent language, two sorts of third plural endings are attested: those in **-r* and the more widespread **-nt*[160]. The usual analysis is that the *-r* forms are proper to the perfect (so-called "stative") paradigm (Latin *meminēre* 'they remember', (later *meminērunt*), Vedic *mamrur* 'they are dead'), and are seen primarily in the third plural preterite of the *-ḫi* conjugation. Sihler claims that a better way to link these *-r* endings is in relation to the occurrence of third singular **-t*. Thus "the 3pl. Forms in **-nt* correlate with **-t*, whereas the *t*-less 3pl forms (that is, the ones in *-r*) correlate with the *t*-less 3sg. In the stative, all 3rd person forms were uniformly *t*-less, in contrast to the jumble of competing inflections in the eventives; this may account for the clearest survival of the r-forms in the stative paradigm, though even there it was subject to

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Speaking of the diversity of endings in Hittite, Sturtevant (1933:217) points out that "...in the 3 s. there are five endings (zero, *ri, ti, ta, tari*) and many verbs are citable with two or three of these (e.g. *halziya, halziyari, halziyatari* 'he calls')."

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Which he claims are "at bottom one and the same ending" (1995:466).

encroachment by the nt-types and their reflexes" (1995: 465).

Possibly pertinent in this regard is what Sihler calls "a curious distribution" and mixing of both endings of the third plural endings *-an* and *-ur,* in e.g., Sanskrit third plural imperfect middle *aduhra* or *aduhran* from root *duh-* 'milk'. This ancient verb is usually inflected with *ātmanepada* endings in the RV, and in its wealth of archaisms is especially instructive, since the third person plural forms of Hittite show a similar mix.

6.4.1. The third plural endings of the Hittite conjugations

Despite the undifferentiated character of the plural paradigms, certain endings may be identified as belonging to one conjugation or the other, especially in the preterite (or "secondary" endings). The third person plural ending *-nt-* is characteristic of the *-mi* conjugation (thus *a-ša-an-zi* 'they are'), and seen in "active" forms of Sanskrit, Avestan, Greek, and Latin, as well as "middle" endings of Sanskrit and Greek, always followed by a vowel (Szemerényi 1996: 238). The "secondary" ending of the *-ḫi* conjugation is *-r* (thus *akir* 'they died'), later extended to the *-mi* conjugation. The *-r* of course is also seen as an ending of the "medio-passive" (as in Latin). Although Meillet (1964:230,234) understood there to be two different *-r-* endings in the proto-language, one which marked "medio-passive" (in Hittite, Latin and Celtic) and one which marked third plural active, evidence from Vedic forms suggests that these two endings are one and the same. It was their functions which diverged. The function of marking third **person** plural remained, whereas the function marking "impersonal" which is of course related to the "distance" from the most personal,

is extended. Archaic forms such as *duhre*, *aduhra* indicate that it is not the *-r-*, but "the elements added to it that characterize the endings as middle" (Burrow 1955:312). I suggest that the *-r-* element was not, in its original function associated with (the category of) voice, but rather with the function of marking "impersonal" (non-speaker), although the two are very much related (as in Figure 4). That this is the case may be seen in Vedic and Hittite forms which may be interpreted as combining both 3rd person plural markers (the third person plural *-nt-* of the "active" and the third person plural *-r* of the "middle":

Vedic Sanskrit:	a.	śé-r-at-e lie+3pl+3pl+ *ātmanepada* 'they lie'		(<*śé-r-ŋt-e*)
	b.	dúh-r-at-e milk+3pl+3pl+*ātmanepada* 'they milk'		(< *dúh-r-ŋt-e*)
Hittite	a.	ar-ta stand+3sg 'he/it stands'	vs.	ar-ta-(ri)[161] stand+3sg(t) +3pl (-r =voice?)
	b.	ar-an-ta stand+3pl+3sg 'they stand'	vs.	ar-an-ta-(ri) stand+3pl+3sg(t) +3pl (-r =voice?)

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Both attested : *arta* twice attested in Old Hittite. 3rd singular present "midd." *piran-se*[*t*] *arta* 'stands before him''(XXXIII 120 I 10); 3rd plural (!) EGIR-*an arta* 'stand[s]in the rear'(X 78 I 13) *ārtari* 'it stands' (KUB XXX 43 IV 5) (HED 1:105); *artari* 'he stands' (twice attested).

These examples indicate that the *-r-* element originally performed two (related) functions: that of marking the grammatical categories of person and number, and the **paradigmatically and semantically related concept of remoteness** (which is voice related), marking conceptual remoteness from (the first person singular) speaker. If this hypothesis is correct, *-ri* forms would have steadily increased as the original voice distinction was falling into disuse, as the two are clearly in an inverse relationship. Critically, the element began in the third person plural (Kortlandt calls the spread of *-r* "beyond doubt" (1981:131). This alone is suggestive of a voice function, namely as an "impersonalizer". This function obtains even in the third person singular, where, in contrast to the other two persons:

> The fundamental role of the 3 sg. is that of 'pure' predication, divorced from the implications of 'personality' (personalness) and subjectivity, which Benveniste has shown are the basic correlations. In a system of oppositions which distinguish the 'persons' in the verb, the 3 sg. is the non-marked, negatively characterised form par excellence. This relation among the persons may be illustrated in a binary system as follows:
>
> | | 1 | 2 | 3 |
> |---|---|---|---|
> | personal/non-p. | + | + | - |
> | subjective/non-s. | + | - | O [sic. This symbol= Ø] |
>
> The critical position of the 3 sg. within the paradigm is evident. It is characterised uniquely by being non-personal; the correlation of subjectivity is unspecified, since this is contingent upon the presence of personalness.
>
> In view of the functional position of the 3 sg. as the zero-person, the non-person, opposed to the personal 1 and 2 sg., it is not surprising that the formal counterpart of this situation is frequently one where 1 and 2 sg. are marked by special desinences, whereas the 3 sg. shows only the bare stem without ending (Watkins 1962:91).

This is the characteristic marking of the third singular *-ḫi* conjugation, the conjugation so geared to "personalness". The "impersonality" becomes even more extreme when the third plural marker is employed, as the further 'distance' of number is brought into play.

Given these paradigmatic facts, it is not surprising that analogical spread of the function 'impersonal' would tend to begin in the "zero" (= third) person (either singular or plural) and spread thence. The Hittite system shows *degrees* of high involvement: there are two first person singular markers. If the *ḫ* of the first person singular conjugation represents the *most* involved, subjective and personal of all the persons (even more so than the first person singular *-m*) then the third person plural *-r* represents the *least* personal, the least involved, the least subjective of all the persons, with its marker -r a suitable "impersonalizing" device.

Assuming that the "impersonalizing" function of the *-r* also reflected an *animacy* split, I suggest that the use of the 3rd person plural marker *-r-* coexisted from the earliest period with the original (personal) diathetic strategy (*-m* vs. *-ḫ*), its original purpose being to mark subject *un*involvement or neutrality - the opposite pole (paradigmatically speaking) of 1st person singular[162].

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I might point out that this *-r* marker signals "non-personal" in the nominal paradigms as well. Hittite, as I have said, does not show the familiar three-way gender paradigm (masculine, feminine, neuter) of the latter attested languages. Instead, the opposition is between common (subsuming both masculine and feminine) and neuter. The neuter function of the *-r* morpheme is seen clearly in Hittite, as it maintains the ancient heteroclitic *-r/-n* stems as a productive nominal formation. This type of lexeme, although it survives in Greek, Latin and Sanskrit

6.5. The rightmost morphological element(s)

In this section, I discuss the vocalic markers that were attached to the consonantal markers of the Hittite present conjugations. Three vowels appear after the person suffix: -*ḫ*-*a* in the so-called "medio-passive", *ḫ*-*e* in the earliest forms of the -*ḫ* conjugation, and later, -*ḫi*, with the tense marker imported from the -*mi* conjugation. I have already suggested that the -*a* may be an artifact of the orthography, and in fact represents *-H_2 > *ḫ* (a preterite-present injunctive-type, parallel to the "secondary" -*m* endings), or is an early rendering of the parent *H_2-*e* > -*ḫa* which was the first person singular form before the importation of the tense particle. I believe I have established sufficient doubt about origin of the first person singular -*ḫa* ending as being from a suffix *-H_2o to lay that to rest. Orthographic problems come into play as well when we try to establish the identity of the other two vowels.

6.5.1. Hittite orthography

The confusion between what the final vowel actually was may be due in large part to the confusion of *i* and *e* in Hittite orthography (Melchert 1992:183ff; Luraghi 1998:174 "the vowels *e* and *i* are frequently interchanged in Hittite cuneiform spelling"). Melchert (1992:183) points out that "The Akkadian syllabary adopted by the Hittites is deficient in *e*-value signs [...] Many CV and VC signs may be read with either *i* or *e* vocalism". This is not to say that these items were identical: Melchert (1992:184) offers strong evidence that /i/ and

/e/ were different phonemes of Hittite.[163] He does indicate (1992:191 note 10) that it is "worth noting that the Lydian signs for /i/ and /u/ are clearly related to Greek iota and upsilon, while Lycian /i/ and /u/ are written E and O".

6.5.1.1. Old Hittite forms in *-e*

It is very important to note that Old Hittite forms of the first person singular *-ḫi* conjugation do show an *-e* (*-ḫe*) which only later became *-ḫi* (Rosenkranz 1978:82; Neu 1986b:125): "Für die Bestimmung dieses *-i* wichtig ist auch die Beobachtung, daß althethitische Texte in der 1 sg. statt *ḫi* gerne *-ḫe* schreiben".

Neu (1968b:126) provides the following examples (many others may be seen with individual verbs in Volume II):

a-ša-aš-ḫe	KBo III 28 II 24
me-e-ma-aḫ-ḫe	ABoT 4+ II13, II9; Bo 3046 II 4
da-a-aḫ-ḫe	Bo 3046+ III 7

Under this scenario, the development from *-ḫe* > *-ḫi* (doubtless under the analogical influence of *-mi*) may be a later development, so also would be the development from present centripetal value of *-ḫe* > (later "mediopassive" preterite *-ḫa*, already in Old Hittite), thus

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Luraghi (1998:174): "The vowels *e* and *i* are frequently interchanged in Hittite cuneiform spelling". There are two phonemes *et* 'eat! vs. *it*! 'go!'

bringing Hittite into line with similar developments (present > preterite) throughout the family. Kuryłowicz (1964:68) makes no bones about the relative age of the two: "The Hittite *ḫi* inflection is simply to be regarded as a *deponential* conjugation differing from the attested Hittite medio-passive by its *archaic form* " (Emphasis in original). In other words, the *-ḫ* conjugation, with original stative *-e* is older than the mediopassive form in *-a.* Kronasser (1956:189) gives support to this view by indicating that the original value of the Anatolian suffix (-χa) was not a preterite, but a present tense.

6.6. Stative marker *-e*

The very *nominal* nature of the perfect has often been noted[164] (Schmalstieg 1980:43,44,89). Kurylowicz notes that "the I.E. perfect goes back to a verbal adjective in *-é*, conveying a meaning comparable to that of the younger formation in *-tó-*,[165](1964:62). Significant here is that both forms are third singular, and that the **-to* (that forms verbal adjectives throughout the IE family e.g. Sanskrit *śrutá* 'heard') form is *later* than the adjectival stative **-e.* Jasanoff (1978:17,18) identifies this *-e* formative as deriving either "denominative" or "deverbative" statives, such as are seen in Latin *habēre* 'to have', *manēre*

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Very likely the "mixed" noun/verb character of this ancient conjugation could be attributed to a time when "nouns and verbs were connected in that, for the most part, they are evolved from identical bases which are in themselves neither nominal nor verbal, and which possess only a fundamental meaning of the vaguest and most general type" (Gray 1934:34).

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It is my impression that suffix **-to/*-no* appears more often with roots of the *-mi* conjugation type- i.e., those of higher transitivity. This may be aspect- related and merits more research.

'to remain', *senēre* 'to age'> *senex*, *rubēre* 'to blush" become red'> *rubex*; also Tocharian B *luketaï* 'is confused', perhaps Armenian present class in *-i-* (type *unim* 'I have'). He claims that these stative presents are "ancient" and attested as "scattered archaisms" throughout the family (1978:19ff). See also Bammesberger 1974 for examples of these statives in Baltic.

6.7. Present 'tense' marker *hic-et-nunc* *-*i* ?

Shields (1992:17ff) describes this *-*i* element as originally 'deictic', deriving from adverbial sources (Anderson 1973:41; Schmalstieg 1980)[166]. Its use indicated events as being near, "here and now" (Shields 1992:25; Lehmann 1974:189; Watkins 1962:102) as opposed to "far", a distinction which was marked via the prefix *e-..."an old adverbial prefix which is temporal denoting remoteness of time (*a* = yonder)" (Burrow 1955:303); Shields 1992:26-7).

> From various idioms it appears that, temporally as well as spatially, the main distinction often is between the near and the far, between the here-and-now, or here or now, and the not-here, there, or not-now and the not here-and-now (Gonda 1956:28-29).

The use of the augment (in Greek and Sanskrit) to indicate past tense was apparently

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Also possible, and likely identical with the previous, is the origin of the element as a post-positional locative case marker meaning 'here'. For this argument, see below.

a later development, however, and one which is absent in Hittite. Hittite showed the "original" method of indicating "not here and now", i.e., by default: forms which didn't show the "here and now" *-*i could* be interpreted as preterites (Comrie 1998:85). This (very early, subtle tense) distinction (primary/secondary) is pervasive throughout the Hittite verbal system, and can be seen throughout the Anatolian family.

As regards the -*ḫi* conjugation preterite endings, Kronasser (1956:188ff) indicates that Hittite shows -*ḫun* (with the secondary suffix -*un* imported from the -*mi* conjugation), whereas the other Anatolian languages show -*ḫa* (Luwian *a-ú-i-ḫa* 'I saw' [compare Hittite *uḫḫun* 'I saw'], Hieroglyphic Luwian[167] *pa-(i)-ḫa* 'I gave', [Hittite *peḫḫun* 'I gave'], Lycian *aχa and aga* 'I made'. He makes the important point that what he refers to as the "gemeinanatolischen" suffix -*χa* [= *ḫa* in Hittite] originally had no notion of 'past time', despite its link to the perfect: "*-*χa* bezeichnete zunächst gar nicht die Zeitstufe der Vergangenheit" (1956:189. See as well his remarks concerning the relationship of this suffix to the Greek κ perfect). But as is well known, the *original* meaning of the IE perfect was a present, not a past (Burrow 1955:297). Apparently, Hieroglyphic Luwian third person forms (with suffix -*a*) even *without* the "here and now" particle were clearly presents: *ta-a* 'he takes' *pa-a* 'he gives'. (Compare Hittite *tai* 'he takes', *pai* 'he gives'). These examples provide clear evidence that the forms which show a final vowel -*a* (such as Hittite *kišḫa* 'I

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Kronasser refers to the script as hieroglyphenhethitisch (abbreviate as hh.) – 'Hieroglyphic Hittite'. It is now understood to be not Hittite, but Luwian, a related (and grammatically similar) Anatolian language spoken primarily in the southern part of the peninsula.

become' or *eša* 'he/she sits') are not necessarily to be interpreted as preterites. This fact also provides an insight into what Neu (1968b:128ff) refers to as the "**ḫai* Flexion" which he believes underlies the endings of the Hittite *-ḫi* conjugation. It is this analysis which, I presume, is one of the factors that motivates his positing of word-final **-o* in his reconstructions (final *-a* as in the IE perfects > *-o*).

Neu (1968b:126ff) reconstructs the following scenario to explain the endings of the ancient perfect.

	IE Perfects	>	Perfect + *-i	>	Early Hittite	>	Hittite
1	**-ḫa*	>	** -ḫ-a-i*	>	** -ḫ-ai*	>	*-ḫi*
2	**-tha*		**-tha-i*		**-thai*		*-ti*
3.	**-a*		** a-i*		**ai*		*-i*

However, the vocalic endings of the perfect are not with final vowel *-a*, as I have indicated and is now widely acknowledged, but from final vowel *-e*. The (correct) final vowel **-e* figures in Hewson and Bubenik's explanation for the "distinctive" set of Latin present perfect inflections. They explain (1997:195):

> Comparative evidence [...] indicates that this /-ī/ [of the present perfect 1st s.] is from */a-i/, the */-a/ being the regular 1Sg inflection of the IE perfect as in Greek *léloipa* "I left", and the final /-i/ being the deictic element added to

primary tenses to mark reference to the present: an affirmation of the systemic status of the particular form not only as Retrospective, but also as present tense.

The inflections of the singular may be analyzed as follows:

Latin	Pre-Latin		IE
ī	<	a-i	< * h_2e-i
istī	<	ista-i	< *isth_2e-i
it	<	īt	< *e-i-t
	<	ed	< *e (plus *ti primary ending)

This analysis clearly agrees in substance with the scenario proposed by Sihler (1995:588) for the Latin endings. As well, it shows that the older forms, which preceded the primary ending stage, did show an *-e,* as in Latin (forms with *-ed*, as above). Other Old Latin forms such as *tutude* vs. later *tutudī* also show the *-e*. (From PIE **tud-é*? cf. Beekes 1995:228).

However, it is very difficult to be certain whether this final vowel is in fact an **-e*, or if it represents a coalescence of final **-a* + **-i*. Based on the final vowel which appears in the secondary endings of the *ātmanepada* third singular *-ta*, Kuryłowicz (1964:58) posits an "older form **-a*, indirectly attested by Vedic *áduhat, áśayat* for **áduha, *áśaya*". He considers the ending **ai* of the third person singular to be "strongly represented" in the RV, both in the thematic and athematic inflection, citing several of the famous *t*-less forms

including *cité, duhé, bruve, vidé, huvé, śáye*. Forms with final-vowel *-e* seem truly archaic: preceding the stage where the person desinences (at least in Sanskrit) had been fully worked out: e.g., *śáy-e* would be older than such verbs as *śáca-te*. However, if one acknowledges the ultimate link to the endings of the IE perfect, the critical factor is to establish the correct form of these IE perfect endings. All scenarios involving **-ai* > *-e* involve an original *-a* throughout. That analysis is not validated by the linguistic facts as we understand them.

If we accept the fact that the laryngeal element **-H_2* had the power to colour a following vowel, and that vowel in IE is posited as **-e*, then the presence alone of the laryngeal would have changed the articulation of the mid vowel, lowering and backing it into the range of an *-a* (as seen in both Greek and Sanskrit perfects). In other words, it is the laryngeal first person singular which is producing the effect on the following vowel. Several scholars (mentioned in Szemerényi 1996:134-135) have argued that once the validity of the laryngeal theory is accepted, many of the occurrences of *-a* in the parent language are rendered questionable: "whereas the vowel *e* and its ablaut variant *o* have an extremely important function in all fields of morphology, the vowel *a* is hardly used at all for such purposes". Very few scholars are prepared to dismiss **a* as an IE phoneme entirely, Beekes (1995:137, 138) being the exception: "PIE had only two vowels: *e* and *o*". It is certainly possible to do so, however, especially because the more ancient layers (pre-PIE) had laryngeals as part of their phonemic inventory. If there were no PIE **a*, however, it makes it very difficult to motivate an *-a* as the final vowel of the forms to which the ancient "here and now" particle is added. As Beekes (1995:238) points out in the primary personal endings

of the Sanskrit perfect (*-a, t(h)a, e*) the "*-a* must have been from *-h_2e*". In other words, the *-e* was a feature of the perfect already, no need to derive it from the addition of the "here and now" to a form showing an *-a.* Szemerényi (1996:289) argues convincingly as well that the *-a* of the Sanskrit perfect could not possibly have come from an IE **-a*. Only an explanation which posits an original -e vowel is consistent with the morphological facts.

He also points out that the Slavic evidence indicates a final vowel *-e.* The only traces of the perfect in Slavic show an *-e* as in *vědě* 'I know' (Szemerényi 1996:289). Szemerényi also argues convincingly (1996:291) that the *-a* of the Sanskrit daughter perfect could not possibly have come from an IE **-a*, (as in the scenarios outlined in Neu, Rosenkranz and Shields). He explains the perfect ending in *-a* as in Sanskrit *jagama* as originating from IE **g^we-g^wom-e*. He notes that this [explanation with an *-e*] is the only explanation which is consistent with the facts:

> The consequence of this would, of course, have been that Ist s. *jagama* could not be derived from **g^we-g^woma*, but the form **g^we-g^wema* proposed as a solution finds no support anywhere and in Aryan itself is in conflict with the palatal law.

Beekes (1995:55) indicates that many correspondence problems in comparative IE linguistics involving perfect forms, are really no mystery and quite easily solved. He asks his readers to "compare the following (1sg. =1st person singular an pf. = perfect):

Skt.	1sg. pf.	tatána	cf. Gr.	tétona 'I stretched'
	3 sg.	tatāna		tétone

In the first form we would expect to see an *ā* in Sanskrit. The problem was solved when it appeared that the 1 sg. *-a* derived from **-h_2e* [-ʃe], that is to say, from a laryngeal, a consonant, followed by an *e*".

This example is important for three reasons:

1. It indicates the unique character of the first person singular in the ancient perfect/stative conjugation (see Szemerenyi 1996:237).

2. It indicates that the endings of the 1st and 3rd persons, despite surface similarity (syncretism), contained different elements, and that it was the consonantal laryngeal element in the first person singular which differentiated them.

3. It does away with the need to posit an original *-a* in the perfect to which the *-i* was added. It is far easier to assume that the original *-e,* such as evidenced by the Greek third singular form.

6.8. A locative/stative marker?

Given the level of archaism with which we are dealing, I suggest that both **-i* and (the more recent) *-e* evolved from a common source. This locative *-e* would be functionally identical to an adjectival or "stative" marker indicating that the subject was somehow 'in'

some state or 'determined by it'. Similarly, the adverbial *hic-et-nunc* *-*i* may also be interpreted as a locative marker, denoting that the subject is acting '*in* the here and now'. Watkins considers the *hic-et-nunc* to be identical in origin with an archaic locative which is appended to certain endingless roots. Of the appearance of this marker in Indo-Iranian, he notes that:

> The deictic element *-i* alone, suffixed to the bare root with zero ending, occurs finally in a very archaic category in Indo-Iranian: the third sg. aorist passive. The most archaic form of this class in the Rg Veda is *jani* 'was born' (Watkins 1962:102-103).

Despite the fact that such forms (all third person singular with *-*i*) are typically referred to as "passive" (and often do have passive value) their original function was not to indicate passive, but intransitivity (Gonda 1951:100; Schmalstieg 1980:98). Schmalstieg (*ibid*) considers these "relics of great antiquity" to be "old nominal formations" whose marker predates Indo-Iranian origin (and is ultimately identical to the *hic-et-nunc -i*). Originally a marker of the locative case, the marker appears in several "nomino-verbal" forms. Burrow (1955:253) mentions several ancient forms with the *-i* locative such as *adati*[168], *camvi* 'in the dish' and *tanvi* 'skinny' (lit: 'in stretchedness' < *tan* 'stretch'). Some

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Burrow testifies to the great age of this form, calling it "pre-Vedic" (1955:233).

of the adjectival and nominal forms with *-i* are so ancient that they do not show any differentiation for gender. Burrow (1955:203) cites "*śúcis* nom. sg. masc. and fem."

Burrow (1955:233) indicates that the oldest forms of the locative appear with no ending whatsoever. These forms may be seen in *n*-stems (*áhan* 'during or in the day' *mūrdhán* 'in the head'), Greek αἰέν 'always', infinitives such as δομεν 'to give', Avestan *mən* in the phrase *mən ča daidyāi* 'and to put in the mind, remember'. Sihler (1995:253) says that although evidence apart from the *n*-stems is scanty, certain "old-looking" forms suggest that these endingless locatives were once more general. Sihler (1995:253) cites Avestan *dvarə* 'at the door'< **dhwer*, *dąm* 'at home'), "early Hitt[ite] É-*ir* 'at home' (classical É-*ni* =*pa-ar-ni*), *ta-ga-*(*a-*)*an* 'on the ground' (PIE **dhĝhom*), *ne-pí-iš* 'in the sky' (PIE **nebbes*), *ki-eš-šar-ta* 'in your hand' (PIE *ĝheser*). The OCS con. Stem loc.sg,-*e* is said to be a particle 'on, in' added to the endingless stem".[169] The addition of the ending *-i* produced "a clearer form which tends to oust the earlier form without ending, but the process is not yet complete by the Vedic period" (Burrow 1955:233).

In Latin, certain old locatives survive in "isolated forms that function as adverbs" (Sihler 1995:253, who cites *humī* 'on the ground' and *rūre* 'in the country').

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Significantly, Sihler considers dative singular**-ey* and locative **-i* to be "different ablaut grades of the same ending, and the meanings are closely related"(1995:253). This connection, and its implications for voice markers, is intriguing and merits a thorough independent study.

6.8.1. The role of verb type in determining the original meaning of the locative marker

Regardless, therefore, of whether we consider the ending to have been *-*i* or *-*e*, both particles indicated that, in one way or another, the subject is "in" the verbal action. In other words, both -*i* and -*e* were remnants of an old locative marker; The 'in the here-and-now' marker *-*i*, appended to the centrifugal "active" conjugation with its more transitive roots came to develop a *tense* meaning. On the other hand, the adjectival marker *-*e* appended to the third singular (originally) endingless paradigm, gave an adjectival, descriptive type of lexeme: as in such forms as *śay-ē* 'lies' ('is in the lying'), or Puhvel's (2002:101) examples:

IE	**woyd-e*	Sanskrit *véd-a*	Greek οἶδ-ε	'He/she is enjoying insight'
IE	**orgh-e*	Hittite *ārk-i*		'He/she is engaged in coition'

That there is a link between a type of "personal" (or adjectival= 'stative') locative, the dative case is suggested by Sihler, who considers the singular endings of these two cases to be "ablaut grades of the same ending" (1995:253). This personal/descriptive characteristic of the locative/dative makes it especially compatible with the stative conjugation. All these matters considered, I would modify the binary split in Table 18 to the following:

Table 28. Development of early inflectional endings in a binary voice opposition

Stage I

DIATHESIS VIA ROOT ABLAUT

CENTRIFUGAL	**CENTRIPETAL**
*CeC	*CoC

Stage II

ADDITION OF PERSON ENDINGS

Sg.	1. *-m	*-H_2
	2. *-s	*-tH_2
	3. *-t	*-Ø

(At this stage, the *-i* of the Sanskrit "secondary" first person singular endings arises. Also possibly the Hittite -*ḫ*, written as -*ḫa* (Lycian -χa) but with 'present' or 'modal' value.

Stage III

ADDITION OF LOCATIVE (DATIVE) MARKER TO 3rd SINGULAR

(*-i* to eventive, *-e* to stative)

Sg.	1. *-m	*-H_2
	2. *-s	*-tH2
	3. *-t-i	*-Ø-e

Stage IV

EXTENSION OF THIRD SINGULAR MARKER THROUGHOUT THE PARADIGM

Sg.	1. *-m-i	*-H_2e
	2. *-s-i	*-tH2-e
	3. *-t-i	*-Ø-e

At stage V, we begin to see the attested reflexes in the daughter languages.

Stage V

REFLEXES IN THE DAUGHTER LANGUAGES

Sg.	1. -mi	-*ḫa* (from earlier *-$\mathbf{H_2}$e) -*a* of IE perfects (< *-$\mathbf{H_2}$e)
	2. -si	*-t^ha (< *t$\mathbf{H_2}$e) -θa in Greek, th in Sanskrit
	3. -ti	*-*e* -*e* in Greek perfect

At Stage VI, seen in Hittite, the *-i* tense marker of the "active" *-mi* conjugation would be extended to the *ḫ* conjugation giving, in the first person singular:

Stage VI

EXTENSION OF TENSE MARKER FROM -M TO -Ḫ CONJUGATION

Sg.	1. *-mi*	-*ḫa*+ *i* (>-*ḫe*)

CHAPTER SEVEN

VOICE DEVELOPMENTS IN THE LATER LANGUAGE

7.0. Introduction

Short of resurrecting a Hittite (as Boley (1993) playfully suggests), there is no way to be certain about the mind of the Hittite speaking community over the span of the various stages of the language. There is no way to determine with any certainty why the original binary system became obsolete, any more than we can explain the same development in Vedic Sanskrit or Ancient Greek[170]. Whatever the reasons, the linguistic results are clear: the original subtle voice distinctions conveyed by the *-ḫi/-mi* conjugation opposition gradually gave way to the increased use of more overt markers of the level of involvement, such as *-za*, unknown in Early Hittite but increasingly common in the later stages. As well, overt markers of agentivity such as the *-mi* conjugation root extensions, causatives *-aḫ, -nu, -nin-* and probably *-iya* had been rapidly proliferating, setting the linguistic stage for the development of a passive construction. Some of these developments are briefly discussed in this final chapter of Volume I.

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Boley (1993:218ff) mentions that there was a distinct tendency toward a more "literal outlook" over the course of Middle and into Late Hittite. She speculates that "it may be that the political situation favoured it or that cultural innovations at the time promoted it". Another possibility is the (typological ?) influence of surrounding languages. A move from OV to VO typology (= Head last > Head first) would serve to undermine a verbal system that marked voice distinctions verb finally.

7.1. Development of Passives

Luraghi states that the greatest changes in the Hittite verbal system between the three stages of the language involve diathesis (1997:28). In the Old Hittite period, the "middle" never displays passive meaning (Luraghi 1990:134, nt.76). She insists that the "middle" as a true personal passive is attested only in documents later than the OH period. Nevertheless, the language did possess ways of conveying a "passive" notion, some of which expanded significantly in the later language.

The notion of "passive" was conveyed at the earlier stages of Hittite in three ways: (1) lexically, (2) with the extended impersonal construction, and (3) by one of two periphrastic constructions, (3a) a common participle + copula construction which seems to be the "native" Hittite method of indicating a "passive" sense, and (3b.) one involving an Akkadian prepositional indicator *IŠ-TU* + NP. I will deal with each separately.

7.1.1. Lexical active/passive opposition

This opposition is seen in such word pairings as *kiš* 'become', used as the lexical passive to *iya* 'do', *ki-* 'lie' used as the passive to *dai-* 'put' and *ak-* 'die' used as the passive to *kwen-* 'kill' (note that no such form as ***kwen-na-ar-ri* 'they are killed' exists)[171]. Suppletion with this last lexical item is extremely common. Haspelmath (1993:106), in a study of "Inchoative/Causative verb alternations" in several languages, notes that 16 out of

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These are all cases, according to Luraghi (1997:33) of "intransitive verbs, both stative and dynamic" serving as lexical passives to "transitive verbs".

the 21 languages expressed the 'kill/die' distinction:

> by different roots (i.e. by suppletion).. ..This would be hard to understand if only the physical meaning of 'die/kill' were considered. Physically, dying/killing is not much different from going out/putting out or other verb pairs that behave similarly. It seems that the enormous social and moral significance of the difference between spontaneous dying and agentive killing has to be taken into account in order to understand why so many languages allow themselves the luxury of different roots for these two events.[172]

On lexical passives, see Friedrich (1960:136) or Neu (1968b:115,116). Lexical passives are rarely (if ever) used with agent phrases (Luraghi 1990:135, nt.77. See Starke (1977:101-104) for a possible exception).

7.1.2. Impersonal Construction via extended 3rd person marker *-ri*

As I noted above, an impersonal "virtual passive" using a third person plural (less often, third person singular) is a common strategy in languages which LACK an overt

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This analysis would throw Boley's "passive" analysis of the verb *akir* (see example 32) into serious jeopardy, however, unless we assume that the 'spontaneous' sense of *die* which originally obtained in the root was being lost. This would fit in with the diachronic nature of the change not only in the verbal system but also in the–more literal-- mind-set of the later Hittite speakers, which would reflect the realization that *dying,* though regularly and typically spontaneous, is sometimes caused, or 'assisted' by external means.

passive. In this way, the impersonal 3rd person can be seen as a type of "transition" from the subtle centrifugal/centripetal (*parasmaipada/ātmanepada*) distinction inherent in the *-mi/-ḫi* opposition, which only hints at relative degrees of agentivity, to a construction with a clear and specific phrase which names a particular agent (either by the use of a nominal in an agentive case (instrumental)) or in a 'by' phrase. A nebulous, non-specific (but critically, **external** to the speaker) agent, viz English *they* (as in 'they say'), French *on*, German *man,* forms the perfect conceptual "bridge" between the two stages. This explains the clearly "added on" nature of many of the forms involving *-ri* morphology (exemplified in Table 1). Luraghi explains (1990:38,39) that this impersonal usage is a feature of the language throughout all periods and with all verbs: "it should be pointed out that all verbs can be used impersonally, in the third person plural [...] [I]n Old Hittite this use of the active voice appears to have the same discourse function as the passive voice in other languages".

The following example, from the OH Zalpa text (StBoT 17)[173], illustrates the use of the impersonal construction:

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For the purposes of this example, I have used the citation of this passage from Luraghi 1990:39, her example (207), with her glossing conventions (= indicates a cliticised element) and translation. In this and in subsequent examples, where it is relevant, I will indicate the source of the passage (i.e., the collection tablet number) as well as the CTH number. If there is a significant treatment of the passage, I indicate this as well. A list of the citations in this first Volume appears separately in Appendix III, as an addendum to the full list of citations from Volume II.

(32) ^{I}Tabarnan ^{I}Ḫappinn= *a* *katta uikta* *Ù* LÚ^{MEŠ} URU^{LIM}

T. -ACC H.-ACC and PREV he-called and man-PL city

natta *pianzi* *šu=* *uš* *tameššir*

not they-give conn they-ACC they-overwhelmed

š= *e* *akir*

conn they-NOM they-died

'[the king] asked for[174] Tabarna and Happi, and the inhabitants would not surrender them; so they were overwhelmed and killed' [lit.: they overwhelmed them and they died].[175]

Luraghi explains that the passive reading is syntactically motivated: "The fact that the impersonal *tamessir* has a function similar to that of a passive is highlighted by coordination with the lexical passive *akir*" (1990:39). On that note, compare the following, where the verb is in Sumerian, providing good evidence that the logogram (BA.)UG$_6$ is to be interpreted as *ak-ki-iš* or *ak-ta*).

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katta uikta is literally 'down called'. Here the preposition *katta* is a "dynamic place word", an obligatory complement of the (motion verb) predicate (Starke 1977)

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Fragments naming the City of Zalpa. (CTH 3). This text is attributed to Muršili I (1620-1590), and is treated extensively by Otten (StBoT 17). This passage, specifically, is KBo XXII 2 Rs. 11-13 (Otten 1973:12).

(33) *ša=an=ašta* *ar-ḫa* *pi-e-ḫu-te-ir* *ša=an*

conn=him+ACC=then out carry+3pl.pret conn=him+ACC

e-eš-ši-kir *ša=aš* BA.UG$_6$

beat+3pl.pret conn=he+NOM die+3sg.pret

'They carried him out, beat and killed him' [lit:'they carried him out, they beat him, and he died'][176]

Here, *ēššikir* as well, in combination with BA.UG$_6$, the Sumerian equivalent of a lexical passive, is to be translated as a passive: 'they beat him' = 'he was beaten'. Note that in both cases, there are two *theys* involved in the predication which are not identical. Relative syntactic roles are expressed by a combination of the verbal endings and case-bearing clitics working in tandem. In (32) it is clear that the 'they' agent (*-ir* suffix) who overwhelmed 'them' (accusative plural clitic *=uš*) are the ones who also killed them (*=uš*). The victims, however, are still marked as the (nominative "actor" experiencer=*e*) of the verb. The same situation obtains in example (33) where two accusative clitics expressing the direct objects of transitive verbs (*arḫa pēḫuter, ēššikir*) are followed by a nominative clitic (= *aš*) indicating the subject of the verb BA.UG$_6$ 'die'. In a strange sense, then, in such constructions, the nominative case marks the patient subject of an ostensibly active, though pragmatically passive, verb.

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Anecdotes (Palace Chronicles) of the Reign of Ḫattušili I (CTH 8, KBo III 34 ii 6-7). Ḫattušili I preceded Muršili I, and ruled from (1650-1620). The passage is treated in Friedrich (1967:57).

In the following example, the 3rd plural must be interpreted as active. The relative roles are again made clear by case-marked clitics: 'they (agent) killed him' (= *an* (accusative)) and 'they (agent) ate him' (= *an* (accusative)):

(34)	*ša=an=kán*	*ku-e-ni-ir*	*ša=an=ap*[177]	*e-te-er*
	conn=he+ACC=PERF	kill+3pl.pret	conn=he+ACC=PERF	eat+3pl.pret

'They killed him and ate him up'[178] NOT * 'He was killed and eaten'.

It would seem to be the case that in such constructions, case-bearing clitics are added to make syntactic relations clear, or to eliminate any ambiguity that might arise in the absence of case-marked nominal arguments. In the following example, the verb ending alone provides the indication that 'they' are the agent subject: no case-bearing clitic appears on the initial string. In the second and third clauses, the pronominal patient/theme arguments are marked with accusative case. The example is from The Proclamation of Telipinu (1525-1500) (KUB XI 1. 32-34) (Sturtevant and Bechtel 1935:185,186)[179] (also in Luraghi 1990:164). The

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This perfectivizing particle occurs in OH, or in "archaizing rituals and mythical texts" (Josephson 1972:335 nt.1) where it indicates some type of telicity: 'they ate him right up' (*ibid*:322).

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The Cannibal Story (CTH 17). KBo 3.60 = BoTU 21. The most extensive treatment is by Güterbock (1938:104,105).

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There are two versions of these Proclamations, one in Akkadian and one in Hittite. Both are identified as CTH 19. This passage is KUB XI1 (BoTU 23B) + KBo XIX .96.

passage describes the assassination of Muršili I (1620 BCE) by his own brother-in-law, one Ḫantili, working in concert with Ḫantili's son-in-law Zidanta. Bryce (1998:105) conjectures that the assassination may have happened shortly after Muršili's triumphant return from his successful military campaigns in Aleppo and Babylon: perhaps an "illustration of the dangers faced by a king who absented himself too long from the seat of power".

(35) *...nu* ^{I}[*Z*]*i-dan-ta-aš A*]-*NA* ^{I}*Ḫa-an-ti-li* [*kat-t*]*a-an ša-ra-a ú-li-eš-ta*

....conn Zidantas with Ḫantili 'conspire' (the phrase is an expression)

nu ḪUL-*lu ut-t*[*ar i-e-i*]*r* *nu= kán* ^{I}*Mur-ši-li-in*

conn bad[180] thing do+3pl.pret conn+prt Muršili+ACC

ku-en-nir nu e]*eš-ḫar i-e-ir*

kill+3pl.pret blood+NOM/ACC do+3pl.pret

'And Zidanta conspired (?) with Ḫantili, and they formed a traitorous plot.

They killed Muršili and spilled [lit: made] (his) blood'

7.1.2.1. The role of the particle *-za* in changing voice system

This particle has been treated extensively in Carruba (1969), Hoffner (1972, 1973b) and most recently by Boley 1993. I will make but a few brief remarks here which relate to the matter at hand: the transitional, changing nature of the voice system.

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ḪUL-*lu* (Kronasser 1966:488). 'Bad' is the simplest rendering of this rich word.

Boley indicates that the use of particle *-za* was extremely limited in Old Hittite: it occurs not at all in the Anitta text, our oldest Hittite document (1993:217). The particle "clearly expanded its use over the course of Hittite". Of its origin, there are various theories. Götze and Pedersen (1934:81) consider the particle to be from a reflexive pronoun **se-*, **swe.* Carruba (1969), presumably following Götze, gives a similar etymology (PIE **swe*, **swoi*). Melchert (1994:60) and Neu (1968b:143ff) consider reflexive **-ti* as the source. For Hittite, of course, the latter explanation is the most probable. Regardless of the morphological form of the source, the semantics (third person singular) are identical. Reflexives are generally assumed to start from a third person form, which is then adopted for all persons, often with later differential person marking (*je me souviens*)[181]. It is only in the late 15th century that it became possible to mark the presence of a first or second person subject in nominal sentences using the clitic particle *-za* , although third person nominative case clitics were always possible (Hoffner 1973b:520).

Another theory says that it began its "life" as a type of "ethical dative"[182] marking

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See Cennamo (1993) for a discussion of the typologically common increase in use of overt reflexives as a diachronic phenomenon.

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An ethical dative is a species of the dative of reference, which applies to personal pronouns expressed in the dative case. In Greek, it often "seems to be a colloquial usage, often in a quite lively context, and it indicates the referent's personal interest/involvement in the activity of the verb" (Joyal: p.c.). He adds that "the Homeric second person singular pronoun *toi* became in Attic a kind of fossilized ethical dative, really a particle (i.e. no longer a pronoun) which implied a certain intimacy ("you should know", "I'll have you know", "let me tell you", *vel sim.*), and that the speaker has an audience".

higher subject involvement in verbal activity[183]. It occurred originally most often (although optionally Boley 1993:185) with the steadily expanding "medio-passive" *-ri* forms, to indicate, in Boley's (1993:15) phrase, "a fake middle". This was necessary, of course, since the *-ḫi* conjugation which originally expressed that type of distinction was dying out:

> One may surmise that at the end of OH, certainly by early MH there was a transition period in the method used to express reflexivity/orientation to the subject [...] Verbs which had originally been employed in the middle alone [...] but had [...] some element of action in their verbal content which the middle form underplayed [...] acquired *-za* as a reinforcement (Boley 1993:186).

This stage lasted but a short time (Boley 1993:187). In the later language, the use of the particle had expanded to "active" verbs as well, where it took on a distinctly accusative flavour (Boley 1993:212ff). In function, it is often considered to be a type of reflexive pronoun. But, as Boley points out, *-za* cannot really correspond to a "true" reflexive pronoun, as it has no case. She appears very dubious about accepting the simple explanation of *-za* as

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We can see how this function of marking subject identity may have arisen from the examples with *-ri* above. In the absence of any further indication of roles than was provided by the verbal endings, it would be in some cases difficult to establish whether the "they" of the suffix was the agent or the undergoer. The use of the clitic *=za*, indicating identity with the argument of verbal ending would help to clarify roles

a reflexive[184] , and notes that, just as often, it:

> simply marks the subject's involvement in the verbal content [...] high volitional or mental effort, or similar. This is a wide-spread use of the reflexive pronoun in Italian [...] for instance, the pair *rifiutare/rifiutarsi* is a case in point. Both involve action, choice, decision on the part of the subject. But with the transitive verb the object claims equal attention with the subject: the verb essentially represents an interaction between them. The reflexive verb, on the other hand, highlights the verbal content solely in terms of the subject, and thus intensifies our appreciation of his activity, intent, mental effort (Boley 1993:201-3).

I agree with her in this judgment and would argue that this function became more relevant as the *-ḫi* conjugation waned, taking its subtle subject-orientation with it. Always partial to analytic constructions, to replace this lost distinction, Hittite chose highly marked analytic construction in the expression of voice as well. I suggest a progression of the following type:

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Hoffner suggests the function is often more accurately described as a 'strengthening' of the idea of possession: 'his own' vs. 'his' (1973b:523, 534).

Stage 1 Original opposition of outwardly directed transitivity (centrifugal version *-mi* conjugation) – vs. inwardly directed transitivity/high volitionality (centripetal version *-ḫi* conjugation) –>>

Stage 2. Higher level of outwardly directed transitivity of *-mi* conjugation -->>

Stage 3. Clarification and reinforcement of transitivity via stem extending causative markers in *-mi* conjugation

Stage 4. 3rd person plural forms (in *-ri*) which have the potential to be construed as active or passive (as in examples above)–>>

Stage 5a. 3rd person plural forms in *-ri* which are not collocated with a case-bearing clitic, but which indicate the identity of the suffixal argument and subject by the addition of *-za*)

Stage 5b. Verbs which bear the detransitivizing/ "medio/passive" suffix *-ri,* but whose subject is NOT 3rd person plural and are thus less ambiguous than forms which are 'real' 3rd person plurals (as in examples 34 and 35 above).

Such forms indicate that quite of bit of desemanticization of the suffix *-ri* has already taken place, even at the oldest layer of Hittite. We have a truly ancient example of such a construction from the Anitta text: LUGAL-*uš eša-ri* 'the king sits down'. Note the nominative case marking leaves no doubt about who is sitting: there is no semantic need to reinforce it by the addition of *-za* (see Hoffner 1973b:522 for the difference in meaning of this verb with and without *-za*). Note also that even at this early stage, the morphology of

ešari shows signs that *-ri* is a later addition: *eša* 'sits' is also widely attested LUGAL-*uš eša* 'the queen [sic!] remains seated' (HED 2:291,292). Attested as well are forms which are triply marked: with causative stem extender *-ḫa-*, clitic *-za*, and suffix *-ri*. Significantly, the example is from a very late text, the Oracles Concerning the Purification of Kingship (CTH 569), composed during the reign of Tudḫaliya IV:

(36)	*nu=za=kan*	LUGAL-*iznanni*	*ēš-ḫaḫa-ri*
	conn=REF=prt	king-ship	install-1sg.-*ri*
	'I install myself in the kingship'		(KBo XVI 98 II 12, in HED 2:291)

The discussion in Haspelmath (1993) of hundreds of what he calls inchoative[185]/causative pairs in various languages, leads one to question whether the construction in *-za* could be more accurately construed as an "anticausative" construction. In inchoative/causative pairs, the "causative verb is basic and the inchoative verb is derived (hence the term anticausative, which was coined in Nedjalkov and Sil'nickij 1969). Again, the anticausative may be marked by an affix (example a), by an anticausative auxiliary (example b), or by stem modification (example c).

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"An **inchoative/causative verb pair** [...] differ only in that the **causative** verb meaning includes an agent participant who causes the situation, whereas the **inchoative** verb meaning excludes a causal agent and presents the situation as occurring spontaneously...the inchoative member of an inchoative/causative pair is semantically similar to the passive of the causative" (Haspelmath 1993:90).

(37)	a.	Russian	*katat'-sja*	'roll (intr.)'
			katat'	'roll (tr.)
	b.	Lezgian	*xkaž xun*	'rise'
			xkažun	'raise'
	c.	Hindi-Urdu	*khul-naa*	'open (intr.)'
			khol-naa	'open (tr.)'

I think there is some justification for this analysis, as the *-za* forms tended to proliferate from the verbal arsenal of the more active (i.e., causative by implication) *-mi* conjugation. It would also go a long way toward explaining the numerous instances where *-za* does not have "reflexive" meaning[186]. (The Sanskrit grammarians had already captured the essence of this distinction. See Rocher (1968:85) for an explanation of this difficult point).

7.1.3. Experiments with periphrastic constructions

7.1.3.1. Participle + copula (agentless)

Perhaps the most common way to indicate a "passive" sense was by an analytic construction involving a participle and an inflected copula verb. This construction appears

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Cf. Russian, where the "reflexive" *sja* does not invariably possess reflexive meaning, e.g.:

on umyvajet=sja	vs.	*sobaka kusajet=sja*
'He washes himself'		'The dog is a 'professional' (i.e., a notorious biter)'
		*'The dog bites itself'

to have been available at all periods of the language. It should be noted that Hittite has only the one participle, in *-nt-*. It did not always indicate present progressive (or imperfective) as does its counterpart in Greek and Sanskrit. The meaning of the participle, and the indication of how the voice is to be interpreted, depends on the nature of the verb. Stative verbs may have a present value, whereas non-stative verbs usually have a past value. Certain verbs, *ed* 'eat' is a good example, may be interpreted either as past passive 'having been eaten' or past active 'having eaten'. This is the case with the Hittite participle *atant/adant* which is "partly active in meaning, like Lat. *pransus*" (Puhvel, HED 2:317). (cf. also Sanskrit *bhuktáḥ* 'having (been) eaten'/'having eaten', or *pītáḥ* 'having been drunk'/'having drunk').

The stative sense is clear in the following examples, both from the Ritual of Ayatarša, Wattiti, and Šušumanniga (CTH 390), where the passive sense is only by implication. No agent need be expressed. We do know, however, that the owner of the bowels was not also the eater. That may seem trivial or obvious, but it would incline us to see that **all** of the examples cited here involve an (unstated and unexpressed) EXTERIOR agent who is not identical to the subject.

(38) *nu-kan* [...] *ka-ra-a-te-eš*[187] *atanteš*

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The Hittite word is cognate with Greek χορδή 'intestine', 'guts', even 'strings' (the same root appears in the compound χορδ-άριον 'disease in the great gut' and in verb χορδο-λογέω 'touch the strings (of an instrument' (LSJ II:1998) and is no doubt related to κῆρ 'heart'. Sanskrit *hṛdayam* 'heart' is also cognate ("mit *h-* aus *ĝh-*"Frisk 1973:1112). The cognate triplets (Hittite *k/g* = Greek χ= Sanskrit *h*) show the same type of correspondence exemplified above. Both the Greek word (with initial χ) and the undifferentiated meaning

conn-prt bowels+NOM+pl. eat+PART+NOM+pl.

'bowels are eaten/have been eaten' (KUB VII 1 II 3, in HED 2:317)

(39) *ga-ra-a-te-eš* *atanteš*

innards'+NOM+pl. eat+PART+NOM+pl.

'Entrails [are] consumed' (KUB VII 1 I 2, in HED 2:317; Luraghi 1997:38)

The following example also gives the stative, rather than passive, sense of the participle: *hurtanteš* does not mean 'cursing', but rather 'accurséd'/ 'in an accurséd state'. The example is from the Extensive Annals of Muršili II (1339-1306), year 7 (CTH 61.II.04)

(40) *ḫur-ta-an-te-eš* *ešir*

curse+PART+pl. be+3pl.pret

'They were cursed' (KUB XIV 17 II 12, in HED 3: 434]

'innards' must be old. (Perhaps the loss of aspiration parallelled the chronological development of the more specific meaning 'heart'.) Levin notes the same type of semantic development from an early undifferentiated meaning of 'inner part of body' to a specific part, either 'heart' or 'womb'. He cites a parallel (already in Möller, Cuny and Bomhard apud Levin) between Sanskrit *gárbʰam* 'womb', Akkadian *qerb-um* 'womb' and Arabic *qalb-un* 'heart' which, although they refer to different organs, "either organ can easily be esteemed the inner part par excellence of the body, the one whose throb demands the most attention. So a looser sense 'the inside' may well be older than the specification that the Sanskrit and Arabic dictionaries list first. Anyhow, 'womb' or 'heart' –taken strictly, literally–has never been the exclusive meaning in any period of recorded history" (1993:93).

Other examples of this analytic passive include the following (see Puhvel's entry for *eš/aš* 'be', in HED 2:285-300 for numerous others).

(41) *ḫui]ttiyanteš* *ēšten*

draw+PART+pl. be+2pl.pret

'You have been drawn' (KUB XV 34 IV 12, in HED 2:287)[188]

(42) ...^{URU}DIDLI.HI.A BÁD *wedanteš* *ešer*

city+pl fortress build+PART+pl. be+3pl.pret

'...fortress cities had been built' (KBo V 8 II 16-17, in HED 2:287)[189]

(43) ...^{URU}DIDLI.HI.A=*ma* *kuyēš* *ŠA* KUR BÁD ^{URU}Ḫatti

city+pl.=but which of fortress Hatti

ištapanteš *ešer*

blockade+PART+pl. be +3pl.pret

'the towns of Hatti which had been blockaded' (KBo II 6 II 24-25, in HED 2:287)[190]

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Evocation (CTH 483)

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Extensive Annals of Muršili II (1339-1306), years 15-22 (CTH 61.II.07)

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Oracles concerning the purification of kingship (of Tudḫaliya IV) (CTH 569)

(44) *nu-wa-kan* *galanga(n)za* *ēš*

conn-QUOT-prt soothe+PART+sg. be+2sg.IMP

'Be soothed!' (HED 2:287)

also *galankanteš ēšte[n*

'Be soothed!' (KBo XV 10 I 32, in HED 2:288)[191]

(45) *išpiyanteš* *ninkante[š]* *ašandu*

sate+PART+3pl. fill+PART+3pl. be+2pl.IMP

'Let them be sated and filled' (KUB XV iii 42, in HED 2: 288)[192]

(Compare Latin: *saturi atque ebrii sunto*)

7.1.3.2. Prepositional Phrase (with Akkadian *IŠ-TU*)

The following forms indicate that a certain amount of syntactic borrowing resulted from language contact with Akkadian (if indeed, it was realized in spoken Hittite). The phrase occurs only rarely in early texts with an animate agent, but see examples (52), (53), (54).

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Ziplantawiya (CTH 443)

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The Madduwattaš Text. (CTH 147) during the reign of Arnuwanda I (1420-1400). The best known treatment is by Götze (1928).

This type of construction *does* express the agent. Again, however, we can see the tentative "experimental" and perhaps "transitional" nature of these constructions: they typically indicate (inanimate) instrument or means; only occasionally is there a sense of purposeful, deliberate, [+human] agent. Again, such a distinction HAD been conveyed by the use of the *-ḫi* conjugation which, as I indicated above, marked both high self involvement and relatively higher [+human] animacy and agency. With the demise of the *-ḫi* conjugation, the issue of how to indicate a [-self], but still [+animate, +human] agent arose. The following are examples of one such attempt to overtly mark an agent by overt syntactic means. The use of the Akkadian preposition *IŠ-TU* indicates that this construction may have been borrowed from a language which did, unlike Hittite, have a fully developed passive construction. The first few examples show the use of *IŠ-TU* to indicate "instrument" or "means", the last few, the use to indicate a sentient, purposeful, agent[193].

(46) *IŠ*]-*TU* IZI-*at* *inuwanzi*

by/with fire+ABL fry+3pl.

'They fry it with fire' (Bo 3217 Vs.7, in HED 1:11)

(47) *IŠ-TU* *ṬUPPI* *aniyanteš*

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Luraghi (1998:179) notes that in OH the instrumental occurs only with inanimate NPs. The instrumental with an animate agent NP occurs in the hapax *šiun-it* (god + INSTR) 'by the god') in the letters from Maşat.

by/with tablet execute+PART+3pl.

'recorded on/by means of a tablet' [but the participle clearly gives the sense of an animate agent who did the recording] (KUB V 6 IV 5, in HED 1:68)[194]

(48) *na=at* *IŠ-TU* *ME-E* *ar-ḫa* *arriyazzi*

conn=at by water away wash+3sg

'He washes it off with water' (KUB XLIV 63 II 10, in HED 1:112)[195]

This construction is possible with a Hittite ablative/instrumental:

(49) *nu* SILÁ *weten-it* *katta* *ānšanzi*

conn lamb water+INST down wipe+3pl.

'and they wipe down the lamb with water' (KBo V 1 IV 4, in HED 1:112)[196]

(50) *nu* *ku-i-e-eš* *IŠ-TU* ^{GIŠ}TUKUL *e-kir*

conn whoever+NOM+pl. by weapon die+3pl.pret

'and whoever is killed by the weapon' (but see below)

194

The Liver Oracles (CTH 570).

195

The Hethitische medizinische Texte (StBoT 19 = Burde 1974:28).

196

Papanikri (CTH 476)

(Apology of Ḫattušili 13, 4.45, Sturtevant and Bechtel 1935:80)[197]

The lexical item is *ekir* 'they die', but the prepositional phrase clearly states an agent: do we say 'they died by the weapon' or 'they are killed with a weapon'? If the latter, what becomes of the lexical opposition *kwen/ak?* Is the latter now reserved for killings involving [-animate] agents, the former for [+animate] human agents?

The following are cases where the agent is clearly an animate, sentient agent. Note that uses with animate agent usually include a "medio/passive" verb in *-ri*, and a patient subject in the nominative case. This is beginning to look like a "real" passive construction.

(51) *mān* ERIN.MEŠ. *IŠ-TU* ^{LU}KUR *ḫullantari*

if troops+NOM by enemy defeat+3pl.+PASS

'If the troops are defeated by the enemy' (KUB XVII 28 IV 45, in HED 3:364)[198]

The next two examples are both from the Late Hittite *Apology of Ḫattušili* III (1275-1250).

(52) ^{URU}KUBABBAR-aš *ḫu-u-ma-an-za IŠ-TU ŠA* ^{LÚ}MU-DI-KA *ne-ya-ri*

city Ḫattušaš+NOM all by your husband led+3sg.+PASS

197
The Apology (CTH 81) is also treated in StBoT 24 = Otten 1981.

198
Ritual for an Army in Retreat (CTH 426)

'the whole city of Hattusas will be led by your husband'

(Apology 12, 4.10-11, in Sturtevant and Bechtel 1935:78)

(53)	*ma-aḫ-ḫa-an=ma*	*ú-it*	*IŠ-TU*	Ė LUGAL
	when=but	come+3sg.pret	by	palace
	ḫa-an-ne-(m)-eš-šar	*ku-it-ki*	EGIR-*pa*	*ḫu-it-ti-ya-at-**ta**-at*[199]
	lawsuit+ NOM	somekind	again	bring+3sg.pret+PASS

(Apology 10, 3.14-15, in Sturtevant and Bechtel 1935:74)

The experts disagree about how to translate this: Sturtevant suggests: 'when, however, an indictment was brought again from the palace'. Neu, on the other hand, captures the [+animate] nature of the agent, which he clearly construes as a metonymic: 'als es aber dazu kam, dass vom Palaste der Prozess etwas verschleppt wurde' (lit: 'when it came to it, that the process was somewhat protracted by the Palace'). There is, to my mind, an implication of deliberate obfuscation or attempt to delay the judgmental process which can only be the mark of sentient [+ human] agency.

The final example, again from a relatively late Hittite text (14thc.)(Muršiliš Sprachlähmung = Götze and Pedersen 1934:10) shows that by this date, not only sentient agents, but the beings with the highest status of all, the deities, could appear as agents in the

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199

The ***ta*** is almost certainly "middle"-*to,* 'protected' by the preterite suffix *-at.*

Akkadian (*IŠ-TU* + NP) construction. Both verbs in the construction are clearly passive: ***da-at-ta-at*** is identified by Götze and Pedersen in their commentary (1934:68) as a medio-passive preterite. The reflex of the old suffix **-to* > Hittite *-ta* is visible, having been 'protected' by the preterite suffix *-at.* The Sumerian SI x DI-*at* (with Hittite preterite ending) is a medio-passive with the meaning 'festgestellt werden (durch Orakel)" (Götze and Pedersen 1934:65). The Hittite equivalent verb is *ḫandā(i)*:

(54)	*....ku-it-ki*	*da-at-ta-at*	*IŠ-TU* DINGIR^{LI}		*QA-TAM-MA*	SI x DI-*at*
	....so	take+3sg.pret	by	god	just so	establish

'...thus was it established by the deity'

(Götze and Pedersen 1934:10 = *Muršilis Sprachlähmung* Rs. 21).

7.2. Conclusion

In this final chapter of Volume I, I have given some indication of the directions taken after the demise of the original *-mi/-ḫi* voice opposition. Once the early system has become obsolete, issues of transitivity, causality, subject involvement, agentivity, and animate control need to be addressed. Several of the strategies adopted to deal with such issues included the semantic and paradigmatic extension and expansion of the "pseudo-passive" morpheme *-ri*, originally a marker of the third person plural, which was later extended to all persons of the paradigm. The particle *-za* reinforced subject involvement[200], first in "medio-passive" verbs in *-ri*, and then throughout the active (*-mi*) paradigms. Issues of agentivity were dealt with, first by *implication* in periphrastic (participle + copula) constructions which did not express an overt agent and then, *overtly* with a prepositional phrase involving Akkadian *IŠ-TU* and commonly, an inanimate agent. This usage was extended to include active, sentient agents, thus providing Hittite with its first and, arguably, only fully "passive" construction.

200

Hoffner (1973b:524ff) leaves no doubt that the particle *-za* most often reinforces the meaning of a certain class or type of verbs, i.e., verbs of perception, reflecting, deciding, emoting--verbs involving "certain psychological subject orientation". "Therefore, although it is impossible to claim that *-za* construes with all verbs expressing emotional or rational activity, it is striking that verbs of this class are particularly susceptible to association with *-za*, because **they characteristically stress subject involvement in the action denoted by the verb in a manner not true of most other verbs**" (1973:526). [My emphasis: SR].

THE HITTITE -ḪI / -MI CONJUGATIONS :

AN EARLY VOICE OPPOSITION

by

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VOLUME II

THE VERBS OF THE HITTITE -ḪI CONJUGATION AS CENTRIPETAL (= "MIDDLE")VOICE

2.0. INTRODUCTION

In this section, I list and discuss the 132 verbs which I have identified as belonging to the *-ḫi* conjugation, based on clear attestation in the first, second or third person singular (following principles outlined in Yoshida 1991). Although arguments could be made for including several other verbs which show evidence of belonging to the *-ḫi* conjugation, those for instance which are attested in the first person preterite, I have attempted to list only those whose membership is clearly and unequivocally attested. Hypothetically, all of the factitives could be included, as each of these verbs indicates deliberation or intent on behalf of the human subject. However, only those factitives with clear attestation have been included. Nor does inclusion in the list of *-ḫi* conjugation verbs imply that the specific verb is exclusively a member of this conjugation. Many of the verbs that appear in the *-ḫi* conjugation also have attested *-mi* forms (see, for instance, forms listed in Kronasser 1966:384-590).

Each verb listed in this section has a sub-section devoted to it. Each sub-section follows the following format: I provide the verb, its gloss(es)as a heading. Next, between horizontal lines, appears (1) either the Kemmer "middle voice" category to which the verb belongs (see Appendix II), or, if there is no clear such category, (2) an indication of whether the verb appears in a special context, either religious, ritual, legal, etc. (These are enclosed in square brackets). In this way, I indicate how each verb may be interpreted as geared to the

special interests of the subject. The main textual body of each entry provides a context, attestations, and discusses cognates throughout the family. Because of the importance of certain types of meaning or context to "special interests of the subject", if the verb is regularly employed in such a special context, I discuss this issue in broader scope. By this means, because so many of the verbs of this conjugation are so employed, I hope to establish a clear proactive case for *-ḫi* verbs as the 'marked' member of the original binary opposition. The overall results are briefly summarized at the end of this section.

In this second volume, I have paginated both independently, and, following in brackets, consecutively from the beginning of Volume I. The footnotes are independently numbered in this volume.

#1. *-*ai* 'exchange', 'give', 'take', 'allot'

3. Reciprocal domain c) Naturally reciprocal events

The root meaning 'give'[1] was central to Indo-European culture: "A characteristic of Indo-European and other archaic societies was the principle of exchange and reciprocal gift giving" (Watkins 1982:1501). Benveniste (1973:66-100) also discusses the importance of 'giving, taking and receiving' verbs to Indo-European culture, and insists that the root **ai*-, though "little known and represented [...] must be re-established in its importance and antiquity" (1973:80). Gamkrelidze and Ivanov (1995:778) suggest an early Indo-European dialectal source for **ai*-: "possibly from Common Indo-European itself or from some regional dialect grouping other than Anatolian". It appears as a (very early) loanword in Hattic *aya-/iya-/ya-* 'give'.

With the possible exception of Tocharian (cf. Kronasser 1966:540 and below), root **ai*, although attested throughout the Indo-European family in derivatives (Bird 1982:15), does not appear on its own as an independent item. This is the situation in Hittite, where it appears as the second element in such core *-ḫi* verbs as #79 *pai* 'give' (*pe-* + **-ai*) and #75.

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1 Mallory and Adams (1997:224) note that the inclusion of the cognates meaning either 'give', 'take' or the directionally neutral 'allot' is in no way problematic, as "it is frequently the case in IE that words meaning 'give' or 'take' often develop the opposite meaning". On this point, which reinforces the nature of the inherently reciprocal notions involved, see also #105 *da-* 'take', or #106 *dāi* 'place, accept'.

nai 'lead' (*ne-* + **-ai*) (Sturtevant 1933:213,214;[2]Kronasser 1966:158,538,540; Melchert 1994:7). As possible examples of the 'bare' root, Mallory and Adams (1997:224) cite Tocharian A *e-*'give' and Tocharian B *ai-* 'give' as cognate, and Gamkrelidze and Ivanov (1995:656) point out that the "Anatolian-Tocharian **(p)-ai* 'give' has further etymological connections (Pokorny 1959:10-11)"[3]. Derivative cognates include Tocharian *ai-tsi* 'give', Oscan "abstract **ai-ti-* 'part' [...] attested by the genitive singular *aeteis*, which corresponds in meaning to the Latin genitive *partis*" (Benveniste 1973:80; also Gamkrelidze and Ivanov 1995:656). Whether Latin *ae-mulus* 'rival' belongs here is "debatable" (Mallory and Adams 1997:224); cf. rather Hittite *ḫim(m)a* 'imitation, substitute, replica, model, toy' (HED 3:314, 315).

Not debatable, however, is the importance of the notion of "Fate" or "Destiny" to the lives and consciousness of Indo European peoples. Root *-ai* is seen in Illyrian proper name *Aetor*, an agent noun from the root *ai*, Oscan *aeteis*, Greek suffixed forms αἶ-σα 'lot, share'[4],

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2

Sturtevant (1933:146) points out that two of the prefixes (*ḫa- and ša-*) which occur in verbs also occur in nouns. That there are such interactions between nouns and verbs, seen as well in similar elements being used to mark both nouns and verbs (as, for instance, r/*n* alternations), is, I believe, indicative of the archaic nature of Hittite.

3

Correspondences between the 'peripheral' daughters (Tocharian, Anatolian, Latin) are indicative of archaisms and will regularly be noted here. #79 *pai-* 'give' was already univerbated in Proto-Anatolian.

4

Concerning the 'life and death' nature of this notion: Burkert (1985:129): αἶ-σα "is not a person, not a god or a power, but a fact: the word means portion, and proclaims that the world is apportioned, that boundaries are drawn in space and time". On this same point, see Dietrich (1965:59-90).

proper name Αἶ-σα 'the divinity who dispenses to everyone his lot or destiny' (LSJ I:42), αἶ-νυμαι 'take' (LSJ I:40), ἔξ-αι-τος. 'picked, taken', ἐξ-αί-νυμαι 'take out, away' (LSJ I: 580, 582). Burkert (1985) discusses the importance of αἶσα 'fate' to the Greeks[5]. See also Gordon (1981) and references therein (especially notes on page 231, where Aisa and Poros are described as "primal divinities, the 'oldest of the gods' γεραίτατοι [θιῶν] (=θεῶν) (or, in another reconstruction, [δαιμόνων] γεραίτατοι". Also Puhvel, *Comparative Mythology* 50.

5

Aisa and derivatives thereof appear often in Homer, as, for instance, Odyssey 5.113, 7.197, 11.61 or Iliad 9.608. The word is regularly paired with μοῖρα 'fate'.

16. Spontaneous events (c) associated with (i) animate beings
[Ritual, religious, social, legal context ('be put to death')]

Ak- 'die', 'be put to death' is understood as lexical passive/intransitive/stative, as opposed to transitive *kwen-* 'kill'; in many contexts, it may be understood as a legal term 'be put to death by judicial sentence, be legally executed' (as in Greek ἀποθανεῖν, ὑπὸ τῆς πόλεως)[6]. Kronasser (1956:194) lists this root under words referring to "Religion, Licht, Dunkelkeit, Krankheit, Tod" (religion, light, darkness, illness, death). It is discussed (with citations) also in Kronasser (1966:22,23,516), Oettinger 1979:401ff, Puhvel (HED 1:17ff) and Luraghi (1990:150,1).

The verb clearly has links to the IE perfect (thus Sturtevant 1927b, 1927c:215 who identifies *ak-* as one[7] of the verbs which "correspond rather closely to IE perfects with stems ending in a consonant", also Friedrich (1960:98) who lists it as "Konsonantische Stämme").

6
As, for instance, Old Hittite original (from StBoT 17= Zalpa text A Rs. 12'-13'= Otten 1973:12,13) cited in Luraghi (1990:150,151).

šu-uš ta-me-eš-šir [...] *še a-kir*
'they were overwhelmed [...] and killed' (Luraghi's translation)
'they conquered them and they died'[or 'were put to death' (?)].

7
Others being #7 *ar-* 'arrive' and #95 *šak-* 'know', which see.

Jasanoff (1978:15) cites, without reference, 1st person singular *akḫi* 'I die' (< *-*ḫe* < *-*ḫai*)[8] which he says "can be accounted for by assuming that original perfects like **akḫa* (< IE *-h_2e), lit. 'I am dead', regularly become preterites ('I (have) died'), from which new presents were created by the addition of the *hic et nunc* particle **i*." This type of analysis is argued for in this thesis, and agrees both with the derivational source outlined below, and with Bechtel's (1938:17ff) remarks[9] quoted here extensively, as the issues he outlines appear repeatedly in the course of this thesis:

> Couvreur argues that the IE perfect had a definite semantic value, and that this is not found in the Hittite *hi*-conjugation. True enough; but the assumed change of meaning is paralleled in Indo-European. The IE perfect is usually assumed to have had the same meaning as the Greek perfect, denoting a present situation resulting from a past act; the evidence for this is chiefly from Greek itself, supported by Latin and Slavic. But the perfect everywhere tends to become simply a preterite, as in late Greek, to a large extent in Latin, and in Germanic. Another development is also shown in certain verbs, of the type of Lat. *memini*, Skt. *veda*, and the Germanic pretero-presents. In the latter, the old perfect forms became simply present, and formed a new preterite of the so-called weak type; in Hittite, both present and preterite were formed out of original perfect material".

Sturtevant (1927b:164) suggests the meaning of *aki* 'he dies' "is a part of the far reaching Hittite assimilation of the original perfect to the present". Commenting on the interplay between the stative/passive ('be killed/dead') vs. present ('dies') meaning of the

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Sturtevant (1927b:161) also, without reference: "*aggahhi*" 'I die'. Neither Friedrich (1960) nor Kronasser (1966) cites the 1st singular present of this verb, nor have I seen it in the course of my perusal of Hittite texts.

9

Which appear as a supplementary note to Sturtevant (1938a:17-19).

root, he notes that: "there is no lack of *ḫi-* verbs denoting a state or condition of the subject [...] but a majority of them have the meaning of the IE present tense formations" [...] "The participle of *ak-* does, to be sure, fall into line with the IE perfect; for $^{D.MEŠ}$*akkanteš* [...] is parallel to Greek οἱ τεθνηκότες 'the dead'" (1927b:164,165). (See note 8, below).

What Sturtevant refers to as the "more common" present meaning of *aki* 'he dies' could be easily explained as reflecting the original sense of the perfect as a present not a preterite. Burrow (1955:297) describes the perfect, one of the "more ancient verbal forms", as in origin "a special kind of present tense, not a preterite". He illustrates his point with this example from Vedic Sanskrit: *ná śrāmyanti ná vi muñcanti éte váyo ná paptuḥ* (perfect), 'They do not become weary or stop, they fly like birds'.

Ak- is attested in 2nd singular *a-ak-ti* (KBo VII 14 I 6 ("alte Tafel"[10] Kronasser 1966:516), Oettinger (1979:402), also Puhvel (HED1:18):

Attestation 2nd singular present a-ak-ti

nu ***ākti*** *ḫarakti*

'**you die** [and] perish')

10

Zukrasi of Aleppo (CTH 15). Attributable to Ḫattušili 1, recording the events of one of his military campaigns in Syria. The Zukrasi referred to is a general of the king of Aleppo. See Bryce (1998:64-100, especially 76 and references therein).

The 3rd singular *aki* (with both meanings 'dies' and 'is put to death') is common in the Laws (see Friedrich 1971:116,117 for complete list). The following are typical usages:

Attestation 3rd singular present a-ki

[*ták*]-*ku* ERUM-*an na-aš-ma* GÌM-*an ku-iš-ki wa-al-aḫ-zi na-aš* ***a-ki*** ...

'If anyone strikes a male or female slave and **he dies**...'

(Sturtevant and Bechtel 1935:210; Friedrich 1971:16,17[11])

ták-ku [...] *takiya* URU-*ri* ***aki***

'If **he dies/ is killed** in another city' (Friedrich 1971:16,17; HED 1:18)

ták-ku LÚ *EL-LAM* MUŠ-*an ku-en-zi da-me-el-la ŠUM-an te-iz-zi*

1 MA.NA KÙ.BABBAR *pa-a-i* . *ták-ku* ÌR-*ša a-pa-a-aš-pít* ***a-ki***

'If a free man kills a snake and speaks another man's name,

he pays1 mina of silver; if a slave does it, **he is killed**'

(Friedrich 1971:76,77; Held et al 1987:124[12])

11

This citation and the next: KBo VI 2 and 3 (CTH 291).

12

Table II, § 55 (1)-(2), (CTH 292). See Friedrich (1971:3,4) for fuller identifications.

na-aš ^{URU}*Ḫa-at-tu-ši ŪL ḫu-u-iš-šu-u-iz-zi* ***a-ki-pa***[13]

'He does not stay alive in Hattusa, (but) **he dies**'

(KBo V 3+ 12 III 31[14], in HED 3:338)

The verb is attested with 3rd singular -š preterite forms *a-ak-ki-iš*, *ag-ga-aš* 'he died' (Kronasser 1966:516 (who also cites *akkišk*), Oettinger 1979:403).

2nd singular imperative is *a-ak* 'die!' The participle is *akkant* 'dead', *ak-kán-ta-aš* 'the dead'[15]. The third person plural is *akir/ekir* 'they die/are killed', but *-mi* forms are also attested, *ak-kán-zi*, but many of these are clearly later, as 1st person singular present *ak-mi* (so Oettinger 1979:401,402).

Puhvel (HED1:21) notes that although *ak-* seems to manifest *a:e* ablaut, this alternation "is confined to 3 pl. pret. act *ekir*, and even there it appears to be a generally

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13

Josephson (1972:331) notes that particle *-(a)pa*, here affixed to the verb *aki*, appears "in texts of old fashioned character" and its use indicates (or reinforces) that "action is seen as being completed as a consequence of the preceding action".

14

Treaty with Ḫukkana of Ḫayasa (CTH 42) Šuppiluliuma I

15

Gamkrelidze and Ivanov (1995:254 nt. 48) cite the participle of this *-ḫi* verb (whose third person plural form is *akir* 'they died') as evidence for "typological plausibility of a historical connection between predicative *-nt-* participles and third person plural endings of both conjugations: "cf. *li-e ak-kán-zi* 'may they not die'/ may they not be killed' (KBo III 23 I 8'), 2 DUMU^{MEŠ} *ak-kán-te-eš* 'two sons died' (Pud. I 24 (4')); singular *akkanza* 'having died' in the sense 'dies, will die' (Kammenhuber 1973-:1, *ak-*, 26-32)."

younger variant besides *akir*" (also Oettinger 1979:402).

Concerning the etymology of this verb, Puhvel (HED 1:22) notes that "*ak(k)*- has no inner-Anatolian cognates [...] but IE origin is probable. */ak-/* < IE **ok*-(perfect stem) presupposes a root **ek*- 'die' postulated also in the Venetic funerary vocable *ekupe θaris, ecupetaris, equpetars*, allegedly 'tombstone'". Puhvel seems sceptical of these (and other) suggestions, which would leave "IE **ek*- 'die' a weak reed, propped up on Hittite and an obscure Venetic compound". In his discussion of this verb, Kronasser (1956:74) cites the Venetic evidence, and adds, from a related (alternating?) root shape **nek*-[16], "*νέκυς* „Leichnam"", Latin "*nex* „Tötung"", Tocharian B "*nek-tsi* „vernichten"". He includes as well Old Irish "*éc* „Tod" ist aber **ŋku*-", although Puhvel (HED 1:22) insists that "attempts to derive *ak*- from **ŋ̊k̊*- [...] are abortive, since the outcome should be **ank*-".

If the two roots do belong together, despite Puhvel's phonological arguments to the contrary, the following must be considered as well: Avestan *nasyeiti* 'disappears', Vedic *náśyati* 'is lost, disappears, perishes', both Tocharian A *näkṣtär* 'disappears, perishes' and *oṅk* 'man', both Tocharian B *nakṣtär* 'disappears, perishes' and *eṅkwe* 'man', perhaps also name of Germanic chthonian goddess *Nehalennia*, Greek νῶκαρ 'coma', νέκταρ 'nectar' (< 'death-conquering') (Mallory and Adams 1997:150). Also included here would be Hittite *henkan* 'fate, death'.

Deciding which items are cognate, however, depends on what one understands as the

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16

For **ek*- : **nek*- cf. Latin *emō*, Gothic *niman* 'take' (*n*-movable??)

ultimate source of the root in Hittite. This is far from clear. Several possibilities present themselves. For instance, many have connected Hittite *ak-* 'die' with IE root **aǵ-* 'drive', the latest being Anttila (2000:147ff.). In his extensive discussion, Anttila argues for an *inherited* source for this "very curious verb", as opposed to a *substrate* (Hattic?) borrowing. He notes that although "Sturtevant (1927b:164,5) suggested ("with little doubt") that Hittite *ak(k)-* would go with Lat *agere* [...] as something like *vitam egi, qui tum agebat, vixit* = 'he is dead' [...] Note also *animam agere* 'to lie dying' obviously 'to drive [out] the spirit'", he [Sturtevant] later retracted this suggestion as untenable.[17]

Anttila explains the "grammatical quirks"of this verb within the context of Hittite linguistic development and cultural milieu (with sources especially in IE hunting culture). Important to my purposes is his reinforcement of the idea that this verb occurs regularly in legal, social and religious context. Imposing a death sentence, either on an enemy or on a group of animals for food, is, he notes, "typically a social group activity". Such "gathering of game and sustenance is of central social and religious import. Killing game is securing food, and killing enemies is protecting one's own unit [...] Such necessities easily lead to glory, as [...] in the Greek and Indo-European heroic sphere [...] and they led to high-culture

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17

A similar form and usage such as in the aspirated Greek *-k-* perfect *ēk-ha* (< *agō*, as in Latin uses above), is a perfect match to (undocumented) Hittite ***ak-ḫi* (discussed above, from Jasanoff 1978:15). However, the semantics of such a "middle" 1st person *-ḫi* form, or as a passive to *kwen-*: 'I end my life for my own benefit (or with intent)/I am put to death', would be semantically improbable. 1st person sg. *-mi* conjugation forms make more sense however, (as they carry no inherent semantic sense of self benefit) and are attested, *āk-mi* 'I am eclipsed/ put to death' (HED 1:17ff.). Oettinger (1979:402) points out that 1st singular attestation in *-mi* are late ("junghethitisch").

sacrifices and other aspects of religion" (Anttila 2000:149).

Mallory and Adams (1997:201) also suggest a link between the ancient IE cultural activities and the Hittite root *ak-*, one which must be of extreme antiquity given the semantic shifts involved. They suggest that $*h_a e\hat{g}$-[18] (= $*a\acute{g}$-) which originally meant 'drive, push, activity', later became specialized to 'competition, fight'. We see the later meaning in Avestan *āzi* 'avidity, greed' (*pəšanā̊ az-* 'engage in a contest'), Vedic *ājí* 'race, fight' (*ājím aj-* 'put on a contest'), Greek ἀγών 'fight, contest', but are given a sense of the earlier meaning in Greek. Here, the original sense was not of combative activity, but simply "assembly, gathering", as in Homer (Iliad 7.298), referring to 'assembled deities' ἀγώνιοι θεοί, 'the gathering of the gods'. Later the root "became specialized into gathering for games, hence 'competition, fight'". The original meaning of the root $*h_a e\hat{g}$- 'drive, push, activity' as being a cooperative assembly (either for hunting or religious practices -- driving animals into a pit for ritual slaughter --or such as seen in the Homeric meanings) only later became specialized to 'combative activity'.[19] The Hittite meaning, then, would reflect this older sense of a collective activity which benefited the society. Cognates with the meaning(s) 'drive' or 'lead' are also attested in Tocharian A and B *āk-* 'lead'. It should be noted that

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18

In Mallory and Adams' schema, h_a represents a laryngeal that "changes an adjacent -*e*- to -a-" and may be either h_2 or h_4 (1997:xxviii).

19

Also possibly linked to the same root (cf. Watkins 1982:1514) is *ēg-* 'to speak': apparently public speaking (ἀγορεύω 'address the assembly'), especially of a persuasive nature, was quite the performance.

words that referred to 'driving' cattle are also sometimes used for 'raiding' cattle (see Mallory and Adams 1997:170).

Despite Anttila's attractive arguments, given the semantics of the verb, I feel that a more likely source for Hittite *ak-* 'die' is ultimately the nominal/verbal root *$*h_1eg$-* 'a lack'/'be in need, lack; be extinguished', seen in Latin *ēgeō* 'need'[...] Hittite *aki/akkanzi* 'dies/they die' (< *$*h_1ógei$/ *$*h_1égn̥ti$* 'be extinguished'), Toch[arian] AB *yäk-* 'neglect, be careless about'" (Mallory and Adams 1997:343). The authors say that "[I]f all these words belong together, we have evidence for a word that was widespread and old in IE".

The form they suggest as the source of *aki*, *$*h_1ógei$*, is clearly a derivative, and may be segmented as *$*h_1óg$-ei*, with the meaning 'be in a state of need'= 'lack'. The suffix morpheme could be the derivational "stative" suffix *$*-eh_1$-* which "served to express a situation" (Beekes 1995:230), in Greek, to derive intransitive aorists: *man-ē-nai* 'to rage'. The derivational strategy *$*h_1óg$-ei* would thus parallel that of attested Tocharian cognate *yäk-ā* 'be negligent' (cited in Winter 1960:183)[20]. Statives in Hittite regularly show the suffix *-ai,* as in *takšul-ai* 'be friendly' (< *takšul-* 'friend'), *aššuw-ai* 'be good' (< *aššuš-* 'good'), forms identified (by Watkins) as *ē*-statives (and parallel to such forms in Latin as the above and others like *sen-ē-re* 'be old') exist in Hittite: Kimball cites OH *nakkē* 'be difficult' as one example. Kimball (1999:208) indicates that "There is a growing consensus [...] that **ei* underwent conditioned split", and, depending on the environment, became a high front vowel

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20

See Lehmann (2002:39) for the argument that the "perfect and the middle in Indo-European languages are reflexes of the earlier stative conjugation".

[either *ī, ē, e,* or *-i*], or a mid front vowel (*ē* or *e*). She says further (214) that: "If **-éi* became */-ī/*, then the *hi*-conjugation third person singular present can show a regular reduction of unaccented **ei* to */-ī/*, and OH *mazze* and *war(a)šše* have to be considered anomalous or analogical to OH 1sg. *-(h)he* < **$h_2$ai* and 2 sg. **-(t)te* < **th_2ai*". In this particular form, consequently, it is impossible to tell whether the final *-i* ending represents the *hic- et- nunc* tense particle or a reflex of the stative marker[21], such as marks the IE perfect and, possibly, the Sanskrit so-called aorist "passive". As I noted earlier, the final *-i* of this ancient form may also be a stative marker.

Sihler (1995:531) says that Latin second conjugation "verbs ending in *-ē-*, namely statives in *-ē-* and roots in *-eH_1-* [b]oth probably include the stem element **$y^e/_o$*[22]. A few verbs continue causative/frequentives in **-$ey^e/_o$*. The *o*-grade of **$h_1$óg-ei* suggests that indeed the *-ei* may be not the stative suffix, but possibly the causative/denominative suffix *éi*, as in **mon-éie* 'warn' ('to cause to consider' whence Latin *moneō* 'to warn'), which Beekes says " is used to form causatives with *-o-* in the root". Sihler points out that many forms such as

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21

For an inner-Anatolian analysis of these vowel changes and contractions, in both nouns and verbs, see Melchert (1994:222,223).

22

Sturtevant's (1929:9) remarks are relevant on this point: "If the Hittite denominatives in *a(i)* from earlier *ayo:aye* are to be connected with anything in Indo-European, they must go with the denominatives in *āi̯o:āi̯e*". He notes (*ibid*:13) the "extreme antiquity" of this suffix, which is "more ancient than stems in *ā*", cf. Sanskrit *prtanā* 'fight' > *prtanāyati* 'he fights' = 'makes war'. Risch (in Puhvel 1960b:169) provides the correspondence *eH_1* > Hittite *āi*, Latin *ē*, and noted "the frequent etymological *ē*" in such *-ḫi* verb roots as *dāi* < *dhē, piddāi* < **ptē.*

albeō 'am white' or *caleō* 'am hot' "look like denominatives in *-e-$y^e/_o$* [but are in fact] stative formations in *-eH_1-($y^e/_o$)" (1995:531).

Although there is no obvious causative sense in the stative/intransitive meaning 'be extinguished = die', there is causative meaning in 'put to death' ('cause to be extinguished'). It is possible that there are two related roots at work here: a stative root *h_1*óg-(*ei*) for 'die' (which suggests that the *o*-grade of the root may itself be derivational), and the suffixed causative form *h_1*og-éi* 'cause to be extinguished'.

Given the age of this root, the relation of nominal root *h_1*eg-* 'a lack' to verbal root *h_1*óg* suggests a derivational strategy somewhat the reverse of the typical *e~o* alternation: the *o*-grade roots (as are common in *-ḫi* and perfect) may be functioning as a "transitivity" enhancer, deriving, as here, a verb from an *e*-grade noun.

In summary, then, although the etymological issue is much disputed and far from settled, I suggest that this verb shows evidence for a characterized (*-eH_1/ *-$y^e/_o$) *o*-grade verbal root (from an *e*-grade noun).

#3. *allap(p)aḫḫ-*, *alpaḫḫ-* 'spit, spit at'

10. Other body actions ('scratch', 'sneeze'...)
[Ritual, religious, social, legal context]

This factitive verb is common in ritual context (often 'spitting out curses'), as from the Old Hittite Ritual for the Royal Couple[23]: *ta-an an-da* III-*iš* LUGAL-*uš* SAL.LUGAL-*ša zi-e-ri-ya* ***al-la-pa-aḫ-ḫa-an-zi*** 'the king and queen **spit** three times into a bowl' (StBoT 8, IV 34,5). For other attestations in Ritual for the Royal Couple, see Otten and Souček (1969:18,19,110), or Neu (1983:12,13) for attestations in other Old Hittite ritual texts. Josephson (1972:49) discusses particles (such as *kan*) used with this verb.

Puhvel (HED 1:30,31) provides several 3rd singular attestations (also Kronasser 1966:431). The following is from the Ritual for the Royal Couple:

Attestation 3rd singular present al-la-ap-pa-aḫ-ḫi

LUGAL-*uš* [...] GUD-*un* [...] ***al-la-ap-pa-aḫ-ḫi*** SAL.LUGAL [...] [***al-***]***la-ap-pa-aḫ-ḫi***

'the king **spits** [...] on the cattle. The queen also **spits** ...' (KBo XVII 1 I 4-6)

23
Ritual for the Royal Couple (CTH 416)

2nd singular imperative *al-la-pa-aḫ* 'spit!'. The participle is *al-la-ap-pa-aḫ-ḫa-an* (Kronasser 1966:431).

Oettinger (1979:456) provides Cuneiform Luwian *tappa* [*dapa*] 'spit' as cognate, although Puhvel (HED 1:31) indicates that the etymology is "uncertain". He notes a possible relation with the "quasi-onomatopoeic" root **lab*(*h*)-, *lap*(*h*)-, as in Greek λαφύσσω, λάπτω, Latin *lambō*, OHG *laffan* 'lick', etc.

I suggest an alternate etymology: This verb is a factitive/causative, containing the derivational suffix *-aḫ-*. Thus, it could be segmented as *alpa-aḫ* 'make a cloud' < *alpa-* 'cloud'> **al-bho-* (whiteness = cloud)(Kronasser 1966:179. 184.186,228)[24]. The semantics would be "spit = make a whiteness (cloud) of spit particles". For IE etymology of the nominal/adjectival root, cf. Watkins (1982:1506) *albho-* 'white' [Pok. *albho*-30], or Melchert (1994:93) *alpā-* 'cloud' < PA **albó-*.

24

The Hittite *al-pa* possibly showing the **n* > *l* correspondence as in *naman* > *lāman* 'name'.

#4. *alwanzaḫḫ-* 'bewitch, hex'

13. Emotion middle (d) speech action
[Ritual, religious, social, legal context]

This verb and its derivatives are used in magical and religious contexts. Puhvel (HED 1:45) cites 3rd singular present *alwanzah[hi*

Attestation 3rd singular present alwanzah[hi (KUB XXXV 145 Rs. 7[25])

The participle, *alwanzaḫḫant-* is usually construed in an adjectival passive/stative usage 'bewitch**ed**': *alwanzaḫḫantan* 'bewitched man/woman', but several usages could as well be considered active: EME.ḪI.A *alwanzaḫḫanteš* 'bewitched or bewitch**ing** [i.e. sorcerous] tongues'. This suggests that the attestation cited in Puhvel (HED 1:45) *mān antuḫši* DINGIR.MEŠ *alwanzaḫḫanteš* and which he translates as 'if for a man the gods are affected by magic' could possibly be translated as 'if the gods (are) bewitch**ing** (or directing a hex toward) a man', with experiencer/dative/terminative NP *antuḫši* the recipient of the hex. Unfortunately, because the relevant tablet is damaged, we do not know the full context of this citation. See, however, Starke (1977), who discusses what he terms directive verbs (including #73 *mema-* 'speak', #79 *pāi-* 'give', #101 *šipand-* 'pour') which require the

25
Symphonie pastorale (CTH 338)

terminative dative (cf. also Held et al 1987:62ff).

Forms which *are* attested suggest the source for the factitive verb (with denominative suffix *-aḫ-*) is (unattested) adjective **alwanza* 'possessing magical charms' (Kronasser 1966:265). The sense is 'do/make a magical charm', with an animate, sentient agent who performs the spell.

The IE source is most likely the semantically rich lexeme **al-w* 'magical charm' as in Greek ἀλύω 'be beside oneself'. Watkins (1982:1506) indicates that root **alu-* appears in words related to sorcery, magic, possession, and intoxication, including Greek cognate cited above and Germanic **aluth-* > OE *(e)alu-* > whence English *ale*. Perhaps also Runic *alu* 'magic spell' (?), Old Norse *ǫl-rūn* 'myth' (?). Although the meaning of neither of these words is known precisely, both "have some sort of magical import" (Mallory and Adams 1997:362). The Hittite cognate would link the semantic notions of magic and intoxicating drink. Thus: "beer induced a "high" wherein the drinker was infused with a sort of magical power" (Mallory and Adams 1997:60).

We know from many sources that Hittites drank beer as well as wine (Hoffner 1974:37,144; del Monte 1995:211-224). Substances poured in ritual contexts attested in Hittite documents include KAŠ 'beer' (= Hittite *šiešar*), GEŠTIN 'wine', even the (unimaginable) KAŠ-GEŠTIN 'beer-wine' (HED 5:17)[26].

26

Apparently, the Hittites had quite an industry: also attested are *marnuwant* 'lager beer' (HED 6), *tawal-*, *walḫi-* (types of beer), KA.DÙ.A. They even had a 'lite' beer: probably the reference is to the colour, not the caloric content.

Indeed, beer was brewed and consumed by practically all ancient peoples, the earliest evidence for beer being a jug from Godin Tepe in Western Iran, dated from c. 3500-3100 BC (Michel and Badler 1992:24). The Egyptians apparently brewed and drank beer: "a vat recovered from the Early Dynastic (c. 3500-3400 BC) site at Hierakonpolis in Egypt yielded the existence of beer residue (wheat, barley, dates, grape pips and signs of fermentation)" (Mallory and Adams 1997:60). Brewing vats are pictured in the art of both Predynastic Egypt and Mesopotamia.

Nevertheless, although consumption was widespread, the use of beer in ritual is relatively limited. Vedic peoples may have consumed *súrā* 'alcohol' "a beer-like beverage made of fermented barley" (Prakash 1961: 24-25), but the juice of the *sóma* plant was the preferred hallucinogenic substance in rituals. There is also what Buck (1949:389) calls the "oldest Indo-European intoxicating drink", the ubiquitous and perseverant 'mead' (<**médhu-*) (in most branches, including Tocharian A *mo*t 'alcoholic beverage' and B *mit* 'honey'), an intoxicating drink made from honey (see Mallory and Adams 1997:271).Generally, Greeks and Romans stuck steadfastly to wine, both for secular and sacred consumption (there is a reference to a honey-mix drink offering in Odyssey 10.519). The semantic links provided by this Hittite root suggest the possibility that beer *may* have been used to enhance the potency of Hittite magic and ritual (see also the entry under #60 *lāḫ-, lāḫu-, laḫ(ḫ)u-, laḫ(ḫ)uwai* 'to pour').

Excursus: In *vīnō vēritās*, but in KAŠ – *poēsis*:

Barley, the main ingredient in beer-brewing, is also an ingredient in ancient poetry, appearing in the formulaic merism 'wheat and barley' (with the "nobler" grain preceding) both in the Old Hittite phrase *šeppir euwann-a* and in Homeric Greek πῦροὶ καὶ κριθή. Mallory and Adams (1997:52) indicate that "In these combinations and in the placement of their constituents we have a small echo of the PIE poetic verbal traditions and an insight into how PIE speakers viewed one of their most important food [and drink] sources". Watkins, in his study of Indo-European poetics, *How To Kill a Dragon* (1995:48), cites further Homeric evidence of an expanded merism, using the lexeme ζειαί 'emmer' which he says is, like Hittite *euwann-a,* a derivative of the traditional IE word for the "unmarked grain" 'barley' *$\underset{\wedge}{i}\acute{e}\underset{\wedge}{u}o$, also in Fenno-Ugric (Finnish *jyvä*, Estonian *iva*). The most common word in Hittite for 'barley' is *ḫalki-* (Puhvel HED 1:35ff, also HED 5:100). Compare Etruscan *halχ-* 'beer' (?) possibly made with barley.

#5. *an(a)š-* 'wipe' (perhaps 'wipe, daub, apply salve')

7. Grooming
[Ritual, religious, social, legal context]

Puhvel (HED 1:75) indicates that the meaning of this verb is a "milder type of action than *warš(iya)* 'wipe, rub, sweep' [...] and is hence found together with expressions for washing, daubing, and salving." The verb is used with accusative of the thing or thing(s) wiped, usually hands and lips, often in cleaning and/or anointing ritual(s), or as a preamble to the same.

Attestation 3rd singular present a-(a-)[27]an-ši

QATI-ŠU ***a-an-ši***

'**wipes** his hands' (KBo XIX 128 I 19 and VI 9)[28]

LUGAL-*uš-kan* [...] *pūriuš* ***a-an-ši***

'the king **wipes** [his] lips' (ANTAḪŠUM fragments KBo IV 9)

27

See Melchert (1994:28,29) concerning the hapax *a-a-an-ši* "for [á:nssi] 'wipes' beside the usual *a-an-ši* cited by Oettinger (1979:436)".

28

The Hittite ANTAḪŠUM Festival (CTH 625), also in ANTAḪŠUM Fragments (CTH 612)

See Kronasser (1966:394,583) for more attestations. Also Sturtevant (1931d:12, with reference).

Puhvel (HED 1:75) notes that the etymology is "obscure" (but see HED 3:445). He indicates that apart from the alternative third plural forms, such as *ānšiyanzi* or *anaššiyanzi* (which appear in hippological texts only), "attested forms point to a root-verb *anš-* [...] but *anš-* can hardly be a primary reflex of an etymological **ons-*, because **ns* yields either *nz* or *šš*". Melchert (1994:70,164) disagrees and proposes *o*-grade root **óms-*(seen also possibly in Palaic *āmšai* 'wipes'[29], which contains an inherited sonorant + fricative cluster, probably */-ms/, which assimilates to *-nš-* in Hittite (but see Carruba 1970:50). The second singular imperative of this verb, *an(a)š* 'wipe!', is cited by Melchert (1994:112) as an example of the rare occurrence of a final consonant cluster.

It should be pointed out that the Greek lexical item in the same semantic field as Hittite *anš-* 'wipe', especially when it applies to personal grooming as in 'wiping away tears', is regularly middle voice ὀμόργνῡμαι 'wipe off' (LSJ II:1227).

29

But Puhvel (p,c.) calls this link "most uncertain".

#6. *appai-*'be finished, be done' (*-mi* caus. counterpart = *appiya-*)

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5. Impersonal
[Formulaic completion to ritual]

This verb appears regularly in the third person singular as an impersonal type of formulaic completion to a ritual, occasionally not unlike an 'amen' (although the normal 'amen' is *āpat ēšdu* 'thus/so be it').

Attestation 3rd singular present a-ap-pa-i/ap-pa-i/a-ap-pa-a-i (Oettinger 1979:477)

ta-a ***ap-pa-a-i***

'it is finished' (KUB II 8 V 39[30], cited in HED 1:94. For others of this type, Kronasser 1966:545)

šal]*li ašeššar* ***ap-pa-a-i***

'the great divine service **is completed**' (KUB II 3 I 50[31], cited in HED 1:94)

Kronasser (1966:545) indicates that the impersonal usage occurs with the infinitive:

30
ANTAḪŠUM Fragments (CTH 617)

31
The Hittite KI.LAM Festival (CTH 627)

waganna ***ap-pa-a-i***

'snacking **is done**'/'There is snacking going on'

(KUB XXXIX 4 Vs.9[32], cited in HED 1:94, Kronasser 1966:545)

Note that when the subject is human, as in the following examples (i.e., the usage is not impersonal), the initial vowel is plene: ('he' = #VVCCV-; 'it' = #VCCVV-).

nu LUGAL-*uš* ***a-ap-pa-i***

'The king **is finished**' [with the ritual] (KUB XVII 28 IV 41[33], cited in Kronasser 1966:545, also HED 1:94)

mahh]*an-ma* ***a-ap-pa-i***

'but when **he is finished**' (KBo V 11 I 25[34], cited in HED 1:94)

The verb is ultimately from Hittite preverb/adverb *appa*(*n*) 'behind, afterwards, later' (so Oettinger 1979:472)+ "stative" *-ai* = 'be (in state of) away-ness/ separation'. For various (and differing) opinions concerning cognates for Hittite preverb *appa*, see Puhvel (HED 1:93ff), Beekes (1995:220,221), Mallory and Adams (1997:42,391).

32
Funerary Rituals: Tablet N (CTH 450.1)

33
Ritual for an Army in Retreat (CTH 426)

34
Instructions for the Gateman (CTH 263)

#7. *ar-/er-* 'reach, come, arrive'

11.Translational motion/motion with reference to a path

Sturtevant (1927c:215) includes the verb *ar-* 'arrive' among his "first" class of verbs which "correspond rather closely to IE perfects with stems ending in a consonant". He notes (1927b) a "general equivalence", both in form and meaning, between Hittite *ari* 'he (has) arrived' and Sanskrit *āritha* 'thou art come' . The verb is attested in all three persons:

Attestation 1st person singular present a-ar-ḫi (Sturtevant 1927c:216; Kronasser 1966:516)

KUR ^{U}]^{RU} *Kummanni* ***a-ar-ḫi***

'**I** shall **come** to Kummanni' (KUB XV 11 III 21[35], cited in HED 1:108)

The following attestation is construed as modal by Puhvel (HED 1:108):

arḫa-man-wa-kan ***a-ar-ḫi***

'Might **I get away**!' (KBo IV 14 III 32-33)[36]

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35 Dreams of the Queen (CTH 584)

36 Treaty with an Unknown party (CTH 123) Tudḫaliya IV?. Apparently very late.

Attestation 2nd singular present a-ar-ti (Kronasser 1966:516)

nu-wa aggannaš wetena[š] kuwapi ***a-ar-ti***

'when **you come** to the waters of death' (KUB VIII 50 III 9-10[37], in HED1:108)

The third singular present can be used both in the personal and impersonal sense:

Attestation 3rd singular present a-a-ri/a-ri (Kronasser 1966:516)

n-aš maḫḫan wappui ***ari***

'when **she arrives** at the river-bank' (KUB XII 58 I 3[38], in HED 1:108)

KÁ-GAL-*aš anda* ***a-a-ri***

'...**arrives** at the gate' (KBo VIII 112 I 7[39], in HED 1:108)

ŠA ABU-ŠU-kan waštul ANA DUMU-*ŠU* ***ari***

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37 Gilgameš: Hittite fragments (CTH 341.III)

38 Ritual of Tunnawiya (CTH 409)

39 Festival Fragments (CTH 669)

'the father's sin **falls** upon the son' (HED 1:108)

UD-*az* ***a-ri***

'the day **arrives**/is at hand' (KUB XXI 1 I 64[40], in HED 1:108)

3rd singular preterite in -*š* is attested *a-ra-aš/a-ar-aš/a-ar-ša*

The Old Hittite Zalpa text (KBo XXII 2 Rs.7[41], duplicate III 38 Rs. 23) has these two spellings attested: *a-ar-ša* 'he arrived' *a-ar-aš* 'he arrived', lending support for the 'dummy' nature of the final vowel. The participle is *arant-* 'arrived' (usually in context of 'ripe' (i.e. 'arrived') grain)

This verb shows *a : e* ablaut, similar to that of #2 *ak-* 'die' but more so. Mallory and Adams (1997:506) suggest an *o*-grade source, *$*h_1$órei*, for *ari-*, from *e*-grade *$*h_1$er-* 'set in motion', a "widespread and old" root in IE. Also Puhvel:"The-*hi* conjugation verb *ar-* probably reflects the *o*-grade of the IE perfect of **er-* 'move, stir, raise'[...] with intransitive force. Cf. the Vedic 3 sg. perf. act. *ā́ra* (RV 3.30.10 *vy ā́ra* 'came apart' = 'opened itself up'), 3rd pl. perf. act. *ārúr* (RV 3.1.4. *śíśum ná jātám ábhy ārur áśvā* 'they came [to him] like

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40
Treaty with Alaksandu of Wilusa (CTH 76) Muwatalli II

41
Fragments Naming the City of Zalpa (CTH 3) Attributed to Muršili I

mares to a newborn foal'" (HED 1:111). (Hoenigswald (1952:182) adds Sanskrit *sárati* 'flows, hastens', with *-s* moveable.) See also Oettinger (1979:404, nt.13) who repeats Risch's suggestion of reduplicated *o*-grade source $*h_3e$-h_3or-*e*. Notice that the *o*-grade *or-* ' (a)rise' has a self-directed sense (as is clear in the Vedic usage) which does not adhere in the *e*-grade *er-* 'raise': I take this as "minimal pair" evidence for the diathetic nature of the vowel gradation. Latin *orior* 'rise', 'be born' is cognate, as is Ombrian *ortum* (see Flobert 1975:59) and Greek "middle" ὄρ-νυμαι 'rise'.

#8. *arai-* ' (a)rise, lift' (*-mi* caus. counterpart *ariya* 'pull, rein in (horses)')

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11. Translational motion/motion with reference to a path

Puhvel (HED 1:126) says that attested forms such as "*arāis* 'rose' vs. *arāit* 'held in check' suggest [...] that the *-hi* conjugation forms are in origin intransitive [...] secondary developments are exemplified by *araizzi* ('raises' = pulls [horses] > 'holds in check)" on the one hand, and "raises" = 'rises' on the other". The *-mi* conjugation presupposes a transitive original meaning 'raise'". A semantic development (intransitive vs. transitive > causative) similar to *walk* (oneself) vs. *walk* (a dog) or, Puhvel's "*lay* which is replacing *lie* in substandard American" may arise from the opposition of these two forms, identical in essence to the process described in Kuryłowicz (1964:87), where the more transitive member of the opposing pair is already "charged with a causative meaning".This is especially so if the "basic verb is a verb of state". By way of exemplification, he gives Slavic pairs *sědĕti* 'sit' vs. *saditi* 'set' and *ležati* 'lie' vs. *ložiti* 'lay'. The verb is attested in first and third persons.

Attestation 1st singular present ariḫḫi

nu-za karū ariwar ḫūdāk ***ariḫḫi***

'at daybreak **I rise** promptly' (KBo XII 103 Vs. 9[42], in HED 1:123)

Attestation 3rd singular present arai

maḫḫan-ma zinnai n-aš ***arai***

'when she finishes, she **arises** (KUB VII 53 II 21[43], in HED 1:123)

ašiwanza ***arai***

'the poor **will rise**'

LU]GAL-*uš* ^{LÚ}KÚR-*ni* ***arāi***

'the king **will rise** in hostility' (KBo XIII 13 Rs.7)[44]

mān [...] ^{D}*SIN-aš aki* KUR-*e anda* $BURU_6$ ***arāi***

'if the moon is eclipsed, a locust-swarm **will arise** in the land' (KUB VIII 1 III 3)[45]

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42 Purification Ritual (CTH 456)

43 Ritual of Tunnawiya (CTH 409)

44 Omen Text, Šumma alu (CTH 536.04)

45 Omen Text, Lunar eclipse: Hittite (CTH 532.II.01) Later in this text, (II 17) the verb #81 *parāi-* 'blow' is used in a similar context: *m]ašaš parāi* 'a locust swarm will blow in'.

As mentioned above, the verb is attested with *-š* preterite: *a-ra-a-iš* (twice in the Anitta-Text, Neu 1974:10,14)

n-aš-kan šarā ḫūdak arha ***arāiš***

'He **rose** up promptly' (KUB XII 65 III 10)[46]

The 2nd singular imperative is **arāi**:

arāi ^{URU}*Neriqaš* ^{D}U-*aš*

'**Arise**, storm-god of N.!' (KUB XXXVI 89 Rs. 58)[47]

An *o*-grade intransitive perfect is the source of both first and third forms: In Puhvel's schema: *ariḫḫi* < * $\underset{\circ}{E}_1$*róy* (H_2)-A_1 *ey, arai* < * $\underset{\circ}{E}_1$*róy* (H_2)-e. This same intransitive perfect source is seen in Greek ὀρίνω 'stir', move, excite' (mostly metaphorical usages, as in μνηστῆρας ὀρίνων 'driving the wooers [wild with fear ?]' (Odyssey 24.448), Armenian imperative *ari* 'stand up!' (HED 1:127).

46

Ḫedammu (CTH 348.09)

47

Prayer to the Storm God of Nerik (CTH 671)

#9. *arawaḫḫ-* 'make free'

[social/culture/legal/ritual context]

This is yet another of the factitive verbs, so common in the *-ḫi* conjugation, whose base morpheme, *ar(a)-* is at the very heart of IE notions of friendship, social acceptance, personal and legal morality. *arawaḫḫ-* is formed from the adjective *arawa-* 'free' (Sturtevant 1931d:14) + causative (agentive) suffix *-aḫ-*, indicates deliberation, intent, etc., : 'make free'. The adjective *arawa-* itself is a derivative of the adjective *a-a-ra* 'right, proper concern, due'. The total meaning of the verb provides insight into Hittite social policy: the meaning is "make right/as things should be'. The implication is that the "correct" optimal situation is that people should be free, integrated into the community. By implication, lack of freedom apparently represents a perturbation in the "proper" order of things.

The base lexeme, *a(a)ra* 'right, proper concern, due' underlies many derivatives involving intimate or advantageous social relationships, such as *ara-* / ^{LÚ}*ara* 'kinsman, friend, member of one's own group' (as in Laroche (1960), Sturtevant (1931d:14); Mallory and Adams (1997:213), *arawa-* < *ara/i-* 'communally acceptable'. It appears as well in the common legal and moral formula *natta āra* (or *ŪL āra*) 'it is not right'/'it is forbidden' (similar to Latin *nefas* 'tabu', 'abomination', 'sin'). Lycian *arā* 'as a due' is an inner-Anatolian cognate.

Sanskrit cognates have religious and social connotations as well. Thus, Vedic *ṛtá-*

'right, proper' (in the Vedas, 'cosmic order', 'holy law' as in RV 8.100.4c,5a), *arí, aryá* 'belonging to the correct (i.e., one's own) community'= 'friend'. See Gamkrelidze and Ivanov (1995:710) for the "ritual and legal meaning" of the IE root and various other cognates.

See Mallory and Adams (1997:213) for a fuller discussion of the various derivatives in daughter languages, from an original meaning which emphasized "in-group status as distinguished from the status of the outsider [...] In Anatolian [...] the personal relationship between individuals". The following is from the Laws (Friedrich 1971:56):

Attestation 3rd singular present a-ra-u-wa-aḫ-ḫi

ma-a-na-an-kán LUGAL-*uš-ma* ***a-ra-u-wa-aḫ-ḫi***

'when the king **frees** him' (KBo VI 4 IV 13[48])

The 1st singular preterite appears often in the phrase referring to liberation from feudal engagements ('to free from socage and corvée') as in

n-aš-kan šaḫḫanit luzzit arawaḫḫun

'I freed them from socage (and) corvée' (HED 1:119)

48

Laws 1 to 100 (CTH 291)

#10. *ark-* 'mark off, subdivide, parcel, set apart, sequester'

5. Impersonal [legal context]

There are numerous citations in the Laws, referring to the rules and laws governing parcelling out land, cattle, etc. As is typical of third person singular usages in the Laws, the context is impersonal[49].

Attestation 3rd singular present a-ar-ki (Kronasser 1966:520,521)

a-ar-gi (Oettinger 1979:414)

ták-ku GUD *ḫu-iš-wa-an-da-an ku-iš-ki* ***a-ar-ki***

ma-aḫ-ḫa-an da-ia-zi-la-aš a-pa-aš-ša

'if anyone **sequesters** a live head of cattle he [is] just like a thief'

(KBo VI 3 III 69 [= Laws 1:73.69], in Friedrich 1971:40).

The participle is *arkant-* 'sequestered', 'marked off' (KBo XI 45 III 26)[50]. Puhvel (HED

49

Because of the impersonal nature of the text, i.e., laws applying to non-specific "anyone", "someone", "a person", there are relatively few *-ḫi* verbs, and only one first person singular *daḫḫi*, 'I will take...' and that is in a direct quote (Table I §74 (71), Friedrich 1971:40). There are several third person which occur regularly (*dai, tarnai*) often in the context of reciprocity or recompense– making things 'right'.

50

Festivals Celebrated by the Prince (CTH 647)

1:140) suggests that the *-ḫi* conjugation stem *ark-* is from an *o*-grade variant of IE **ergh-*. See also Melchert (1994:137), following Eichner (1982[51]:23), for *o*-grade **órkei* as the source of *ārki* 'cuts'. (See also Oettinger 1979:415).

There have been many suggestions and false starts concerning cognates for the Hittite verb. Various proposals include various words for divisions, fences, etc, as, perhaps Greek ὄρχατος 'garden', or ὄρχος 'row of vines' (see, for instance HED 1:141, or Mallory and Adams (1997:354). For counter evidence to this, see Frisk 1973:II,434). Alternately, words such as Latin *arceō* 'keep separate', Greek ἀρκέω 'ward off', Armenian *argelum* 'hinder, hold back', Tocharian B *ārk-* 'be obliged to', seem more semantically sound (and are suggested by Sturtevant 1933:87), although Puhvel (HED 1:142) dismisses most of these as "abortive".

Though semantically sound, these last suggestions are not free from problems: Latin *arceō* 'keep separate' is generally assumed to be cognate with Hittite *-mi* verb *ḫark* 'have', used as an auxiliary in analytic predications (the so-called periphrastic perfect) (Boley 1984). This would leave *-mi* verb *ḫark* 'have' and *-ḫi* verb *ark-* as ultimately from the same source, presumably IE root **h₂erk-* 'hold back', 'contain' (Mallory and Adams 1997:270) (? Greek ἕρκος 'inclosure'). This is not phonologically impossible, but would depend on stress patterns and ablaut variants (see Kimball 1999:140ff for possibilities). The more

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51

Melchert's (1994:19) reference to Eichner (= 1982a: Zur hethitischen Etymologie (1. *ištark-* und *ištarnink-*; 2. *ark-*; 3. *šešd-*) Gs. Kronasser 16-28). See Melchert (*ibid*) for comments on devoiced stop here.

metaphorical meaning of *-mi* verb *ḫark* 'have' < 'contain' would adhere in the Tocharian B cognate *ārk-* 'be obliged to' = 'have to' (as in English modal developments). The original, older, more literal meaning would be seen in *-ḫi* verb *ark-* 'sequesters', 'cuts off'. Certainly, the separation of the two roots would be ancient.

#11. *ark-* 'copulate with'

3 (c). Reciprocal domain. Naturally reciprocal events

Puhvel (HED 1:142) rejects link with previous root, #10 *ark-* 'mark off' (in the sense of an obscene reference to 'splitting')[52]. The connection is rather to IE **órĝho-* 'coital excitation, sexual frenzy' (in Greek ὄρχις 'testicles'). The semantic progression 'out-of-control (sexual) frenzy' > 'frenzy' in general > 'rage' can be seen in the Sanskrit cognate *rágha-* 'anger, rage'. Puhvel (HED 1:147) points out the similarities, in meaning and usage, between Vedic root *rghāyáte* 'is impetuous, rages' and *vṛṣāyáte* 'behaves like a rutting male'. Related lexeme (*ātmanepada*) participle *rghāyámāṇa,* an epithet of Indra, refers to the divine 'battle rage' in RV (HED 1:147). Also cognate is Greek "middle" ὀρχεῖται 'writhes lasciviously'. Mallory and Adams comment (1997:508) that "Though the underlying verb is attested only in Hittite (with originally iterative-intensives also in Slavic, Indic, and Greek), this is surely the oldest reconstructable IE verb for 'copulate'."

Attestation 3rd singular present a-ar-ki

UDU.A.LUM GIM-*an* UDU.SÍG + SAL ***ārki***

52
But the meaning could as well be 'form a unit'.

'even as the ram **mounts** the ewe...' (KBo X 45 IV 30[53])

There is a variant of the above (KUB XLI 8 IV 30) with spelling ***arga*** 'mounts' (cf. HED 1:142), (Puhvel's "middle"), which would represent one of the 'preterite-presents'.

53

Purification of a house; Ritual for Netherworld deities (CTH 446)

#12. *armaḫḫ-* 'impregnate'

3 (c). Reciprocal domain. Naturally reciprocal events.

armaḫḫ- 'impregnate' is the masculine-oriented variant of the construction *-za armaḫḫ-* 'get (self), or become, pregnant'. The meaning of *armaḫḫi* is '**make** (via factitive *-aḫḫ-*) moon-bound' (*arma* 'moon') vs. '**be** moon-bound' *armai-* (*-mi* conjugation). See Beckman (1983) or HED 1:157) for various references to the relationship between the moon, sickness and pregnancy. Gamkrelidze and Ivanov (1995 I: 591) point out the Anatolian terms for 'moon' (Luwian has *arma-* also) differ from terms used in the rest of the Indo-European world, perhaps a reflection and result of the "special cultic significance" of both the sun and the moon (often as the source of illness!) in Hittite religious life. Although the lexemes for both 'sun' and 'moon' are "unique", "distinctive" and "without secure Indo-European etymologies", these authors suggest that *arma-* "may be connected with the rising of moon, a verbal form *ar-* 'arise, rise' plus *-ma* suffix." This proposal, for all its unlikely semantics, is intriguing. *-ma-* is an archaic suffix, which derives action nouns in Hittite (see Kronasser 1966:177) and may be seen in such Vedic words as *yā-ma* 'going', *ghar-má* 'heat', *dhár-ma* 'law' and several others (Burrow 1955:174).

The following citation, from the Birth Rituals, with the *-za* particle (Boley 1993:164), is from a relatively late tablet (probably Middle Hittite, given certain deliberate archaisms and extensive Hurrian influences (Beckman 1983:149).

Attestation 3rd singular (with *-za*) ar-ma-aḫ-ḫi

ma-]*a-an-za* SAL-*za* ***ar-ma-aḫ-ḫi***

'If a woman **becomes pregnant**' (KBo XVII 65 I[54], in Beckman 1983:132)

The following 1st singular preterite citation, without the particle, is from the Song of Kumarbi, parallel in subject matter to Hesiod's *Theogony*, but written some 500 years earlier (on which, see West 1997:102, and 278). (See Hoffner (1990:38-61) for discussion of the Hittite version of the (original) Hurrian myth):

āšmatta ***armaḫḫun*** ^{D}IM-*nit nakkit*

'lo, **I have impregnated** you with the mighty storm god'

(KUB XXXIII 120 I 30-31)[55]

Still on the issue of parallelisms between the mythological and poetic traditions of Anatolia and other ancient societies: Discussing a "striking and unique archaism" which links Anatolia and ancient Greece, Watkins (1995:99) points out the poetic parallelism between the juxtaposed verb and adjective from this verb in the Myth of Telepinu (KUB XVII 10 I 14) *armaḫḫanzi armawanteš* '[cattle, sheep and humans no longer] conceive but the pregnant

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54 Birth Rituals (CTH 430)

55 Song of Kumarbi (CTH 344)

[ones]'[...], to Hesiod's "unique" poetic phraseology βριάει [...] βριάοντα, where, in the latter, "the art lies in the grammatical figure: the antithesis of transitivity and intransitivity in what is taken as the same verb, factitive βριάει 'makes strong' (βριαρός)', but intransitive, stative participle βριάοντα ' (who is) strong'". Watkins suggests a morphological parallelism between βριάοντα ' (made) strong' (< *$g^{u}rih_2$-ah_2-*ont*, i.e., as reflecting a more archaic transitive (factitive) function) and Hittite participle *armaḫḫ-ant* 'pregnant' (cf. archaic lexemes Vedic *jár-ant* or Greek *γέρ-οντ*' (made) old', or, perhaps, in some of the Latin denominatives with causative meaning, as *rubr-āns* 'made red') (see Flobert 1975:411).

#13. *arra-* 'wash'

7. Grooming [ritual context]

This verb refers regularly in the context of "ritual" washing, as in the citations below. As does the previous verb (#12 *armaḫḫ-* 'impregnate'), *a(a)rra-* 'wash' occurs (often, as in HED 1:112,113) with the particle *-za,* but only in later texts: Boley (1993:158) indicates that the verb was used without the particle in Old Hittite texts.

Attestation 1st singular present a-ar-ra-aḫ-ḫi (Oettinger 1979:437; Kimball 1999:417)

ar-ra-aḫ-ḫi (Kronasser 1966:528, HED 1:16)

n-ašta DUMU-*an ayiš-šiš* [error for *-šit*] *parā* ***arraḫḫi***

'then **I rinse** out the child's mouth' (KUB VII 1 I 29[56], cited in HED 1:16)

Attestation 3rd singular present a-ar-ri

... LUGAL-*uš* III-*ŠU a-i-iš-še-et* ***a-ar-ri***

56

Ritual of Ayatarša, Wattiti, and Šušumanniga (CTH 390)

2. 44 (302)

'the king **washes** his mouth three times' (KBo XVII I 15 = StBoT 8:18)[57]

Melchert (1994:163) argues that the Tocharian cognate *yär-* 'bathe'[58] points to the source of the Hittite verb as $*e/orh_x$, and not **órs-*, such as has been suggested by, among others, Götze-Pedersen (1934:48) or Kimball (1983:182ff.). Kimball (1999) has apparently updated her analysis, and now derives *ārr-* 'wash' from $*H_1érH$- where the long root vowel "was generalized from forms of the paradigm in which the verb stem occurred before endings in initial consonant, e.g. P[roto]A[natolian] 1sg pres. $érH\text{-}h_2ai$ > [*ārhe*]" (Kimball 1999:153). For semantics, compare Latin deponent *lavor* 'wash', one of a number of Flobert's "verbes curatifs" (1975:413). The participle is *arrant-* 'washed'.

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57 Ritual for the Royal Couple (CTH 416)

58 Kimball (1999:417) a *set* root underlies the infinitive of this verb *yärnāssi* 'to bathe', where, as in HED 1:116, Hittite *-rr-* may be assimilated from $-*rH_2$-. A similar analysis is given in Oettinger 1979:438)

#14. *aš-/eš-* 'sit', 'seat self'

9. Change in body posture

This verb appears often in Old Hittite in the so-called "mediopassive" forms *ēšа* / -*ašanta* with present value, with neither *-za* particle nor the *-ri* endings. Indeed, Melchert (1994:152) calls the third singular form (< * *ēšo-*) "the crucial founding form" of this verb. Thus *ēšа* 'he [the king] sits', as in, e.g., KBo XVII 74 IV 33, from the Old Hittite Festival of Storm and Thunder (CTH 631), or the very common third plural *ašanta/ešand/ta* as in LUGAL SAL.LUGAL ^{GIŠ}DAG-*ti ašanta* 'the king [and] queen sit on the throne'. It is this form which is cognate with Greek ἧσθαι 'sits', Vedic *āste* 'sits' (see, for instance Mallory and Adams 1997:522 or Kimball 1999:439).

The relationship between the verbs meaning 'be' and 'sit' has been much discussed. Mallory and Adams (*ibid*) consider the IE root *$*h_1ēs$*- 'sit' to be the lengthened grade intensive of *$*h_1es$*-'be' (which may have originally meant 'sit'!)[59]. Given the relationship between the two verbs[60], if one considers that the verb 'be' regularly occurs with "active"[61]

59

In many languages *to be* is 'to be in a place' and often 'sit' is used in this sense, e.g. Mi'kmaq *epit* (John Hewson: p.c.). The more abstract sense of 'be' ('exist') as in English is a later development.

60

An interchange which persists in some languages to this day: cf. Spanish *es, ser, estar.*

61

See also HED 2:300 for an originally "middle" meaning and later, secondary, active

inflection throughout the IE family (Greek ἐι-μί, Sanskrit *ás-mi*, Avestan *ah-mi,* Hittite *ēs-mi* all 'I am'), then the lengthened grade of the same verb which produces *$*h_1ēs$- 'sit' and underlies "middle"/*ātmanepada* forms again throughout the family (Greek ἧσ-θ-αι, Sanskrit *ās-te Avestan ās-te*, Hittite *ēš-a* 'sits'), is a clear example of lengthened vowel grade marking voice. (The participle of the underlying verb, *āššant* 'remaining', has a geminate consonant in contrast to *ašant* 'being').

Neu (1968b) explains that Hittte *eš* - 'sit' began as a simple middle, with both stative and transformative use. But the transformative meaning moved over to the active sector and in the process acquired -*za*[62]. The stative meaning 'to sit' stayed a middle, and is not found with -*za*. This change in category for the transformative *eš*- took place in Middle Hittite (Boley 1993:16).

Although there is no doubt that the verb appears regularly with -*za* and -*ri* endings, (even in the oldest texts, such as Anitta) the form *eša* with present value is very frequent in Old Hittite:

Attestation 3rd singular "preterite-present" e-ša

LUGAL-*uš* ***e-ša***

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forms *ēš-zi* (= unaspirated -*t*-> *ts*/_*i*.)

62

Again, the particle -*za* occurs mainly with active verbs. Only in middle and late Hittite is it found with "middles" (Boley 1993:15,73).

'the queen [sic] **sits**' (KBo XIX 28 V 38)[63]

LUGAL-*uš* ***e-ša***

'the king **sits**' (KBo XVII 74 IV 33)[64]

The 2nd singular imperative *e-eš* 'sit!' parallels other 'bare' stem imperatives of the *ḫi* conjugation (cf 2nd singular imperative is *a-ak* 'die!'). For discussions of this verb see Kronasser (1966:21,22,120,257,293,298,315,336,390,452,570,578,582).

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63 The Hittite ANTAḪŠUM Festival (CTH 625)

64 Festival of Storm and Thunder (CTH 631)

#15. *ašaš-/ašeš-* 'place, make sit, set up = establish (rare)'

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9. Change in body posture
Ritual context?

Another of the *-ḫi* verb "consonant stems", this verb shows two morphological patterns characteristic of the "old" IE perfect: ablaut and reduplication. Puhvel mentions "thoroughgoing paradigmatic *a : e* ablaut" (also seen in fellow consonant stem *-ḫi* verbs #7 *ar-* 'arrive', #55 *karap-* 'eat up' and #95 *šak-* 'know'). This reduplicated form (seen in *ešešir* 'they sat') runs parallel to *eša:ešanta* 'sit' (which Puhvel notes is the usual "mediopassive" form of the verb 'sit'). The initial *a*-vocalism of forms such as *ašešḫut* (besides *ēšḫut* 'sit!') is "part of a gravitation towards a transitive sense close to that of causative *ašešanu-* [causative of reduplicated *ešeš-*][...].the last step was the consolidation of a *-ḫi* conjugation paradigm" (HED I:211). See further discussion in Sturtevant 1933:283; Kronasser 1956:194; Friedrich 1960:98; Kronasser 1966: 517,569,570,571; Oettinger 1979:430ff; HED 1:207ff.

This verb is attested in all three persons, as well as with the older 1st person singular ending in *-ḫe* (see Kronasser 1966:370 for a list of forms in this category):

Attestation 1st singular present a-ša-aš-ḫe /aš-aš-ḫi

a-ša-aš-ḫe

'**I sit**' (KBo III 28 II 24[65], in Kronasser 1966:370,517; HED 1:207)

***ašašḫi**-ma-ššan*

'**I seat** [the sick child]' (KUB VII 1 I 40[66], in HED 1:207)

nu-ššan DINGIR-*LUM šer apiy*[*a*] ***ašašhi***

'thereon **I place** the deity' (KBo XV 25 Vs.2-3[67], in HED 1:207)

Attestation 2nd singular present a-ša-aš-ti

man-za 1 URU-*LUM-ma kuinki* ***a-ša-aš-ti***

'but if **you establish** one single town' (KBo V 13 I 34[68], in Kronasser 1966:517)

Attestation 3rd singular present a-ša-(a-)ši

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65 Fragments of Anecdotes (Palace Chronicles of Ḫattušili I) (CTH 9)

66 Ritual of Ayatarša, Wattiti, & Šušumanniga (CTH 390)

67 Ritual of Iatiya against Wišuriyanza (CTH 396)

68 Treaty with Kupanta-LAMMA (CTH 68) Muršili II

The third singular form of this verb appears three times in the Anitta Text. This is the fullest citation:

nu ^{URU}*Ḫa-at-tu-ša-an a-ap-pa* ***a-ša-a-š[i]***

(Whoever become king after me)'[...] and [re-] **establishes** Ḫattuša'

(KBo III 22 Rs. 50[69], StBoT 18:12)

*nu-šša*n *kūš* DINGIR.MEŠ ***ašaši***

'and **he places** these deities' (KUB VII 41 IV 13[70], in HED 1:208)

nu DUMU.MEŠ LUGAL ***ašāši***

'**he seats** the princes' (KBo IV 9 V 20[71], in HED 1:208)

t-uš ***ašāši***

'**he seats** them' (KBo IV 9 V 27, 51)

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69 Proclamation of Anitta, King of Kuššara (CTH 1)

70 Purification of a house; Ritual for Netherworld deities (CTH 446)

71 ANTAḪŠUM Fragments (CTH 612)

Puhvel cites the unusual third singular (with 'stative' *-e*?) *ašaše* from the Great Festival at Arinna (KBo VIII 121[72], 6) (HED I:208). Could the reduplication be an archaic causative strategy, as in Semitic? See the previous entry for the verb *eš-/aš-* 'sit' which underlies *ašaš*.

72

Great Festival at Arinna (CTH 634)

3. (c.) Naturally reciprocal "See implies social interaction" Kemmer (1993:110)

Kronasser (1966:382) makes the observation that many "core" verbs of the *ḫi* conjugation, including *auš-* 'see', regularly appear as "middle" verbs, or "deponents" in Latin, Greek, Sanskrit. As evidence, he cites *uḫḫi* 'I see' (cf. Greek δέρκομαι 'I see'), as well as *ḫalziḫḫi* 'I call' (cf. Indic *návate* 'shouts') *ḫarrai* 'crush' (cf. Homeric ἴπτομαι 'I push [...] punish'), *šakḫi* 'I know' (cf. Greek ἐπίσταμαι[73] 'I understand'), *udaḫḫi* 'I bring' (compare Homeric κομίζομαι 'I carry'), *neḫḫi* 'I lead' (cf. Latin comitor 'I accompany, follow'), *piḫḫi* 'I give' (cf. Homeric δωρέομαι 'I present'). See also Kronasser (1956:191nt.31), where he makes the same observation: "Anderseits ist auch die semantische Struktur eines großen Teiles der hi-Verba so, daß in den anderen idg. Sprachen ein Medium (Deponens) entspricht: *aki* – lat. *moritur*, *ispai* – ai. *sphāyate*, *karāpi* – lat. *vescitur*, *pahsi* – lat *tuetur*, *tai* –δέχεται, *maltai* – εὔχεται".

This verb provides solid chronological evidence for several voice-related developments. Although *au*(*š*)- has attested *-mi* forms, Puhvel (HED 1:243) confirms that "*-mi* conjugation forms with *-š-* before *-t-* (e.g. *aušzi, aušdu*) are secondary and late". He suggests that the earlier (*-ḫi*) conjugation paradigm may have been "*uhhi, autti, *aui, umeni,*

73
In Homer, the verb refers both to intellectual and artistic abilities (LSJ I:659).

autteni, uwanzi [...] Thus the verb *au-* was basically a diphthongal stem of the *-hi* conjugation like e.g. *nai-* or *pai-*". On the chronology of the development of the so-called "reflexive" *-za* particle, Boley (1993:106) notes that this verb never appears with the particle in the old language: "there is no case of *-za* with *aus-* attested in OH"[74].

Au-/u- is a heavily attested, much discussed verb. See, for instance, Friedrich (1960:106);Watkins (1962:79ff); Kronasser (1966:543); Puhvel (HED 1:234ff); Luraghi (1990:50,169); Watkins (1995:117). As with the previous entry, this verb shows ablaut patterns characteristic of old "perfect". The ablaut pattern *au-*: *u-* is seen as well in such cognate lexemes as Sanskrit *uṣāḥ* 'dawn' (zero grade), Latin *aurōra*, Lithuanian *aũšti* 'get light' (full grade). Such evidence allows us to project confidently "a paradigm with two ablaut grades to Proto-Indo-European" (Gamkrelidze and Ivanov 1995:193).

Kimball (1999:177) suggests another possible source for *aus-* beside *au-*, *u-* 'see'– namely, extended stems **awis-* /**awis-dh-*[75] which would include Sanskrit *āviṣ* 'openly' (Sanskrit *avati* 'observe, notice' also given by Puhvel (HED 1:243) as the "correct etymon"), Greek αἰσθάνομαι 'I understand' and Latin *audīre* 'I hear'.

74

However, to be fair, given the relatively small size of the Old Hittite corpus, this could be simply *argumentum e silentio*.

75

However, Kimball's suggestion seems at odds with Gamkrelidze and Ivanov's (1995:199 nt.8) observation that: "The opposition of suffixes *-*s-* and *-*es-* (zero vs. full grade) may have indicated transitivity vs. intransitivity of the verbal stem: cf. **aus-* 'get light' (intransitive) and **wes-* 'cast light, burn' (cf. Skt. *avasran* 'they cast light', Latin *Vesta*).

The same root which we have in Hittite *au(š)-* 'see' is reflected in Early Irish *aí* 'poetry, poetic art' (from IE * *au̯-et-*, according to Watkins 1995:117) and in Welsh *awen* 'poetic inspiration'. Also from this root would be the archaic Latin word for 'seer/poet', *vātēs* (Watkins 1995:118). Words for poets regularly refer to the facility of inner vision or 'sight' which the poet possesses. (Recall that Homer, the archetypal seer/poet of the Greeks, was, according to tradition, blind.) For the vast lexicon of Sanskrit terms equating sight = mental 'vision' of the intellect, cf. Reat (1990:129ff) *The Origins of Indian Psychology*, Gonda (1963) *The Vision of the Vedic Poets*, or Puhvel (1981:312-315) 'Sight and thought in early Indoeuropean' in *Analecta Indoeuropaea.*

Mallory and Adams (1997:418) point out that IE verbs for 'perceive' or 'understand' often involve not the 'eye' ('I see'= perceive through visual data) > 'I understand')(as in Sanskrit), but the 'ear' ('I hear' = perceive through auditory data) > 'I understand'), as in Latin, Greek and Hittite. See Gamkrelidze and Ivanov (1995:688 nt.14) on this same point with numerous cognates. Note that the Sanskrit (Vedic hapax) cognate *uvé* 'I see, I realize' (1 = 3 stative *-e*), often equated with Hittite *uḫḫi* (see HED 1:243), also comes from a root meaning 'ear'. See also Avestan dual form *uši* which means both the literal 'ears' and the intellectual faculty 'reason'.

Attestation 1st singular present u-uḫ-ḫi

n-at ŪL ***ūḫhi***

2. 55 (313)

'**I** do not **see** it' (KBo VIII 41,2)

ūhhi *nāui*

'**I** do not yet **see**' (KBo III 34 I 23[76])

(For other 1st singular attestations, see HED 1:235 or Kronasser (1966:543)).

Attestation 2nd singular present a-ut-ti

takku ^{D}*SIN* ***a-ut-ti***

'if **you see** the moon' (KUB XXIX 11 II 14[77])

(For other 2nd singular attestations, see HED I:235 or Kronasser (1966:543)).

Also attested are the "conflated" "complex" "mixed" 2nd and 3rd plural endings[78]:

2nd plural aušta/ ašt / auštat

3rd plural aušta/ ašt / auštat

76

Anecdotes (Palace Chronicle) of the Reign of Ḫattušili I (CTH 8)

77

Lunar Omens (CTH 533)

78

Others include *memašta* (< *mema* 'speak') and *uppešta* (< *uppa-* 'send here'), etc.

The verb appears in various expressions with preverbs: thus for instance *katta(n) auš-* 'look into, investigate', *parā auš-* 'disregard' (cf. *šan para lie a-ut-ti*).

#17. *ḫalāi-* 'set wheel in motion'

Mallory and Adams (1997:506) cite source for *ḫalai* as [3rd singular perfect] *o*-grade **h₂lóḭei* 'sets in motion', extended from **h₂lei* 'set in motion'. They note that only Hittite maintains the original meaning of this "widespread and old" IE root: elsewhere, the meaning has been specialized to 'set (a liquid) in motion'. This specialized meaning can be seen in Homeric [Iliad 11.774; Odyssey 3.50] Greek cognate ἄλεισον 'cup, goblet' (LSJ I:62; Frisk 1973:67). See as well Kronasser (1966:545,555, 561), Oettinger (1979:480), HED 3:12)

Puhvel (HED 3:12) connects the Hittite root with Greek ἰάλλω 'send off, stretch forth' but calls other connections "abortive", such as with Greek ἄλλομαι 'leap', ἀλέω 'grind' or Sanskrit *íyarti* 'set in motion'. The last one is more likely related to one of the other (numerous) IE roots meaning 'set in motion' **h₁er-*, whence presents Hittite *ari* 'comes' *arta* 'stands', Latin *orior* 'rise, be born'.

Attestation 3rd singular present ḫa-la-a-i

nu GIŠDUBBIN [= *ḫurkin*] ***ḫalāi***

'he **sets** the wheel **in motion**' (KUB IX 1 II 32)[79]

79

Ritual for an Army in Retreat (CTH 428)

2. 58 (316)

#18. *ḫaliḫlai-* 'genuflect, make obeisance'

9. Change in body posture

This is the reduplicated[80] version of the verb *ḫaliya-* 'kneel, genuflect', which verb can be connected to Greek "middle voice" verb λιάζομαι 'sink, shrink'. Van Brock (1974:123) cites this verb as an example of certain types of reduplication characteristic of stems, such as this one, which show alternations of the type *-āi-/-iya*[81]

Attestation 2nd singular present ḫa-li-iḫ-la-la-ti (Kronasser 1966:545)

maršanza-wa-zik LUGAL-*un-wa-z mekki* ***ḫaliḫlatti***

80

Kimball (1999:179) describes it as "broken reduplication". Van Brock (1974:123) offers a fuller analysis.

81

"On posera **ḫali-ḫaliya-* syncopé en *ḫali-ḫliya-/ḫali-ḫlā(i)* [...]et le cas devient comparable à celui de *laḫḫi-laḫḫiya-* où la syncope ne s'est pas produite, ou de louv. *ḫui-ḫuiya-* en face d'un simple *ḫuwai-/ḫuiyai*: on a affaire à un redoublement complet comprenant, non seulement la racine verbale, mais une forme réduite du suffixe *-āi-/-iya-*" (Van Brock 1974:123). I do not find Van Brock's analysis convincing, as the (*ḫi* forms) in *-āi-*are already syncopated versions of earlier IE suffixed *o*-grade perfects (see Puhvel 1960b:169). Why assume a complex recycling of the same process, rather than simply assuming that the form in *āi* is the starting point for reduplication? (As well, what is interpreted as alternation in stems (*-āi-/-iya-*) may be more accurately interpreted as coming from paradigmatic alternations in the singular and plural forms of the same (*-ḫi* conjugation) paradigm: in other words, ablaut (as in the IE perfect). I fully concur with Melchert who, discussing the phonology of reduplicated verbs such as this (1994:174), states that "Much more study even to approximate the conditioning factors" which result in the attested forms is necessary.

'You are a hypocrite, **you** forever **make obeisance** to the king' (KBo III 34 II 20-21)[82]

See Van Brock (1974:141) for a discussion of this citation, and the interpretive translation "outrager, offenser (?)" [perhaps 'insult'?] put forward by Götze, based on the context of the cited passage, a contentious interaction between two Hittite civil servants.

Attestation 3rd singular present ḫa-li-iḫ-la-i (KUB XIV 1 Rs.10[83])

Note: 3rd plural preterite of *ḫaliya* is *ḫaliyer* (Sturtevant 1931d:19).

See Sturtevant (1931d:18, with references); Kronasser (1966:472,484,545,548,571); Puhvel (HED 3:31), Melchert (1994:173).

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82 Anecdotes (Palace Chronicle) of the Reign of Ḫattušili I (CTH 8). Note the use of *-zik* 'you' as a clitic. The full form is *zigga.*

83 Madduwattaš (CTH 147)

#19. *ḫalzāi-* 'to call, shout, crave, summon'

13. Emotion middle (d) Speech acts [Ritual use]

ḫalzāi- is one of the best attested of all Hittite verbs. It is extremely common in ritual, religious, political, ceremonial contexts. Puhvel (1988b:525) lists the various meanings of this verb as:

> (1) 'call out, cry, shout'; (2) 'cry for, crave' (e.g., pardon); (3) 'proclaim, recite, read aloud'; (4) 'call, summon, invoke, invite'; (5) 'call (by name)'. There is little doubt that (1) is basic, and that the other meanings are offshoots thereof.

This verb is found as well in Luwian, and was thus probably "part of the Anatolian folk-idioms of Western Asia Minor" (Puhvel 1988a:592). Cognate with *ḫalzāi-* are such diverse items as Gothic *laþōn* 'call, summon, invite', Old Norse *laða* 'call, summon, invite', Old Latin *lessus* 'wailing, lamentation' (archaic and obsolete even in Cicero's time (Puhvel 1988b:526), Greek ἀλαζών 'braggart' (literally 'crier'). Luwian forms with the same meaning (*halta-, haltatt-, halti(ya)* establish **halt-* as the Proto-Anatolian precursor. Puhvel

suggests a PIE etymon with root structure **Hél-t, *Hl̥-t*.[84] Many have considered this verb to be onomatopoeic, with "an Indo-European guttural as the source of *h̬*". Under such a scenario, related lexemes would include Greek **καλέω** 'I call', Czech ***hlásati*** 'call out' (HED 3:64). (Bubenik (p.c.) deems the last relationship "dubious", as Czech *h* is generally from **g*.) Also Latin ***calāre*** 'call, summon' and Old Norse ***kalla*** 'call' would belong here.(See Puhvel (1988b:525, HED 3:64) for references from such sources for this idea as Hrozný 1917, Marstrander, Pedersen, Hammerich, Schmitt-Brandt).

Bomhard and Kerns (1995:406) reconstruct Proto-Nostratic **k*$^{[h]}$*al-*/ **k*$^{[h]}$***əl-*** 'to make a noise, to sound' which would link virtually all of the cognates (which the "classical" theory cannot): the initial laryngeal of the Hittite verb, the voiceless velar stop of Greek **καλέω** and Latin *calō* 'to call, summon', the voiced velars of the cognates cited above, the Grimm reflex *h-* of Old High German *halōn* ''to call, fetch', perhaps even Vedic *hl/rādate* 'to sound' (Mayrhofer III:615ff) ('sound', 'rejoice').[85]

As if the cognate stage were not crowded enough, Sturtevant (1927a:119) introduces another character. He suggests that this verb is "clearly" from IE **bhels-* which he relates to

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84

The *-z-* in the Hittite form is explained by postulating a suffixed Proto-Anatolian form. Thus: **H*$_l$*l̥t* + yé/ó-. The high front vowel/glide of the suffix affricates the *t*.

85

See the same type of correspondence which the "classical" theories cannot justify: Latin ***ego***, Vedic ***aham***, Hittite ***uk***-/suffixed *-h̬* 'I'. Also Greek ***kheír*** 'hand' (i.e. χ [kh] voiceless velar stop + aspiration (Allen 1987:19ff)), Hittite ***keššar*** 'hand' (i.e. [k] voiceless velar stop reflex), Sanskrit ***hásta*** 'hand' (aspiration reflex). Also Hittite *gimmanza* 'winter' = Greek **χειμα** = Sanskrit *hemantas*.

Sanskrit *bhāṣate* 'speaks' and *bhásati* 'barks'[86]. Note that the verb describing human speech is *ātmanepada*, the animal noise, *parasmaipada*. This distinction is noted in Pāṇini's *Aṣṭādhyāyī*Book 1, Chapter 3, verse 48: *vyaktávācām samuccāraṇe:* the verb *vad* 'to speak' takes the *ātmanepada* voice when a human speaks as in

(a) *sam-prá-vad-ante brāhmaṇā* 'the brahmins chant in chorus' but

(b) *sam-prá-vad-anti kukkuṭāḥ* 'the chickens cluck simultaneously'

Pandit Vasu's explanation reinforces the point:

> The sense of the sûtra is that when men, who are only capable of articulate speech, speak all in one and the same time, then the verb *vad* takes the affix of the Atmanepada. When lower animals make a chorus of noise, the verb does not take the Atmanepada (1962:142; See also Katre1987:64).

This is completely consistent with Stepanov's description of the original grounds for voice selection in PIE (see also Lehmann 2002:65ff):

> If a sentence has as its subject an "active entity" (man, animal, wind, river,

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86

Also, Lithuanian *balsas*, 'voice'; also OHG *bellan* 'barks'.

water, fire, etc.) the predicate is taken from the *activa tantum* class. If, however, the "active entity" is specifically and emphatically human, the predicate will be chosen from the *media tantum* class (1992:161).

Frisk (1973:762ff) connects καλέω not with *ḫalzai-* but with *kalleš-/kalliš-*, a *-mi* verb meaning 'entice, lure, evoke, summon up' (Puhvel HED 4:22ff). Puhvel says that whereas *ḫalzai* is the usual verb for 'call, invite', *kalleš-* has a "tinge of enticement or inducement rather than exclamation; its basic meaning may be 'lure' rather than 'call for'". [cf. KUB XVII 5 i. 6 - The Anatolian myth of Illuyanka : ^{MUŠ}*illuyank*[*an*] *ḫantešnaz šarā kallišta* [Inaras] ..'lured the snake up from his hole (saying)'[...]

Oettinger (1979:507) lists these verbs separately (deriving *kalleš* from **kalh$_1$ -es-*) (1979:197). Nevertheless, the "cross-pollination" of cognates suggests that these verbs are ultimately identical. Melchert's (1994:80) discussion of the phonology underlying *kalleš* is enlightening and indicates that the issue is far from settled. Were one to consider a full analysis of these two verbs (*ḫalzāi-* and *kalleš-*), a number of possibilities would have to be considered, including the effect of suffixation on the stress patterns of the root, and, subsequently, the issue of laryngeal metathesis.

The following attestations, extremely common in religious, military, governmental contexts are typical, though by no means exhaustive:

Attestation 1st singular present ḫal-zi-iḫ-ḫi

2. 64 (322)

^{D}UTU-*ŠI* ERÍN. MEŠ *kuwapi* ***ḫal-zi-iḫ-ḫi***

'when **I** the king **summon** the troops' (KUB XIII 27 Rs.19)[87]

ANA PUḪRI ***ḫal-zi-iḫ-ḫi***

'**I call** to assembly'

nu-tta *ḫalḫiliškimi nu duddu* ***ḫal-[zi-iḫ-ḫi]***

'**I** kneel to you and **beg** for mercy (or 'call for pardon')' (KUB XXVI 86 III 4-5)

This verb is often used in context of invoking deities. The following is typical:

DINGIR-LUM ***ḫal-zi-iḫ-ḫi***

'**I invoke** the deity' (KBo VIII 63 IV 5-6)[88]

nu DINGIR.MEŠ *kuyēš kedani* UD-*ti kuedani arkuwēšni IŠTU* EME-YA ***ḫalziḫḫun***

'what deities on this day for what prayer with my tongue **I have summoned**'

(HED 3:57)

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87 Treaty with the Kaska (CTH 138)

88 Fragments of Vows (CTH 590)

Traces of name-magic "lurk" in the next examples with *ḫalzāi-*, according to Puhvel (*Epilecta,* 297)

nu-kan antuḫšaš ZI-*ŠU* ***ḫal-zi-iḫ-ḫi***

'**I call** the person's soul [ZI 'soul' in place of *ŠUM* 'name']' (KUB XII 63 Vs.18)[89]

nu-kan antuhšaš ŠUM-ŠU ***ḫal-zi-iḫ-ḫi*** (*ibid* 13)

'**I call** the person's name' (also HED 3:53-4)

There are as well numerous 2nd singular attestations (see HED 3:54). Again, the following is typical:

Attestation 2nd singular present ḫal-za-it-ti

šer tamai ŠUM-an ***ḫal-za-it-ti***

'**you call** another name'

nu-wa-mu kuwapi ^{D}UTU-*ŠI BELI-YA lāḫḫa* ***ḫalziššati***

'when **you** the king, my lord, **summon** me to war'

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89 Ritual of Zuwi (CTH 412.03)

(KUB XIV 1 Rs.13[90], cited in HED 5:1)

Attestation 3rd singular present ḫal-za-a-i

*n-uš-kan šippanduwanzi ŠUM.*HI.A-*ŠUNU ḫūmanduš-pat* ***ḫalzāi***

'**he calls** them all [by] their names to libate' (KBo XIX 128 III 10-12)[91]

Often in ritual contexts, the subject of this verb is *kita* (c.), a cult functionary who calls out in ritual, usually in the company of other performers (including cantors, jesters, etc.) (Puhvel HED 4:200). Thus:

nu aḫā ḫalzianzi ^{LÚ}*kītaš-ma* [*nam*]*ma ŪL* ***ḫalzāi***

'They cry "aha!" but the kita **does** not **call** out further'

In ritual and religious use, third singular forms in *-iya* appear regularly in an impersonal context: *adanna ḫalziya* 'there is a call to eat/one is called to eat', *wagāta ḫalziya* 'there is an invitation "[have] a bite!"'. As well, forms in *-iya-ri*, again in an impersonal context, are attested: *ḫalziyari* 'there is a cry', *nu wakanna ḫalziyari* 'there is an invitation

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90 Madduwattaš (CTH 147)

91 The Hittite ANTAḪŠUM Festival (CTH 625)

to [have a] bite'. These forms appear to be later than the unsuffixed forms of the *-ḫi* conjugation, thus providing an insight into the chronology of voice development, at least in this particular verb. Puhvel (HED 3:63) refers to "the original active [sic: recall that Puhvel makes no voice distinction between *-ḫi* and *-mi* verbs, calling them both "active") 3 sg. in the Luwoid *haltatti*", with the later "mediopassive diathesis" in such forms as Luwian *hal-ti-ta-ri* 'er wird gerufen' (KBo IV 11,49).

Kronasser (1966:382) cites this verb along with Vedic *navate* 'cry out' as semantic pairs: often, as he states, the non-Anatolian paired item is a "deponent"/"middle" verb, as here. [Semantically, Tocharian AB *nu-* 'roar' belongs here too, as does Latin *nūntius* 'message']. The same point was made originally by Rozenkranz (1953, 1958), and reiterated by Gamkrelidze and Ivanov:

> The Hittite *-ḫi* conjugation primarily involves verbs which correspond to mediopassives elsewhere, cf. Hitt[ite] *paḫḫašḫi* and Lat[in] *pāscō* 'I herd, graze (livestock)', Hitt[ite] *arḫi* 'I achieve, reach' and Latin *orior* 'I get up, stand up' (1995:257).

For further discussion of this verb, see Kronasser (1956:198); Friedrich (1960:101,2) or Kronasser (1966:536,538,540); Oettinger (1979:62ff); HED (3:53, 60); Boley (1993:21).

#20. *ḫalzešša*-'crave/beg pardon', 'summon'

13. Emotion middle (d) speech action [Ritual use]

This verb is the iterative form of *ḫalzai*- 'call, shout'. Recall Melchert's (1994:78) explanation that "all[92] examples of iter. *-išš* (*a*)- in Hittite are formed to *ḫi*- verbs in *-i-* (*ḫalzišša-, šišša-*), all clear cases of which are enlargements of roots in final *$*-h_1$* [...] In all cases of final *$*-h_1i$*- (*$*seh_1$*(i)-, *$*werh_1i$*-), laryngeal-sonorant metathesis [...] would lead to *$*-ih_1s$*- whence *-išš-*" [or in this case, *ešš-*].

Attestation 1st singular present ḫal-zi-iš-ša-aḫ-ḫi (Kronasser 1966:554; HED 3:60)

kinun-a šiuni-mi piran tuwaddu ***ḫalziššaḫḫi*** *nu-mu* DINGIR *-YA ištamaš*

'now before my god **I crave pardon**; my god, hear me!'

(KUB XXX 10 Rs.22)[93]

Attestation 2nd singular present ḫal-zi-iš-ša-at-ti (Kronasser 1966:554; HED 3:60)

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92 However, *e/išša*- is the iterative of *-iya*- 'do' (HED 2:300). See entry #49.

93 Kantuzzili's Prayer (CTH 373)

nu-wa-mu kuwapi ^{D}UTU-*ŠI BELI-YA lāḫḫa* ***ḫalziššatti***

'when **you** the king my lord **summon** me to war'

(KUB XIV 1 Rs. 13[94] Madduwattaš (CTH 147))

Attestation 3rd singular present ḫal-zi-eš-ša-i (Kronasser 1966: 554; HED 3:61)

[INIM-*n*]*i-ma-wa-šmaš kuedani* ***ḫalzeššai***

'in what matter **is he summoning** you?' (KUB XVII 7 III 15)[95]

DINGIR.MEŠ-*ma* GAL $^{LÚ-MEŠ}$ŠÌLA.ŠU.DU$_8$ *lamnit* ***ḫalzeššai***

'the **chief** of the cupbearers **calls** the gods by name'

(KBo XXI 85 I 11)[96]

i-i ***ḫalziššāi***

' (S)he **calls out/wails/ululates** "iiii"'

(KBo XVII 43 I 11)[97]

94
Madduwattaš (CTH 147)

95
Ullik Tabl 1 (CTH 345.01)

96
The Hittite *ḫišuwaš* Festival (CTH 628.IIf)

97
Hattian (CTH 744)

Whereas related Hittite *-mi* verb *ḫalziya* has a meaning 'howl' and is often used to describe the sounds of wolves, the iterative-durative *-ḫi* verb *ḫalzi/ešša* describing "human ululation in ritual context is well documented from Old Hittite onward" (Puhvel 1988b:527).

nu UR.BAR.RA-*ili* ***ḫalziššai***

'**He howls** like a wolf' (KUB IX 31 II 12)

This usage is very heavily attested, most often, because of the nature of outcry as a public activity, in the 3rd plural. See previous reference for several such attestations, also Puhvel (HED3:61ff), Neu (1983:47) for lists of citations in Old Hittite ritual texts. See also entry in Oettinger (1979:507).

As pointed out in the previous entry, the verb which underlies this iterative form has been connected to various Germanic verbs, notably Gothic *laþōn*, OE *laðian* 'call, summon, invite'. A possibility also is Old Latin *lessus* 'wailing, lamentation' ("the archaic word for the current onomatopoeic *ēiulātio* or *ēiulātus*. As a relic of **Hlet-tu-* [...] it meant basically ' (out)cry'" (Puhvel 1988b:526).

Puhvel's (HED 3:63) reconstruction of the etymon is as follows: "Basic to this verb (*ḫalzai*)is Proto-Anatolian **ḫalt(i)ya-* < * $H_1l̥$*tyé/ó-*, a primary formation with **-ye-/-yo-* suffix like e.g. *aššiya-* (< **A_2ns-yó-* '**be** favored' [...] or *parkiya* (< **bhṛh-yó-* '**be** high')". The suffix is cognate with Sanskrit *-ya-* (as in *trp-ya-ti* 'be satisfied'), an old "stative" morpheme, alternating with *-ē-* (as still in Greek μαίνομαι 'be mad', 'be beside oneself' :

ἐμάνη 'be maddened' ; with accent polarization, it yields the Sanskrit "passive" *kriyáte* 'is made'.

#21. *ḫamank-* 'bind', 'tie', 'betroth'

[Common in (birth) ritual, magic, marriage arrangements]

Actions involving binding and tying (often with bits of coloured wool) are common in Hittite rituals (and in IE worship in general, as in Homer Iliad Book 1, 14-15). See Watkins (1995:456ff) for "binding" as a theme in IE poetics (δέδεται in Homer, *ḫamank*, *išḫai* in Hittite). This verb is common in a ritual context, especially rituals associated with birth; it appears regularly with the preverb *anda-*.

Attestation 1st singular present ḫa-ma-an-ga-aḫ-ḫi (HED 3:64)

ḫa-ma-an-ga-aḫ-ḫi

'I bind' (KBo XII 96 I 20)[98]

Attestation 3rd singular present ḫa-ma-an-ki (Kronasser 1966:433)

ANA QATI-ŠU-ya-šši-ššan SÍG SA_5 ***ḫamanki***

98

Deeds of Šuppiluliuma. 18-27: III. Fragments of subsequent tablets (?) (CTH 40)

2. 73 (331)

'and to her hand **he binds** red wool' (KUB IX 22 II 27)[99]

*nu-šša*n SÍG SA_5 *ANA* GÌR.MEŠ-*ŠU* ***ḫamanki***

'**he ties** red wool to its feet' (KBo V 1 IV 6-7)[100]

a]*nda šepikušti* ***ḫamanki***

'**she ties** to the pin' (KBo XII 112 Vs.6)[101]

a]*nda* ^{GIŠ}*niniyalaš ḫamanki*

'**she ties** to the cradle' (KBo XII 112 Vs.7)

Despite counterbalancing *-mi* forms, this verb "has the looks of a *-ḫi* conjugation verb" with its "seeming *a* : *e* ablaut on the lines of *ak*(*k*)-, *ar*-, ... *karap*-, ... *šarap*-..." (HED 3:67).

Mallory and Adams list the following cognates for this "widespread and old" IE root: Latin *angō* 'tie up, draw close', Greek ἄγχω 'tie together' and derive the Hittite verb from

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99 Birth Rituals (CTH 477)

100 Papanikri (CTH 476)

101 This and the following attestation are from Ritual Fragments (CTH 470)

*h_2*m*negʰ*- 'tie', 'betroth' (1997:64)[102]. A Semitic origin for both *ǰamank* and (?) cognate Greek ἀνάγκη ['of necessity'] 'constraint, blood tie' has been suggested (cf. references in Puhvel HED 3:68), but whether this connection is to be taken seriously is debatable. See also Oettinger (1979:436).

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See Plato, *The Republic*, Book 10 616ff (Cornford 1968 [1945]:352ff) for the connection between ἀνάγκη, wearing and tying (and fate), in the myth of Er, which may have an eastern influence.

#22. *ḫān-* 'draw, scoop (liquids)'

This verb is used in the context of drawing up fluids (either water or wine) and is common in Festival texts, as in the citation below. As in #2 *ak-* 'die', *a : e* ablaut may be seen in the third plural preterite forms *ḫi-ni-ir / ḫe-ni-ir* vs. *ḫa-ni-ir*.

Attestation 3rd singular present ḫa-a-ni

GEŠTIN-*an šarā* ***ḫāni***

'[he] **draws** up wine' (KUB X 11 V 9-11)[103]

The imperative is the "simple" *ḫa-a-an* 'scoop!' (Kronasser 1966:513,525).

This word is attested only in Hittite, Armenian and Greek. The Greek cognate is ἄντλον 'bilge-water', ἀντλέω 'bale (out)', the Armenian *hanem* 'draw out, remove'. Like Hittite, Armenian preserves word-initial $*h_2$-, as in this verb and other words such as *haw* 'grandfather' from PIE $*h_2euh_2os$ 'grandfather' (Hittite *ḫuḫḫaš* 'grandfather', compare Hittite *ḫarki* 'white' from PIE $*h_2arĝi$ - 'white').

103
Offerings to royal images (CTH 660)

Although Mallory and Adams note (1997:27ff) that only approximately 450-500 Armenian lexemes are from the IE wordstock, there are several words of Hurrian origin (including words for trees, and camel). See Mallory and Adams (1997:29ff) for map and discussion of early associations of these groups. For more on this verb see Kronasser (1966:513); Oettinger (1979:438); Puhvel (HED 3:76)

#23. *ḫanna-* 'contend (against)','judge, decree, litigate'

3. Reciprocal domain or perhaps 13. Emotion middle (d) speech action

As with many of the *-ḫi* verbs, this verb appears in a figura etymologica: *ḫannieššar ḫanna* 'judge a judgement' (compare Akkadian *dīnam dānu* or Greek δίκην δικάζεσθαί τινι 'to go to law with one'). Kronasser (1966:561,2) has posited a connection with *ḫa(i)-* 'believe', 'trust': *ḫanna* being a causative built to that stem. Watkins (1969:75,6) posits characterised IE root **Hō-ne/o*, connecting this root with Latin *ōmen.* Others have suggested a relation with *onus* 'load'. Sturtevant (1933:134,135) analyses this verb as a univerbated stem: composed of preverb *ḫa-* + verbal root *nai* 'leads'. The same preverb (possibly) occurs in fellow *-ḫi* verbs *ḫatk-* 'shuts' and *ḫuwai* 'runs'.

Attestation 1st singular present ḫa-an-na-aḫ-ḫi (HED 3:77)

ḫa-an-na-aḫ-ḫi

'I judge' (KBo XIX 70)[104]

This verb is attested in what I am calling "preterite present" form, and in a figura

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Treaty with Manapa-Tarḫunta of Šeḫa (CTH 69)

2. 78 (336)

etymologica, in this OH copy of Kantuzili's Prayer (CTH 374):

Attestation 2nd singular "preterite-present" ḫa-an-na-at-ta (Kronasser 1966:562)

ḫanneššar zik-pat ^{D}UTU-*uš* ***ḫannatta***

'**You** alone, Sun God, **pass** judgement...' (KUB XXXI 135 Vs.10)[105]

Attestation 3rd singular present ḫa-an-na-a-i/ ḫa-an-na-i (Kronasser 1966:562)

... le kuiški ***ḫannai***...

'let no one **sue**...' (KBo III 3 II)[106]

ḫa-an-na-a-i

'**decides a lawsuit**' (Sturtevant 1933:134,135)

This verb is attested heavily with *-ri* forms, but these appear to be later (HED 3:82). The similarity in form, meaning and archaism between Homeric *medium tantum* ὄνομαι

105

Similar to Kantuzili's Prayer (CTH 374). Note that this form is present tense, marked with person marker *-t-*, but with final vowel *-a*.

106

Arbitration about Barqa; Treaty w. Duppi-Tešub of Amurru (CTH 63) Muršili II

'quarrel', 'contend' as in Odyssey 5:379 ὀνόσσεσθαι κακότητος 'quarrel with bad luck' should be noted. Mallory and Adams (1997:124ff) confirm PIE status for this word, despite its sparse attestation.

#24. *ḫandai-* 'entrust'; 'betroth'; 'join, put together'

13. Emotion middle (b) two-participant

This verb is not related to *ḫant-* 'front' nor its derivative *ḫanda* 'with a view to'; its base meaning, according to Puhvel (HED 3:106) is the very "middle" ' (en)trust', and thence, by semantic extension to 'betroth', thence again to 'arrange', etc. As such, its source is the present participle of the verb *ḫai* 'trust'. (*ḫantant-* 'true, loyal, righteous'> *ḫa-an-da-an-te-eš* 'married folks'). Also ^{D}*Inaras maltešnaš ḫandān* 'true to Inaras' ritual' (cited in HED 3:102) *ḫandān memian* 'true word' (KBo III 23 IV 12)[107]. See also Kronasser (1966:548) for this meaning. The denominative verb from the same participle ***ḫadandai*** has the meaning 'act loyally or providentially': *ŠA* ^{D}*IŠTAR parā ḫantandatar memaḫḫi* 'I speak of Ištar's providence' (KBo III 6 I 5)[108] . See also Friedrich (1960:135).

Attestation 3rd singular present ḫa-an-da-a-i (Kronasser 1966:476)

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107 Pimpira fragment (CTH 24)

108 Apology of Ḫattušili III (CTH 81)

#25. *ḫappinaḫḫ-* 'enrich'

This is a factivitive/causative verb from the adjective *ḫappina-* 'rich', *-nt-* derivative *ḫappinant* 'rich' (HED 3:124). The link with Latin *ops* 'wealth', Sanskrit *ápnas* n.'wealth' (via "extended" neuter suffix *-nas* (Burrow 1955:158), makes this look suspiciously like a heteroclitic *r/n* pair, with *ḫappir* 'business, trade, payment' (cf. *ḫappin-/ ḫappir-*). Puhvel (HED 3:125) repeats Oettinger's (1981:148-9) suggestion that a "Proto-Hittite" heteroclisis underlies both. This cannot be correct, however, for several reasons. In this particular pair, the *r/n* alternation comes not from a case alternation (nominative vs. oblique) within a neuter paradigm, but from the distinction between the *-r* of a neuter stem and the *-n* of an animate stem, to which an animate suffix is added. The obvious connective sense is that trade or business *ḫappir* (neuter) is the source of 'wealth' which makes one rich *ḫappin* (animate), 'rich' (*ḫappin-ant*) (animate). As well, the same development (without recourse to the heteroclitic explanation) is seen both in Sanskrit *ápas* 'work' > *ápnas* 'wealth', Latin *opus* 'work' *ops*, *opulentus* 'wealth', 'plenty' (< **open-ont-*). Mallory and Adams (1997:637) suggest a connection of the (animate) Hittite word meaning 'wealthy' with such Greek lexemes as the relatively rare Homeric word ἄφενος 'wealth'," ἀφνειός 'well-off, wealthy'[109] (< early Greek **apnehios* with transfer of the aspiration to the preceding **-p-* and

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See Anttila (2000:159) who suggests a PIE etymon **sm̥-g*^{w}*hn* 'with one' blow' (cf. ἄφνω

thence to **ápenos*). A root noun**h₂óps* is attested in Lat[in] Ops (deity of abundance)". Other cognates would include Avestan *afnahvant* 'wealthy', (also with an animate suffix!).

Various IE cognates suggest possibly borrowings from Anatolian . Although Mallory and Adams argue against the suggestion that ἄφενος 'wealth' is a borrowing from Anatolian (1997:637), the entire issue of borrowing in this, and in the arguably related *ḫappir-*, is far from settled. See, for instance, the discussion in Puhvel (HED 3:127) where Hittite *ḫappir-/ḫappar-* (n) 'business' may be connected with Greek and Latin words meaning 'shopkeeper' (i.e. κάπηλος, *caupō*) as "Mediterranean" loanword from Anatolian.

Attestation	1st singular present	ha-ap-pi-na-ah-ha-ah-hi	(KUB XLI 32 Rs.10)[110]
Attestation	3rd singular present	ha-ap-pi-na-ah-hi	(KUB XLVIII 99)[111]

Bomhard and Kerns (1994:535,536) list Proto-Nostratic root *ħap[ħ]- / ħəp[ħ]- 'to gather or collect' (with hands or arms)' which they suggest underlies all the IE cognates listed above.

'suddenly') or 'rich by beating together (i.e., by hunting and gathering)'

110 Fragments of Incantations (CTH 458)

111 Naming Pirwa (CTH 337)

#26. *ḫarra-* 'crush' 'destroy'

Attestation 3rd singular present ḫar-ra-i

ḫar-ra-i

'**pounds**' as in *mallai ḫarrai* 'grinds and pounds' (of grain)

Puhvel (HED 3:136) suggests several sources for this verb, including a borrowing from Akkadian *ḫarāru* 'grind'. Alternately, he posits cognates OCS *oriti* (> Russian *raz-orit'* 'destroy'), presumably all descended from an IE root of possible shape $*h_2er\text{-}H$ (see also Mallory and Adams (1997:158)).

If we were to posit a root beginning with a velar stop, however, we could connect all the above with Vedic *śṛ* 'crush' (cf Macdonell 1975:448) and extended causative *śṛṇāti* 'destroys'. Given the interaction between *ḫ and k/ḱ*, such a connection seems entirely plausible (*pace* Puhvel).

#27. *ḫaš-* 'give birth'

16 (c) i. Spontaneous events associated with animate beings

Gamkrelidze and Ivanov (1995:653) cite two ancient Indo-European words for 'clan' and 'clan leader', **ḱ'en-* 'give birth' and **Hons-/*Hṇs-* 'give birth, produce; kin; kinship grouping', distributed differently among the historical dialects[112]. These authors indicate that original meaning of 'give birth' is preserved only in the Anatolian languages[113]: in the verb *ḫaš-* 'give birth', related nouns *ḫāšša* 'offspring', *ḫaššatar* 'clan, kin', *ḫaššannaš-šaš* 'his clansman', participle *ḫaššant-* 'born' (Kronasser 1966:258), and possibly Luwian *ḫāšša* 'grandson' (although Melchert insists that these two roots should be kept separate[114]. See HED 3:69, 227 for Hittite *ḫāšša* and Luwian *ḫāšša* both from PA **hamša.*

Cognate with this verb are the Hittite words for 'king' (= 'leader of the kin group')

112

Puhvel (1992:266) claims that the first root (his **ĝenE-/ĝnē-*), denoting "the creation of living beings in a sexual and social and even legal sense, although "profuse" and well attested in almost all Indo-European languages, "has left no verbal trace in Hittite" (nor in Baltic and Slavic).

113

But this is not true if Tocharian B *ās-* 'produce' is cognate. It is not in Puhvel's view (HED 3:221).

114

Melchert (1994:163ff) explains derivative *ḫāšša* 'offspring' as from **h₂ónso-* and distinguishes the roots **h₂o/ens-* 'beget, give birth' and Hieroglyphic Luwian */has* (*/hass-/*) which come from **h₂ó/émso-* > Luwian *ḫamša* 'grandchild'.

ḫaššu-, *ḫaššu-šša*ra 'queen', Hieroglyphic Luwian *hasusara* 'queen'. This extended meaning of 'king, emperor' is present already by the Old Hittite period, together with the historical connection to the word for 'clan':

> The Old Hittite king (*ḫaššuš*) Hattusilis I (seventeenth century B.C.) considered all his subjects to be members of a single clan, descended from one mother: *ši-i-e-el* ÌR^{MEŠ}.*ŠU I.NA* 1 AMA *ḫa-aš-ša-an-te-eš* (HAB II 47) 'his (i.e. the king's) subjects are born from one mother' (Gamkrelidze and Ivanov1995:653).

A similar semantic extension of *kin* > *king* may be seen in NE (Mallory and Adams 1997:330). These authors acknowledge that the "most widely accepted hypothesis" links *ḫaš-* 'procreate, give birth; engender, bear', *ḫašša-* 'progeny', Hittite noun *ḫaššu-* 'king' and Tocharian B *ās-* 'produce' to nominal root **h$_a$énsus-* 'god, spirit; vital force'. It would thus be related to many IE words for gods and kings, such as Avestan *ahura* 'god, lord', Vedic *ásura* 'divine, mighty, lord', perhaps Venetic *ahsu-* 'idol' (?), Old Icelandic *áss* 'god', Old English *ōs* 'god' (Gamkrelidze and Ivanov 1995:653).

> The original meaning under this hypothesis would be preserved in Anatolian and Tocharian, while the semantic development [of Hittite *ḫaššu-* 'king'] would be similar to that seen in the relationship of NE *kin* and *king.* The

development of 'spirit, god' in the rest of Proto-Indo-European would reflect the creative powers inherent in the gods (Mallory and Adams 1997:330).

The semantic development would be 'procreator' > 'ruler' > 'god' with the last step parallelling Mycenean *wa-na-ka* 'king', Greek (*F*)ἄναξ, but classical Greek 'divine king':

> In Greek tradition, going back to the Mycenean period, the king had analogous functions (Myc. *wa-na-ka*; Gr *wánaks* 'king' is interpreted a 'sovereign, lord, king as head of state; god' [...] This word has a correspondent in Toch. A *nātäk* 'lord'[also Tocharian B *ñakte* 'god'][...] (Gamkredlidze and Ivanov 1995:655,6).

Watkins (1995:8) clearly agrees (see also HED 3:245-246):

> Most scholars today assume that these words for 'king, lord, god' are related to the Hittite verb *ḫāš- /ḫašš-* 'beget, engender, produce', from **h*$_2$*o/ans-*. Ferdinand Sommer as early as 1922 noted the parallelism of Hittite *ḫāš-/ḫašš-* 'engender' beside *ḫaššu-* 'king' (Germanic **kuningaz*) from another single IE root **ĝenh*$_1$ -also meaning 'engender'. The ruler was looked upon as the symbolic generator of his subjects; the notion is still with us in the metaphor 'father of his country' translating the even clearer Latin figure *pater*

patriae.

In *Reflexes of IE. laryngeals in four Finnish words,* Nilsson (1994) argues that this word is one of several that provide links with the Finno-Ugric family. He describes an identical semantic development (from the "non=sacral, concrete meaning 'man in general, a tribal community, people' to 'founding father; God')[115] for Finnish *kansa* 'people' (1995:57). *Kansa* is "conventionally" explained as a loan-word from the Germanic *χansō* (seen in, e.g., Gothic *hansa*, OE *hós* 'troop, company'); however, there are problems with this explanation, not the least of which is that the Germanic word lacks a good etymology.

Nilsson proposes that Finnish *kansa* be added to the list of cognates, including the several words for 'gods' cited above (OE *ōs* 'God', Sanskrit *aśura* 'powerful, lord' > later ' (evil) spirit' and Hittite *ḫaš-* 'give birth'. He gives as the source IE root *$*h_2ans$-* (< *h_2ens-*), being an *e*-grade variant of the IE. *$*h_2ns$-u*" (1994:57). While the Indo-Iranian cognates were characterised as *-u* stems, the Finnish word reflects "a collective neuter in *-ā*", with the right meaning 'people'.

What some scholars interpret as the verb 'beget, give birth' is often attested with *-za* as transitive (see, for instance, Puhvel HED 3:212). I believe Sihler (1995:538) to have the correct interpretation, however: he identifies constructions such as *-za ḫaši* with the reflexive

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The same connection may be seen in Gothic *manna*, OHG. *man, mannisco*, Gmc.-Latin *Mannus* 'name of the founding father of the Gmc. tribe according to Tacitus ~ Sanskrit *Manu(s)* 'Stammvater der Menschen', Vedic *mánuṣa-* 'Mensch' (Nilsson 1994:57ff).

particle to involve the verb *ḫaš- / ḫeš* 'open': thus *-za ḫaši* 'open oneself'[116].

It is clear that in the meaning 'give birth', this verb is attested without the particle:

Attestation 3rd singular present ḫa-a-ši

SAL-*za* ***ḫāši***

'... a woman **gives birth**' (KUB XXI 40)[117], 16 XXX 29 Vs. 1

It appears often in Birth Rituals : SAL-*za ḫāši* '[...] a woman gives birth'. It is used transitively as 'birth' a baby: Thus, a midwife says: *ḫāšhun* 'I have brought to birth'. Puhvel (HED 3:217) explains the "*a-* vocalism of Hittite ... [as] due to *o*-grade".

Gamkrelidze and Ivanov (1995:758) connect the "ancient meaning" 'son' of *-ḫšu-* with this root. Kronasser (1966:258, 513); Oettinger (1979:439); (HED 3: 212ff); Puhvel (1992:266-268).

Puhvel calls the association of the verb *ḫaš-/ḫeš-* 'open' with the verb *ḫaš-* 'beget, give birth', Tocharian *ās-* 'bring forth' (such as made by, among others, Kronasser)

116

Hoffner (1973b:525) comments on the meaning which the addition of the particle *-za* adds to the basic verb.

117

Fragments of letters in Hittite: naming Urḫi-Tešub and Bentešina (CTH 209.02).

"valueless" (HED 3:221)[118]. Nevertheless, the link is tempting: Sihler (1995:538) indicates that Latin *pariō* 'bring forth, bear' whose etymological meaning is 'open' is a "precise semantic parallel to Hit[tite] *ḫa-a-ši* usually 'opens', but with the refl[exive] particle "*-za*, 'gives birth, begets' (used of both sexes)." [119].

See Kimball (1999:96) for an explanation of possible phonological or accentual conditioning of these two (derivationally related?) verbs. Kronasser (1956:194,5) and (1966:513,517) lists these separately, as does Oettinger (1979:439.440).

This verb appears in the imperative in ritual formulae used in spells (several Old Hittite compositions grouped by Laroche in CTH 820, KBo 21.22, KUB 55.2 etc., all cited in Watkins 1995:138ff).

DUMU (É.GAL)] *tezzi ḫa-a-š* [an alternate version has *ḫe-e-š*]

'The chamberlain says, "Open!"'

Oettinger (1979:50) correctly identified this as the imperative of this verb, rather than the nominative singular of the noun *ḫa-a-š* 'ashes; soda ash; soap'. Watkins (1995:138) cites several of the rather comical false steps in interpretation: "Washing powder! Whence comest

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118

As is any association with Latin *ōs* 'mouth'.

119

See HED (4:151-153) for *kenu-* 'open up' cognate with Greek χαίνω 'yawn, gape'. χάος, the dark, gaping space beneath the earth, is the first constituent of creation in Hesiod, *Theogony*.

thou?"; "Soap! Whence comest thou?". Such errors are, he graciously concedes, "understandable", because soap is used in several Hittite rituals.

In a rather bizarre misstep, Sturtevant (1928b:159), assuming a correspondence between word initial *ḫ-* in Sanskrit and *bh* in other Indo-European languages, connects this verb (and its iterative counterpart *ḫašk-* 'open' with IE **bhosos* 'naked'. A more reasonable link is that proposed in Gamkrelidze and Ivanov (1995:708). They cite root **Has-* 'ritual hearth, altar' (seen in Hittite *ḫašša-* 'altar', *Latin āra-* 'altar', Oscan *aasaí* 'in the hearth' and "reflected with altered meaning in Sanskrit *āsa-* 'ashes'") as one of the many special legal and ritual words whose meaning is restricted to the Anatolian and Italic (and, in some cases, Celtic) dialect area (cf the Old Hittite formula *ḫa-aš-ši-i pa-aḫ-ḫu-ur* 'fire in the hearth' (BoTU 10 β 23-25) and Oscan *aasaí purasiaí* 'in the fiery hearth'). On the importance of 'fire' and 'hearth', Gamkrelidze and Ivanov (1995:605, 606) say:

> Maintaining a fire in the hearth and preparing hot food obviously played an essential role in the Indo-European household and assumed ritual significance, as is reflected in the exceptional cultic significance of the hearth and the ritual group of cooks and preparers of food in Indo-European traditions. In Hittite tradition there are special instructions for keeping the fire (sometimes a ritual fire) in the hearth [...] Analogous ritual groups [i.e., special 'fire people' (LÚ^{MEŠ} *paḫḫuenaš*), special 'cooks'^{LÚ}MUL*ḪALDIM)] having an even more complex ritual function are also attested in ancient Roman tradition [...] In Indic tradition a cult of fire and hearth is preserved for a long time [...]; there are also ritual castes for cooks, comparable in type to those of the Hittites.

#28. *ḫatk-* 'lock, conclude, cover'

According to Sturtevant (1930c:218) this verb is "probably" composed of a preverb *ḫa-* (< IE **h*$_2$*o*-'to', as in Melchert 1984:23) and the zero grade (*-tk*) of the same root that appears in Latin *teg-* 'cover' (see also Sihler 1995:532 for root). However, other cognates have an initial *s-*, as in Greek σ-τέγω 'cover, protect' or a voiceless aspirated stop *t*^{h} as in Sanskrit (*bhū gaṇa) s-th-ag-* 'cover, hide, conceal' (see references in Mayrhofer III:523).

Sturtevant (1933:239) comments that this is the only verb, of all the primary consonant stems of the *-ḫi* conjugation, which does not have an *a*[120] in the radical syllable throughout the present singular.

Attestation 3rd singular present ḫa-at-ki (Kronasser 1966:521)

Numerous 3rd singular usages are attested involving 'shutting' of various important openings, such as temples, city gates, etc.

É DINGIR-*LIM* ***ḫa-at-ki***

120
Whose correspondence with the *o* of the IE perfect singular is "obvious" (Sturtevant 1933:239)

'...**shuts** the temple' (VBoT LVIII IV 38)[121]

^{GIŠ}IG-*ann-a* ***ḫa-at-ki***

'and **he shuts** the door' (KUB IX 31 II 35-36)[122]

ta KÁ.GAL ***ḫa-at-ki***

'**he shuts** the city gates' (KUB XX 87 I 17)[123]

Puhvel gives a base meaning of this root as 'press, make tight', semantically close to Latin *premō* 'press, bear down on'[124]as in *premere oculōs* 'shut the eyes'. The extended meaning may be seen in what Puhvel refers to as an "excellent" Hittite : Greek isogloss:

> This sense, coupled with the consistent spelling *ḫa-ad-ga-* [...] argues cogently for a connection with Gr[eek] ἄχθομαι 'be loaded, be burdened, be depressed', ἄχθος 'load, burden, pressure' [...] The sequence *ḫatk-/* *ἄχθω : *ḫatku-*: ἄχθος is formally and semantically analogous with *ḫamank-* 'tie'/ ἄγχω, Lat. *angō* 'constrict' : Skt. *aṁhú-*, Goth. *aggwus*

121

Disappearance of Sun (CTH 323)

122

Ritual of Ašḫella against a plague in the army (CTH 394)

123

Festival Fragments (CTH 670)

124

Cf Latin *prēlum* 'oil press' < **pres-lo*) "although the root in question is obscure" (Sihler 1995:213).

'narrow': Skt. *áṁhas-*, Lat. *angus* 'tightness' (HED3:268).

Concerning the underlying meaning of *ḫatk-*, Sturtevant (1927a:120) comments on Sommer's [1922] proposal that the base meaning of 'press' underlies this verb:

> Sommer connected the two meanings [i.e., 'press' > 'shut'] by citing an Accadian [sic] parallel, and suggesting that the [...] language influenced the Hittite verb. To me such foreign influence upon the meaning of a native word seems rather improbable, and besides there is no reason for making the second meaning of *ḫatk-* somewhat more drastic (Sturtevant 1927a:120).

He goes on to argue for a primary meaning, not of 'press' but of 'strike, smite', and suggests German *zuschlagen* as an example of a development to the meaning 'close'. This meaning adheres clearly in other cognates for this "widespread and old" IE root, including Old Norse *agi* 'terror', *ōgn* 'fright', Old High German *akī~ egī* 'terror', and many others (see Mallory and Adams (1997:247) for an extensive list). Cognates may also include Old Irish *-ágor* 'I fear' [note the correspondence here between Hittite *-ḫi* verb (i.e. NOT a form in *-ri*) with Greek "middle" form and OI "deponent" form in *-r*].

Bomhard and Kerns (1994:587) reconstruct Proto-Nostratic **hak'-/*hək'-* 'to inflict pain', 'to wrong', 'to injure'. See also Oettinger (1979:441).

#29. *ḫatta-* 'stick', 'make a hole in', 'stab', 'slaughter'

[Ritual usage]

Melchert tentatively identifies the intervocalic voiceless geminate of this verb as of Proto Anatolian origin (from **Háto-* 'cut') (1994:150), but notes that the PIE etymon remains "elusive" (1994:147). Puhvel (HED 3:254) includes the suggestion that *ḫat* is an Anatolian loanword in Armenian[125].

Sturtevant (1938b:209) gives the meaning of the verbal noun derived from *ḫatta-* 'carve, make a hole', *ḫattatar*, as 'writing (on a clay tablet)' against Sommer and Falkensteins' 'Weisheit' (wisdom). In support of his argument, Sturtevant cites the phrase *ḫattatarnaš* LUGAL-*uš* 'king of *ḫ*.', an "epithet of Nabū, the god of writing, in VBoT 2.16". See Kronasser (1966:529) or Puhvel (HED 3: 248ff for full array of attestations). The third singular is attested as *-ḫi* verb in a ritual to the goddess Ištar, as in the next two citations:

Attestation 3rd singular present ḫa-at-da-i /ḫa-at-da-a-i (Kronasser 1966:529)

125

Assuming that Hittite *-tt-* points to IE **t* (or *t*^{h} Mallory and Adams 1997:27)= Armenian *t'*. The archaic character of Armenian is still a matter of dispute. Gamkrelize and Ivanov's reconstruction of PIE stops looks a great deal like the stops of Armenian, indicating its archaic nature. Like Hittite, Armenian also preserves certain word-initial laryngeals.

1 NINDA.SIG-*kan ištarna* ***ḫaddai*** *nu-šša*n *šer ḫulli dāi* (KBo II 9 IV 17)[126]

'he **makes a hole** in the center of a flatbread and puts a fir-cone (in it)'

n-ankan ^{LÚ}SANGA *ANA* ^{D}*Āpi kattanda* ***ḫaddāi***

'The priest **sticks** it [a sheep] downward into the pit' (KUB X 63 I 20)[127]

This verb is attested as a "preterite present":

Attestation 3rd singular "preterite present" ḫa-at-ta

kuiš aniyaezzi n-an-kan ***ḫatta***

'he who officiates, him **he pricks**' (KUB XLI 22-23(?))[128] (see HED 3:250)

Attestation 3rd plural "preterite present" ḫa-at-ta-an-ta

nu MĀŠ.GAL ***ḫattanta***

'**They stick** the he-goat' (HT 1 I 36, in HED 3:251)

126
Ritual for Ištar of Nineveh (CTH 716)

127
Winter Festival for Ištar of Nineveh (CTH 715)

128
Ritual Fragments (CTH 470)

#30. *ḫuittiyai-* 'draw', 'strings' (wool, in rituals)

[Ritual context]

This verb is attested heavily as a *-mi* verb. Nevertheless, the situation is far from simple. In clearly ritual contexts, the third person singular *-ḫi* form is attested:

Attestation 3rd singular present ḫu-it-ti-ya-i (Kronasser 1966:485)

nu-za SÍG *ašaran dāi n-an-šan* [...] ***ḫuittiyai***

'she takes white wool and **strings** it' (KUB XXVII 67 II 15-17)[129]

The verb is very common with preverbs such as *anda, appa*, and *parā*. The next two citations, both from the Ritual of Ambazzi for Tarpatašši (as is the previous example) occur with preverbs:

šarā ***ḫuittiyai***

'**she strings** it'

n-ašta SÍG *āndaran ser arḫa ...* ***ḫuittiyai***

129

Ritual of Ambazzi for Tarpatašši (CTH 391.1)

'...**strings** across blue wool' (Kronasser 1966:485; HED 3:345).

Not surprisingly, given the aspectual nature of the action of stringing wool, or drawing ritual items 'through' or 'up', this verb occurs in a "durative" form, with suffix -*anna*- (for this suffix, and other verbs which bear it, see Kronasser 1966:558). In this extended form, -*ḫi* forms are plentiful, and the meaning is often 'pull' or 'draw up'. Both of the following attestations are from the Ritual for Ištar of Nineveh:

Attestation 1st singular present ḫu-it-ti-ya-an-na-aḫ-ḫi (Kronasser 1966:558)

n-at-kan kāša paḫḫunaz ***ḫuittiyannaḫḫi***

'lo! **I pull** it from fire' (KBo II 9 IV 21)[130]

n-aš-kan kāša tagnaz SUD-***annaḫḫi***

'lo! **I pull** them from the earth' (KBo II 9 IV 14-15)

Attestation 2nd singular present

130

Ritual for Ištar of Nineveh (CTH 716)

Also attested is 2nd singular *ḫu-it-ti* 'Pull!' (KBo III 66)[131] or *ḫu-it-ti+wa* KUB XXIX 1 II 11[132], a ritual to ensure offspring.)

Attestation 3rd singular present ḫu-it-ti-ya-an-na-i

kuitman-ma-zan BEL ŠIŠKUR.ŠIŠKUR *IŠTU* ŠAG.DU-*ŠU*

tēt̄an laple[*pan*] *enerann-a* ***ḫu-it-ti-ya-an-na-i***

'while the sacrificer **pulls** from his head a hair,

an eyelash, and an eyebrow hair' (KUB XXXII 8 III 6-8)[133]

GI-*an* ***ḫuttiyannai*** *tarnai-ma-an*

...'**strings** an arrow and lets it fly' (KBo XVII 18 II 12)[134]

Consider as well the following 3rd plural **present** (= 'preterite present') forms, both from the Laws, where the suffixal element ***onto*** is clearly visible:

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131 Festival naming King Ḫantili (CTH 655)

132 Foundation Ritual (CTH 414)

133 Great Ritual fragments (CTH 762)

134 Hattian (CTH 744)

kinun-a 1 UDU LÚ-*naš kaššaš-šaš* ***ḫuittianta***

'now **they adduce** one sheep instead of the man...' (KUB XXIX 30 III 6)[135]

auliuš ḫuittianta

'**they adduce** sacrificial contingents' (HED 3:346-7)

Puhvel points out some of the morpho-phonemic anomalies of this verb: "*ḫuittiya-* is notable for non-affrication before *-iya-* (glaringly unlike e.g. *ḫat[t]-* , *ḫazziya-*). It resembles that of the 2 sg. pres. act [sic] ending *-tti* < $*tA_1e+i$ (cf. Skt. *-tha*) and points to $*H_1wedA_1$– if base-meaning is 'draw' rather than 'lead; marry'" (HED 3:351).

Across the IE family, this "very old" verb often refers to marriage, especially from the male point of view (Mallory and Adams 1997:346). Examples include Old English *weotuma* 'brideprice', Welsh *arweddu* 'lead, bring', Lithuanian *vedù* 'lead, marry (said of a man)', Latvian *vedu* 'lead, marry (said of a man)', Avestan *vaδū* 'young woman, bride', Vedic *vadhū* 'bride'. See Puhvel (2002:280, 281) for more on the etymology of various items of wedding terminology.

Bomhard and Kerns (1994:601) list this root as Proto-Nostratic **wad-*/**wəd-* 'to take, lead, carry, bring'. Related items include (Proto-Afroasiatic) Proto-Semitic **wad-ay-* 'to take (away)' as in Arabic *wadday* 'send off/out/away' > noun *ta-wdiya-t* 'sending (off)', Proto-

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135
Laws 101 to 200 (CTH 292)

Finno-Ugrian **wetā* 'to take, lead guide, carry' as in Finnish *vetä* 'to pull, hawl, draw, lead'.

The imperative is the "bare" *ḫu-it-ti-ya* 'Pull!'as in this excerpt from a ritual to prevent a premature death:

arḫa ḫu-it-ti-ya

'pull away!' (in Kronasser 1966:485)

#31. *ḫulla-* 'smite'

3. Reciprocal domain (c) Naturally reciprocal domains

This verb is common in third singular "impersonal" type legal-language usages, as exemplified below. *ḫulla-* also appears in a context which is typologically significant. I mentioned in Volume I, Chapter 7 that one of the steps in the development of new voice strategies, including a "full" passive, was the use of prepositional phrases (in *IŠTU*) with first an inanimate, then later, animate agents. The following is an example of the latter:

mān ERÍN.MEŠ *IŠTU* ^{LÚ}**KÚR** *ḫullantari*

'if troops are defeated by **the enemy**' (KUB XVII 28 IV 45)

Attestation 3rd singular present ḫu-ul-la-(a-)i (Kronasser 1966:510)

kuis-ma-an ***ḫullai***

'but whoever **quashes** it' (KBo VI 28 Rs.29[136] in HED 3:364)

kuis-ma AMAT Taba[rna...] ***ḫullāi***

136

Decree regarding the *ḫekur* of Pirwa (CTH 88)

2. 102 (360)

'but who[ever] **quashes** the king's ordinance' (KUB XXVI 50 Rs 8-9)[137]

Puhvel (1995:178) considers this verb to be similar in morphology to the Sanskrit ninth class of verbs: verbs which add a nasal infix to a stem with a laryngeal suffix (already in Kuryłowicz 1927,1928; Kronasser 1966:556)[138]. Thus, *ḫulla* 'smite' would derive from **ḫulnā*, which in turn derives from, in Puhvel's vast system of laryngeals, "< **Hwl̥-n-éA*^{W}-, beside *HwlléA*^{W}- in Greek (ϝ)άλω- 'be defeated'". That such types of verbs exist in Hittite is evidence that "all these laryngeal varieties of the type **pu-n-éH-ti* can be shown to have survived outside of Indo-Iranian" (*ibid*). Calling this verb "the very best example for the **-ln-* to **-ll-* assimilation" Melchert (1994:82) describes similar morphology (**$h_{2/3}$ wl̥-ne-h_1*) (*ibid*:56), and argues (from assimilation patterns in rare and archaic words such as Hittite *ḫulana* 'wool' (1994:56, 66)–cf Greek λῆνος 'wool') that the assimilation of **-ln-* to **-nn-* must have been very early (PA), even preceding other archaic assimilatory processes.

Puhvel had earlier indicated (HED 3:368) that *ḫulla*'s closest cognate is perhaps Greek ἀναλίσκω 'waste, spend' (whence ἁλίσκομαι 'be defeated'). Mallory and Adams, however, (1997:158) connect this verb rather with Latin *ab-oleō* 'destroy' and Greek ὄλλῡμι 'destroy', both from **h_3elh_1-* 'destroy' (see HED 3:13-14 for derivative *ḫall-ann-iya-*) . The

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137

Landgrant of Tudḫaliya IV to Sahurunuwa (CTH 225)

138

Other *-ḫi* verbs in this category include: *iškuna-* 'stain', *šunna-* 'fill', *šanna-* keep secret', *tarna-* 'let go', *duwarna-* 'break', *zenna-* 'finish' and perhaps several others, predominately *-ḫi* verbs (see Kronasser 1966:558 ff).

form is attested in very few languages. Nevertheless, it is clearly very old: see Sihler (1995:486) for a discussion of the initial laryngeal element and its relation to "disguised" elements in archaic morphology in Greek, and in such possibly related Hittite verbs as *walḫ-* 'fight'. Melchert (1994:169) however provides evidence that *walḫ-* 'strike' and *ḫulla-* 'fight' should be kept separate.

#32. *ḫuwai-* 'run', 'march (before)', 'flee'

11. Translational motion [Common in ritual, military and religious context]

This verb (which appears as *hwiya-* in Hieroglyphic Luwian writings as *hu-i* or *hu-wa/ kwi/a*) (Hawkins 1995:75)) is important in ritual formulae "X (usually a god) ran before me [...] and I conquered". In Luwian hieroglyphics from the time of Tudhaliya IV, this "stock clause" is usually followed by "a statement of conquest".[139] Sturtevant insists that when the common phrase *piran ḫuwai* occurs, the meaning is never 'run' or 'flee before', but always 'march before' (Sturtevant 1927a:110, but see below). He goes on to say that "It is used, for example, of a marshal conducting high officials to their positions during a religious ceremony". Usually, the phrase has "a god or several gods as subject, and the context makes it perfectly clear that in marching before the army of the Hittite king the gods insure his victory. This interpretation gains support from many Assyrian passages which represent the gods as marching before or beside their royal worshippers".

ḫuwai- appears often in phrases with a preverb, often with idiomatic and/or metaphorical meaning. Thus *piran ḫuwai* 'run in front' has the metaphorical meaning 'help out', *appa ḫuwai* literally 'runs back' , may have the meaning 'desert (as from the army)', its antonym being *appan ḫuwai* 'run behind', meaning 'back up' or 'support' (Puhvel HED

139

On such evidence, Hawkins deduces that *-mi [...] muwa-* is the 1st person singular equivalent of the common (late) Hittite phrase *-za [...] tarh-* 'and I conquered'. In Hieroglyphic Luwian, the 3rd singular enclitic reflexive is *-ti* not *-za* (but see Kimball 1999:191).

V:2).

Sturtevant (1933:213,214) considers *ḫuwai-* to be composed of two preverbs: *ḫa-* (< IH *ḫo-* which appears in fellow *-ḫi* verb *ḫanna-* 'litigate'), and *u/we-* 'hither' (< IH *au-*, *we-*, *wo-*) (which appears in *-ḫi* verbs *unna-* 'drive hither', *uppa-* 'send hither', *udai-* 'bring hither', and *waki-* 'bites', and is seen in Latin (*au-fero* 'carry away' or *vēscor* 'eat of'; cf. also Sanskrit *áva* 'down from', all of which go back to PIE $*h_2eu$- 'down from' (Beekes 1995:220)). In Sturtevant's scenario, the root is the motion verb *ei-* 'go'.

Kronasser (1966:541) suggests a root source **u̯ei-* seen in "ai. veti, vyanti „verfolgen", ved. āveti „kommt herbei"". If this is so[140], then cognates would include Greek ἴεμαι- 'go, move oneself forward' (Frisk 1973:711) (with the metaphorically extended 'strive', 'desire' (such as seen in Latin *vīs* (<*u̯ei-*s) 'thou wantest'. See Sihler (1995:539ff) for a lengthy discussion of this "much debated form" and its connection to this and various other roots; also Mallory and Adams (1997:208)). This would entail an IE "perfect stem" ($*A_1wóye$) according to Puhvel (*ibid*). Note that both the Greek, and the Sanskrit cognates (as in the Vedic example below) are "middle".

The Vedic cognate *véti* 'sets out for' is seen in its intensive form in RV 10.33.2 d:

vér ná ***vevīyate*** *matíḥ*

'my mind **is fluttering** like a bird's'.

140

Puhvel (HED3:423) calls this the "most plausible" of several "wayward and preposterous" etymologies)

The original meaning of the Hittite verb is clearly *ātmanepada*: 'escape' = 'run for your own benefit', as in *n-aš-mu-kan huwaiš* 'he escaped me' (Puhvel HED 3:420, AM 50.30-1). Such meaning ('escape from' = 'flee') suggests Greek φεύγω and Latin *fugio* both 'flee'. This etymology is attractive from a phonological standpoint: it would link PIE **bh* with descendants Greek φ [p^h], Latin *f* [ph], and Hittite *ḫ* (minus the labial stop). This state of affairs (a CC sequence phoneme in IE, giving an aspirated voiceless variety in Greek [maintaining place, but changing voicing, "downgrading" consonantal second phoneme aspiration (i.e. secondary articulation)], a fricative in Latin, and the maintenance of the consonantal laryngeal in Hittite] is the same type of system as is suggested in Sihler (1995:153).

As is common with Sanskrit verbs of motion, *ḫuwai-* appears followed by the "accusative of motion". Indeed, it is the only verb which does this:

> the accusative of motion regularly occurs only with the verb *ḫuwai-*, 'to run', mostly in the expression *ḫaššan=kan ḫuwai* ' (s)he runs toward the hearth' found in rituals. Since *ḫuwai-* is often classified as a stative verb in Old Hittite [...] the interpretation of the accusative as a Directive expression is doubtful (Luraghi 1997:10).

This verb is clearly not stative: the participle shows *ātmanepada* semantics: *huianza* ' (to be) running' (Luraghi 1997:29).

Attestation 1st singular present ḫu-i-iḫ-ḫi

(KBo XI 19 Vs. 14)[141]; (Kronasser 1966:501, 541); HED 3:419.

Attestation 3rd singular present ḫu-wa-i ' (s)he runs'

This 3rd singular usage is very common in descriptions of rituals (as in (a)), very often, as above, with the (preverb) *piran* (as in (b)):

(a) *na-aš-ši* EGIR-*an namma* UZU *iškišaz* ***ḫ ūwāi***

'she then **runs** behind his back' (KUB XIV 13 III 13)[142]

(b) *nu-mu* DU *BELI-YA piran* ***ḫ ūwaiš***

'the storm-god my lord **led** the way for me' (= 'helped me to victory')

(KUB XIX 39 II 11)[143]

The verb is also used in the sense of 'grow' as in (c):

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141 Hurrian: Ritual of Šalašu (CTH 788)

142 Fourth Plague Prayer (CTH 378.04)

143 Extensive Annals of Muršili II: year 12 (CTH 61 II.06)

(c) *wel[luw]aš anda welkuwa le* ***ḫuwāi***

'in the meadows the grass does not **grow**'

(Kronasser 1966:502; HED 3:419)

The verb appears occasionally with gloss wedges, although as Puhvel (HED 2:422) notes "There is nothing visibly Luwian about the gloss-marked *ḫuwāiš* ['he escaped' KBo III 4 II 31[144], rather the reverse, since *-ḫi* conjugation forms are problematic in Luwian". The *-mi* form *ḫuuiyami* (marked with gloss-wedges Kronasser 1966:501) could be either Luwian or Hittite. On this verb, see also Sturtevant (1930b:151).

144

This is a relatively late text: Ten Year Annals of Muršili II (CTH 61)

#33. *ḫuwapp-* 'treat badly', 'harrow'

13. Emotion middle

This verb appears to be a derivative of postulated noun **Hwápo-* 'evil', a near synonym to *idalu* (HED 3:431). Melchert (1994:147) dates the addition of the second *-p-* [Hwáp·po-] which acts to close the syllable explaining the vowel quality: **Hwápo-* > *ḫ(u)wappa-*" as being "at least by pre-Hittite". Given the meaning of this root ('treat badly' = 'cause evil to'), I suggest that the suffixal *-p* is the archaic root extension "causative" *-p*, also seen in root *ištap(p)-* 'close' (which see).[145]

The root shows ablaut (*ḫuwap- / ḫup-*) (Kronasser (1966:513, 516, 582[146]), and is attested in all three persons, often in conjunction with the prepositional phrase *šākuwa katta* which Puhvel (HED 3:430) translates as "downright" but seems to allow a more literal 'eyes lowered = half closed?', perhaps as some aspect of the ritual.

Attestation 1st singular present ḫu-wa-ap-pa-aḫ-ḫi (Kronasser 1966:446,513)

ḫuwappaḫḫi

145

See Burrow (1955:357) for this element in Sanskrit, and Kronasser (1966:407) for further speculations for this archaic formative in Hittite, Sanskrit and Latin.

146

Although Kimball (1999:185ff) says that ablaut here may be an "illusion": she suggests that three verbs are conflated -- *ḫuwapp-* 'treat badly', *ḫwapp-* 'throw' and *ḫuppāi* 'entangle' (?).

'**I treat badly**' (Madduwattaš 143, cited in Kronasser (1966:446))

^{D}IM-*aš-wa* URU *Liḫzinan* [...] [IGI.HI.A *-wa*] *katta* ***ḫuwappaḫḫi***

'**I,** the storm-god, shall **harrow** L. into abjection'

(KUB VII 57 I 6-7[147], in HED 3:430)

Attestation 2nd singular present ḫu-wa-ap-ti (Kronasser 1966:513)

zik-ma-an-kan innarā laknuši nu-šši-kan ***ḫuwapti*** *kuitki*

'**You** of your own accord trip him and **spoil** something for him'

(KUB XXVI 1 III 42-43[148], in HED 3:430)

Attestation 3rd singular present ḫu-wa-ap-pí / ḫu-wa-ap-pa-i (HED 3:430)

The 3rd singular appears often in the context of 'spoiling' or 'disfiguring' some ritual item, be it a piece of bread, or a figurine. In such cases, the translation seems to depend on the item to which the 'evil' is being done. Thus, combining the meaning of the verb (in the sense of 'dis-forming' the bread), and the aspectual preverb *šan,* I have translated the citation

147
Ritual of Zuwi (CTH 412.02)

148
Instructions of Tudḫaliya IV to Princes & Lords (CTH 255)

below as 'crumbles'. Were the item a clay figurine, perhaps 'shatters' would be the apt translation. The meaning and ritual significance of the phrase *šākuwa katta*, which I am translating as 'eyes averted', is unclear to me. If, as I suspect, destroying the material integrity of the ritual item is perceived as somehow 'bad' (*ḫuwappa-*), then the aversion of the eyes would be an appropriate ritual accompaniment to such an action. See HED 3:432 for an alternate interpretation which repeats Melchert's syntactic misinterpretation (?) of the post-posed ***katta*** **as a preverb (similar in structure to Vedic *ní-vapati* 'shatter'). The clear** syntactic arrangement (NP P) as seen in the following citation argues against such an interpretation:

n-an-šan *ištanāni* *piran* [...] *šākuwa katta* ***ḫuwāppi***

and-it-ASP altar+DAT before eye+pl down disfigure+3sg.-*ḫi*

'eyes averted, **he crumbles it** [= a bit of bread] **up** [lit. disfigures it = does evil to its material integrity] before the altar' (KBo XVII 88 II 8-9)[149]

The verb is attested with the *-š* preterite: *ḫu-wa-ap-pí-iš*

[KU]R-*e ḫūwappiš*

149

Monthly Festivals (CTH 591)

'harrowed the land' (KUB XLIII 75 Vs.19)[150]

Cognates are spotty and unclear. Mallory and Adams (1997:43) suggest Old Irish *fel* 'bad', Old English *yfel* 'bad, evil' OHG *ubil* 'bad, evil' Gothic *ubils* 'bad, evil' are related, adding that the root is attested "only on the western and southern margins of the IE world". Puhvel (HED 3:432) dismisses Szemerényi's suggestion that Greek ὕβρις 'insolence/ wanton violence' was a borrowing from Anatolian sources (**ḫu(wa)ppar* 'maltreatment'); the Greek word seems to contain a prefixal element ὐ- (Frisk 1973:954), whereas the Hittite does not. See Puhvel (*ibid*) for further speculations on possible cognates.

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150 Anecdotes (Palace Chronicle) of the Reign of Ḫattušili I (CTH 8)

#34. *ḫu(wa)rt-* 'curse'

13. Emotion middle (d) speech action

The notion of cursing, the calling down of evil on individuals or groups, is often intertwined with notions of 'praying' (cf. Greek ἀράομαι 'pray, vow, call down curses', Luwian *hīrūt* 'curse' (< Proto-Anatolian **h₂ērut-* 'curse' (Mallory and Adams 1997:450)). This Hittite verb meaning 'curse' is attested at the oldest layer, in the Anitta Text, in 1st singular preterite, as in the formulaic double *-ḫi* verb construction:

nu ma-a-al-taḫ-ḫu-un nu [(***ḫu-u-wa-ar*)*-taḫ-ḫu-un***

'I vowed and **I cursed**'](KUB XXVI 71 I 7[151]; Neu 1974:14)

As often with *-ḫi* verbs, this verb appears in a figura etymologica:

ḫurtan ḫarkanzi

'**They have cursed** a curse' (KUB XXX 45 III 17)[152]

Attestation 1st singular present ḫu-u-wa-ar-taḫ-ḫi (Kronasser 1966:411,529)

151
Proclamation of Anitta (CTH 1)

152
Catalog: N TUPPU (CTH 277)

(KUB XXXIII 117 IV 8[153], in Neu 1974:44; Oettinger 1979:441ff, HED 3:433)

Attestation 3rd singular present ḫur-da-a-i (HED 3:433)

walaḫzi ***ḫurdāi*** *le kuinki*

'**he** shall not strike [nor] **curse** anyone' (KUB IX 15 II 15)[154]

The verb is attested with *-š* preterite, in both stem variants[155]:

ḫur-ta-aš

'he cursed' (Kronasser 1966:529)

ḫu-wa-ar-ta-aš-ma-an ŪL

'but she did not curse her'

(KUB XXII 70 Vs.86[156] in HED 3:433, Kronasser 1966:529)

153

Fragments naming Kumarbi (CTH 346)

154

Purification Ritual (CTH 456)

155

See Kimball (1999:184ff) and references therein for discussion of the possible chronological ordering of these variants.

156

Oracles on cult of Arušna (CTH 566)

This root shows ablaut (thus Eichner and Melchert, apud Kimball 1997:184). With reference to cognates, Sturtevant (1931a:118) connected this root with Latin *verbum* 'word', Lithuanian *vardas* 'name', Gothic *waúrd* 'word', Greek *Ϝέριω > εἴρω 'speak'. Puhvel (HED 3:436) prefers connection with the more specific legal and formal semantics contained in such cognates as Sanskrit *vratá* 'vow', OCS *rota* 'oath', Old Prussian *wertemmai* 'we swear'.

For further discussion, see Sturtevant (1931a:118); Kronasser (1966:529); Neu (1974:14, 86ff); Oettinger (1979:441ff); Puhvel (HED 3:433); Kimball (1999:184ff).

#35. *iyan(n)a*-'go, be on one's way'

11. Translational motion: motion with reference to a path

Kronasser (1956:198, 1966:558) includes this root under roots with -(*an-*)*na-* suffix, which, in this case, has durative (not causative) meaning (derived from *iya-* 'go'). This verb is attested in the OH 1st singular form in -*ḫe*, from the Ritual for the Royal Couple:

Attestation 1st singular present i-ya-an-na-aḫ-ḫé

(Kronasser 1966:370,558; Oettinger 1979:78; Neu 1983:75)

... *nu* ^{URU}*Ḫa-at-tu-ša* ***i-i̯a-an-na-aḫ-ḫ***[*e*] ...

'...**I'm on my way** to Hattusa...' (KBo XVII 4 II 8)[157]

Attestation 3rd singular present i-ya-an-na-i

URU-*ya* ***ya-an-na-i***

'**he travels** to the town' (KBo XX 48 Rs. 9)[158]

(Kronasser 1966:406,558; Oettinger1979:78; HED 2:326)

157
Ritual for the Royal Couple (CTH 416)

158
Ḫuwaššana Festival Fragments (CTH 694)

n-aš ***iyannai*** ...

'He goes' (KUB IX 17, 19)[159]

Boley (1993:23) notes that this verb "rarely has the particle" *-za*. This is significant, since the meaning (without the particle) is clearly "middle". (Compare Latin *proficiscor* 'set out','originate', 'arise'.) See also Otten and Souček 1969:24; Oettinger 1979:494ff; Neu 1983:75,76; Puhvel HED 2:326.

The preterite in *-š* attested *i-ya-an-ni-eš* / *i-ya-an-iš* '(s)he went' (Kronasser 1966:558). The participle is *iyanniyant* 'going' (Kronasser 1966:579).

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159 Lamma Festival Fragments (CTH 685).

#36. *in(n)araḫ(ḫ)*-'strengthen'

[Factitive (denotes purposeful action)]

Root ***innar***- is found in derivatives such as *innarā* 'willfully, on one's own', 'strong, violent' (Melchert 1994:135) etc., *in(n)arawant*- 'strong, forceful' ('sexually potent' in the Ritual of Anniwiyani), *innarawatar* 'strength'. Inar is the name of a king of the city of Neša/Kaneš in early Anatolian history (see Bryce 1998:35,36), and, of course, of the goddess Innara (discussed below). Luwoid cognates include *annaru*- (adjective), *annari*- (noun) CLuv. *annara/i*- 'forceful' < ***en-(h$_2$)nor-ó*- 'having manly strength within' (Melchert 1994:50,139; HED 3:457). This root has been connected (by Hrozný) with Greek ἀνήρ 'man', ἠνορέη 'manliness'. Puhvel (HED 2:372ff) adds also Vedic *nar*-, Armenian *ayr*, Oscan *ner*- as one of a dialectal IE pair of words for 'man', the other being ***wir*-**.

The two roots for 'man' co-exist in Vedic: the latter contains a sexual connotation (as in *vīrá-kártṛ* 'penis'= 'manly-deed-doer'), whereas the former is (secondarily from original 'strength') connected with 'maleness' in general. The original lexical meaning *of nṛ*- 'force, strength' is seen in Vedic derivatives such as *nṛ́tama*- 'keenest, most forceful' as, for instance:

nṛvát ta indra **nṛ́tamā**bhir ūtī́ vaṃsīmáhi · vāmáṃ śrómatebhiḥ

'with **most potent** aid from thee, like heroes, Indra, may we win

wealth by deeds of glory' [RV 6.19.10a,b]

2. 119 (377)

Is the name Indra, the name of the most efficacious and thus most invoked of the Vedic deities, from the same source as is this Hittite *-ḫi* verb? If so[160], the connection is very, very old: Sanskrit grammarians connected the name of their most efficacious deity, Indra, to a root *ind-* meaning 'be energetic/strong' (from a simpler root (?), cf. 3rd person plural perfect *invire* 'to be lord and master of' < *in/inv-*'to infuse strength'[161] or *iná* 'strong', 'energetic' < *i-* or *in/inv-*). For the *-d-*, compare Greek root alternation ἀνήρ / ἀνδρός 'man' (< * ἀνρός, as in Buck (1933:188)). See also LSJ I:138 or Mayrhofer I:88,89 for links between the Greek, Sanskrit and Hittite cognates.

The name was already well established in Indic when the Hittites (re-)encountered their Aryan linguistic relatives in the Mitanni country. It is in a (late) treaty between the Hittite king Šuppiluliuma and Mitanni king Sattiwaza[162] (Matiwāza in Burrow) (c. 1350 BCE) that we read the names of the divinities sworn by to formalize the treaty: Indara, Mitraš (il), Našattia(nna), Uruvanašš(il). Stripped of their "non-Aryan terminations" these are clearly the names of the Vedic gods Indra, Mitra, Nāsatya, Varuṇa. Burrow (1955:28) comments that: "It is clear that not only Aryan language, but also Aryan religion in a form closely resembling that known from the Rgveda, was current in this region of the Near East

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160

See, for instance, Winn (1995:119) for this possibility.

161

See Burrow (1955:288ff) for archaic causative meaning of extension *-nv-*.

162

Treaty of Šuppiluliuma I with Sattiwaza of Mitanni: I. Akkadian version (CTH 51)
Treaty of Šuppiluliuma I with Sattiwaza of Mitanni: II. Hittite version
Treaty of Sattiwaza with Šuppiluliuma I: I. Akkadian version (CTH 52)
Treaty of Sattiwaza with Šuppiluliuma I: II. Hittite version

during this period".

Hittite also provides us with evidence of an earlier, less restrictive meaning of the underlying etymon. Working from postulated PA **enar-* 'strength', Puhvel (HED 2:373) says that these words for 'man' are "accentually polarized animate nominative counterparts" of words meaning 'strength'. This 'strength', though, clearly did not exclusively reside in the male gender: the goddess I(n)nara, daughter of the Storm God, figures largely in the Hurrian/Hittite pantheon as she who saves the day when she lures the serpent Illuyanka out of his hole and renders him harmless.

Based on the combined evidence of Greek, Sanskrit and Hittite, the original shared association must predate IE: thus, an archaic morphological alteration of stems with and without the *-d-*, which is seen in different contexts and word classes: in Greek nominal declension (direct vs. oblique cases of *aner-/andr-* 'man') and in Vedic (adjectival *nṛ-* 'strong' vs. proper name *In-d-r* 'strong one (?)', with Hittite showing the early (*d*-less) form *innar-* 'strong' with original less-gender-specific meaning [+human strength] vs later [+male human strength].

Attestation 3rd singular present i-na-ra-aḫ-ḫi

labarnaš LUGAL-*uš inarauanza nu-šše-pa utniyanza ḫūmanza anda* ***i-na-ra-aḫ-ḫi***

'the king [is] strong, and him the whole land **makes** additionally **strong**'

(KUB XXXVI 110[163] Rs.11-12; Kronasser 1966:427; Neu 1983:76; Puhvel HED 2:367). See also Oettinger (1979:240ff).

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Labarna benediction (CTH 820)

#37. *išḫai*-'tie, fasten', 'marry', 'obligate with' (i.e. 'bind')

3. Reciprocal domain
[also Treaty and Covenant vocabulary]

Derivatives from this verb (*išḫai* > *išḫanai* > *išḫani(ya)t(t) ar-*, etc.) involve important human relationships, including marital relationships: *išḫanittarātar-* 'binding, bond, marital alliance', *išḫanattalla-* 'the one who marries off a daughter' (literally: 'binder') (Puhvel HED 2:395,6), or treaties and/or formal promises: *išḫiul* 'binding, obligation, treaty, etc.' (McCarthy 1978:75). Weinfeld (1973:190ff) notes that the notion of 'binding' (='tying' together) is common in treaty terminology throughout the ancient Near East: "The classical term for treaty as has been crystallized in the middle of the second millennium B. C. E. in Mesopotamia and Anatolia is: *riksu/rikistu/rikiltu u māmītu* or in the plural *riksāte u māmīte*" [< Akkadian *rakāsu* 'to bind'] a hendiadys where the *riksu* expresses the bond and *māmītu* refers to the oath which accompanies the obligation (Weinfeld 1973:190). The Hebrew equivalent appears in Deuteronomy 29:11,13 *bryt w'lh.*[164] See also McCarthy (1978:75ff).

In addition to being central to Treaty and Covenant vocabulary, the notion of 'binding' or 'attachments' is at the heart of IE myth, metaphor and ritual (For Vedic, see e.g. Puhvel, *Comparative Mythology* 48-49). Watkins (1995:454) considers the phrase 'binding

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Greek *pistis* 'pledge of good faith' is in the same semantic field, and regularly in phrases with middle voice verbs (see LSJ II:1408 for numerous examples).

[...] with a cord' a central "motifeme" in IE culture, seen both in Greek myth (as in the vanquishing of Typhoeus, a myth "generally assumed [to have been] diffused to the Greeks from Anatolia"[165]) and its "cross-linguistic verbal echo" in the Hittite Illuyanka Tales, (cited in Watkins 1995:455, with his glossing conventions), one of the oldest of the Anatolian myths[166]:

^{m}Ḫūpašiyašš=a uit nu ^{MUŠ}illuyankan **išḫimanta**[167]

'and Hupasiyas came and **bound** the serpent **with a cord**.'

On the linguistic rationale for the 'transfer' from Anatolian to Greek, Watkins (1995:456) comments that:

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Myth is often understood as an attempt to explain (and thus, perhaps, to exert a measure of control over) natural phenomena. The lashing (ἱμάσσω 'bind' < ἱμάς 'thong') of Typhoeus is often thought to refer to attempts to control an earthquake.

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See also *The East Face of Helicon*, West's extensive 1997 study of the influences of the Ancient Near East, especially Anatolia, on Greek intellectual, social, religious and ritual life.

167

The wealth of linguistic archaisms in these texts points to an Old Hittite origin; however, surviving copies date from the New Kingdom. Concerning the tales themselves, Hoffner (1990:10ff) explains:"These simple tales, taken over from the Hattian people, attribute a poor spring to the defeat and incapacitation of their chief deity, the Storm God, by an evil and powerful reptile [Illuyanka] [...] In both versions of the myth, the Storm God needs the help of a mortal [that would be Ḫūpašiya] and a trick [the luring of the serpent into the restraint] in order to regain supremacy over the serpent. These stories were probably told or sung during the course of the Purulli Festival".

> Hittite išḫimāš, išḫimān- 'rope, cord' and Greek ἱμάς, ἱμάντ- 'thong' are in fact cognates, but more importantly they are sufficiently similar in sound and meaning to be compared by speakers in a language-contact situation. In this way we can account for the seemingly surprising transfer of the narrative associative form of išḫimāš to the narrative associative semantics of ἱμάσσω. It is a phonetic echo...

This verb also has a link to Latin *saeculum* 'the longest span of human life'[168]. Again, from Watkins (1995:351):

> Etymologically, *saeculum* agrees exactly with Welsh *hoedl* 'lifespan', and that may be taken as the meaning of their common IE ancestor **sah₂i-tlo-m* (< **seh₂i-tlo-m*). Though this **-tlo-* derivative is confined to Italic and Celtic, the complete absence of the verbal root in either proves the formation must be considerably older. The root is the verb 'to bind', Hittite *išḫai* [...] and its derivative *išḫiul* 'contract'. Compare the Indo-Iranian perfect Vedic *siṣāya* = Gathic Avestan *hišāiiā*, and the figura etymologica in RV 8.67.8 *mā́ naḥ sétuḥ siṣed ayám* 'may this fetter not bind us' [...] The ancient metaphor which underlies IE **sah₂i-tlo-m* (**-tlo-* nomen instrumenti) the 'lifespans', the generations are 'links' in a chain of life."

All cognates assume the initial *i-* to be prothetic, thus the root is clearly **seh₂(i)-*'bind'. Luwian *ḫišḫiia* 'tie together'. Vedic cognates include *ásāt, sāt* 'he bound', *sināti* 'binds', *sayatvám* 'binding', *sétar* 'binder' (and a few words with *ava* prefix, *avasātár* 'he who frees'

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168 See Sihler (1995:210) for an explanation of the development of medial **-tl-* to Italic **-kl-, -cl-* which, with the addition of the anaptytic vowel, accounts for the form *sae-c[u]l-um.*

referring to unfettering, unbinding, releasing), Old Norse *seiðr* 'line, rope; magic', Greek words referring to binding cited above. Attempts to link Vedic *sūtra* 'thread' to this root and its derivatives are abortive, both morphologically and phonologically, according to Puhvel HED 2:403). For a fuller list of cognates, see Mayrhofer (III:549ff) or Oettinger (1979:461,466).

Attestation 1st singular present iš-šḫ-iḫ-ḫi

Both Oettinger (1979:466) and Puhvel (HED 2:398) include this form (from KBo XVIII 74[169],2) as an attestation, but Kronasser (1966:538) stars it. The preterite *iš-šḫ-iḫ-ḫu-un* 'I bound' is attested.

Attestation 3rd singular present iš-ḫa-a-i

Third singular is attested in several contexts: in the Laws, Ritual, with preverbs:

še-ep-an ***iš-ḫa-a-i***

'He **binds up** sheaves' (KUB XIII 15 Rs.4[170] [=Laws 2:58, in HED 2:398)

169

Letter to the King or Queen (CTH 188)

170

Laws 101 to 200 (CTH 292)

šer anda] [...]***iš-ḫa-a-i***

'**she wraps** up' (KUB XII 58 III 26)[171]

(For numerous 3rd singular attestations, cf. Kronasser 1966:24, 407,486,538,568; Oettinger 1979:466; Puhvel HED 2:398).

Jasanoff (1978:64) comments on the "isolated" status of this root. Attested forms could represent the same type of *-ai-/-iya-* "apophony" as in the *dāi-* type (often verbs built from roots which show an enlargement **-i-* in languages outside Anatolian: the clearest such case is *išḫāi-* 'tie', which belongs to the family of Ved. *ásāt* 'tied' (**seh₂-t*), perf. *siṣā́ya* (**(se)soh₂-i̯-e*). Superficially, it would be attractive to compare the Hittite verb with the latter: *išḫāi* would then continue a preform **soh₂-i̯-ei*. Alternately, *išḫāi-* may continue "an otherwise extinct present type in which an ablauting root (**dheh₁/dhh₁*) was followed by an invariant *i*-element and the "activized" middle endings (with **'e(i)* in the 3sg.)

Note that Jasanoff identifies the endings preceding the here-and-now "activizing"-*i* as "middle". See also his comments (1978:64) on the historical primacy of *-i-* as opposed to *-iya-* as shown by the "old (Middle Hittite) 1pl. forms *ḫalziwen* and *piwen*, "which show that the weak stem of these verbs originally ended in *-i-* rather than *-iya-*".

See also Kronasser (1956:197); Friedrich (1960:106); Kronasser (1966:538); Mayrhofer (III:549); Jasanoff (1978:63); Oettinger (1979:466,590); Puhvel (HED 2:96-398).

171
Ritual of Tunnawiya (CTH 409)

#38. *išḫamai-*'sing'

[Common in religious and/or ritual context]

This verb is common in texts which were likely considered "poetic" texts within the Hittite cultural milieu. Called 'songs' (and referred to by Sumerogram ŠÌR 'song' (ŠÌR^{RU} = Akkadian *izammaru* 'they sing'), these texts often show evidence of being translations from Hurrian poetic works. Thus, in the Song of Ullikummi, we find the line:

dapiyaš	*šiunaš addan Kumarbin*	***išḫamiḫḫi***
all	gods father K.	sing-1sg.

'**I sing** of Kumarbi, father of all gods'

(KUB XXXIII 96[172] 1 4, in HED 2:394; Hoffner 1990:52ff; Watkins 1995:247.

Watkins indicates that many such texts which show "similar prosodic and stylistic features" likely imitate the "poetic form of the source language". He cites a portion of the Song of Silver [173](note the verb-initial syntax):

172

Song of Kumarbi (CTH 345.01= Ullikummi Table 1)

173

Song of Silver (CTH 364)

išḫamiḫḫiy=an KÙ.BABBAR- *an šanizzi*[

'**I sing** of him, Silver the unique (?)' (Watkins 1995:248)

Verb-fronting in Hittite has been identified with several semantic, syntactic, and stylistic nuances, including emphasis, mood, even adversativity (Luraghi 1990:94ff). The above usage suggests a syntactic similarity with the Homeric ἀείδω 'I sing'. Watkins suggests that "a connection between these Hittite 1st sg. forms and the Homeric epic and hymnic practice [...] is not known, but it is not impossible". It need scarcely be said that the function of the invocation via song was central to the religious practices of Indo-European culture.

Attestation 1st singular present išḫamiḫḫi (as above) (See also Oetttinger 1979:465)

Attestation 3rd singular present išḫamai

išḫamai *hattili*

'(s)**he sings** in Hattic'

Cognates are numerous and testify to the archaic status of what is "obviously a very old word in IE" (Mallory and Adams 1995:520). Greek ὕμνος 'song, festival song of praise (whether for gods or heroes)' is cognate, as is Vedic *sā́man* 'song' (Oettinger 1979:465). A connection

between the root which underlies the previous verb, *seh_2 'bind', has been suggested, though not yet proven (see Puhvel HED 2:395, who traces *išḫamai* 'song' to an unattested **išḫama-*, *išḫiya-* 'tie, bind', *išḫima(n)-* 'line, cord'. "The semantic tie-in would be "rhapsodic" in the literal sense" (cf Sanskrit *sūtra* 'thread' > 'canon'). Gamkrelidze and Ivanov (1995:734) reinforce this link, noting that "A characteristic feature of Indo-European metalinguistic terms for poetic speech is the metaphorical use of handcraft terminology to describe poetic art". Thus from **tek-s* 'prepare', 'weave ', 'build' come Sanskrit *takṣ-* 'compose a poem', and Greek τέχνη 'art', both from a root referring to weaving; from **seH(i)-* 'knit, twist' come words used to refer to poetry, including Hittite *išḫamai* 'sing' and Sanskrit *sūtram* 'text, work of art'. These all involve "special ritual speech" in PIE culture which uses "special terms referring to this type of speech in contrast to others" (Gamkrelidze and Ivanov (1995:733).

#39. *išḫuwa(i)*-'pour, scatter, throw, dispense, shed'

[Common in religious and/or ritual context]
In final 3rd singular attestations, 16. Spontaneous events
(f). existential change/denaturement

The verb is extremely common in ritual context, where it is apparently used interchangeably with #103 *šuḫḫa-* 'pour out', the two verbs being similar in meaning, and both distinct from #60 *laḫ(ḫ)uwa-* 'pour (liquids)'. Indeed Kronasser (1966:543) suggests that this verb is a derivative of *šuḫḫa-* 'pour', with the base meaning 'throw' (down). (The two verbs are used in similar context, as may be seen in the 3rd singular examples below. See below for further discussion of the links between them).

Attestation 1st singular present iš-ḫu-wa-aḫ-ḫi/ iš-ḫu-uḫ-ḫi

(Kronasser 1966:289, 302, 525,543,544, 558)

[*nu*] *ANA* DINGIR-*LIM* ^{DUG} *ḫaršiyalli INA* ^{URU}KÙ.BABBAR-*ti Ù INA* ^{URU}*Ḫakmiš* ***iš-ḫu-wa-aḫ-ḫi***

'to the(e,) goddess, **I shall pour** into a pithos at Hattusas and Hakmis'

(KUB XV 11[174] II 8-9, in HED 2:404)

174
Dreams of the Queen (CTH 584)

As with several other *-ḫi* verbs, and commonly with "middle" voice verbs in general, this verb occurs in figurae etymologicae, as in the citation which follows:

išḫuweššar ***iš-ḫu-uḫ-ḫi***

'**I pour** a heap [of grain]= **I scatter** [grain] copiously'

(KUB XXXI 84 III 63[175], in HED 2:404,408; also Kronasser 1966:543)

A 1st singular present derivative (with durative suffix *-anna-*) *iš-ḫu-(u)-wa-an-na-aḫ-ḫi* 'I scatter' is attested as in KUB XII 44 III 17[176], in Kronasser (1966:558).

Attestation 3rd singular present iš-ḫu-wa-a-i

Third singular usages are common in passages describing items 'poured ' (out) or 'scattered' during the performance of rituals (often medical). Items scattered or poured may include lumps of cheese, pieces of bread, fruits, beer, wine, even liver:

NINDA.KUR$_4$.RA-*kan* KAŠ GEŠTN NÍG.GIG *tepauwaza ḫattešni*

GAM-*anda* ***iš-ḫu-u-wa-a-i***

175

Instructions for the Border Officials (CTH 261)

176

Anna's Ritual for an Unfruitful Vineyard (CTH 392)

'**he pours** thick bread, beer, wine and liver in small amounts down into the hole'

(KUB XXXVI 89 Vs.9[177], in HED 2:405)

purpuruš GA.KIN.AG ^{GIŠ} *INBI.*ḪI.A NINDA-ya *ŠAPAL* LUGAL ***iš-ḫu-u-wa-a-i***

'**one scatters** lumps [of] cheese, fruits, and bread under the king'

(KBo XIX 128 I 14-16[178], in HED 2:405)

In a similar context, the verb *šuḫḫa* appears:

...^{NINDA} *purpuruš* LUGAL-*i kattan* ***šuḫḫai***

'[the staff man] **scatters** bread lumps under the king' (KBo X 24 IV 28)[179]

The 'throwing' notion is regularly reinforced by the use of an assortment of preverbs (see Kronasser 1966:543, who lists in this capacity *anda, arḫa, katta, piran katta*):

memalla arḫa iš-ḫu-wa-a-i

' (s)**he pours** away groats' (KBo V 2 II 19-20[180], in Puhvel HED 2:404).

177
Prayer to the Storm God of Nerik (CTH 671)

178
The Hittite ANTAḪŠUM Festival (CTH 625)

179
The Hittite KI.LAM Festival (CTH 627.Ib)

180
Ammiḫatna (CTH 471)

The alternate form *šer šuḫḫai* 'pours on' appears in same context.

anda ***iš-ḫu-u-wa-i***

'hurls (a stone into the river)' (KUB II 7 I 12)[181]

In the following, *išḫuwai* is used in the sense of a tree shedding its leaves:

nu ḫurpaštanuš arḫa ŪL ***išḫuwai***

'[the tree] **does** not **shed** its leaves' (KUB XXIX 1 IV 19[182], in Kronasser 1966:543, or HED 2:404)

or a bow dispensing arrows:

GI.Ú.TAG.GA.HI.A-*ma piran katta* ***iš-ḫu-u-wa-i***

'**sheds** forth arrows' (KUB VII 54 III 21)[183] (cf. Sanskrit *iṣu-*, Avestan *išu-* 'arrow') (in Kronasser 1966:543 or HED 2:409)

181
Outline of the Festival of Haste (CTH 626.1)

182
Foundation Ritual (CTH 414)

183
Ritual of Dandanku (CTH 425.02)

There is a wealth of literature about cognates suggested by the last type of meaning. Puhvel (HED 2:409, also *Epilecta* 196) posits a connection with Greek ἰός (< *ἰσϝός), Sanskrit *íṣu-*, Avestan *išu-* 'arrow', via an unattested noun ***išhu***(wa)-. For similar analysis, see also Mayrhofer I:93, Frisk 1973:730, or LSJ I:832. Mallory and Adams (1997:78) derive the Greek and Indic words for 'arrow' ultimately from verbal root ***h*$_1$*eis-*' 'set in motion' (via various nominal derivatives).

How such an analysis, however intriguing, would suit the Hittite word, I am not sure. Hittite *išḫuwa-* is regularly employed when the item thrown or hurled is *not* an arrow. Neither does the IE etymon necessarily refer to an arrow, but rather simply a 'hurled' thing, with the specific meaning 'arrow' as the hurled thing only developing in Greek and Indic. These two facts could indicate the archaic nature of the Hittite lexeme: the meaning of the Hittite verb is the more general 'hurling (away)' (of liquid or solid substances), only occasionally in the context of an 'arrow'. Here, the meaning would not have solidified into the particular meaning 'arrow', as in Greek and Indic.

However, intra-Anatolian evidence suggests that the Greek and Indic link may not be relevant at all, or not in any recoverable way. Melchert (1994:168) discusses the complex dissimilation phenomena which he posits for these two verbs, *išḫu(wa)-* 'sprinkle' and *šuḫḫ(a)-* 'pour'. Further complicating the issue, he adds the verb *išḫai* 'bind' into the mix, suggesting that both *išḫai-* 'bind' and *išḫu(wa)-* 'sprinkle' may be "reduplicated *i*-presents with dissimilatory loss of the initial **H*-", especially given the Cuneiform Luwian form *ḫišḫi-*

[184]. He admits, however, that other possibilities cannot be entirely excluded, including an ablauting root present (of an irregular-type paradigm) which ultimately would have split into *šuḫḫ(a)* and *(i)šḫu(wa)*- with "secondary differentiation of meaning". Such complexities make a definitive judgement about extra-Anatolian cognates impossible.

The preterite in *-š* is attested: *iš-ḫu-wa-iš* / *iš-ḫu-u-wa-aš* 'he scattered' (Kronasser 1966:544). The participle is *išḫuwan(teš)* 'poured', 'thrown' (Kronasser 1966:475, HED 2:407).

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Luwian *ḫišḫi(ya)* 'bind', from PA **Hi-sHi* (Melchert 1994:235,249).

#40. *išiya(ḫḫ)*-'reveal', 'expose', 'finger'

14. Cognition middle

Attestation 3rd singular present i-ši-ya-aḫ-ḫi (Kronasser 1966:302,432; Oettinger 1979:457; Puhvel HED 2:409)

The form *išiya-* is attested only in verbal noun *išiyatar* 'that which has been revealed' ='revelation'. All other derivational forms (e.g. *išiyaḫḫiškattalla-* 'informer') employ the longer stem. Attested preterite forms of this verb could be argued to indicate aspectual nuances, with forms in *-š* (e.g. *išiaḫḫiš)*, suggesting an 'aorist' (perfective aspect), as in *š-an* LÚ URU*Huntarā išiaḫḫiš* 'a man from H. **informed** on him' (KUB XXXVI 104[185] Vs. 11), and forms in *-ta* suggesting a 'perfect' (retrospective aspect), as in DINGIR-*LIM eni kuitki išiyaḫta* '**has** the deity in any way **denounced** this?'

Against several (including Oettinger, Chantraine, Kuryłowicz) who have suggested a tie-in with Sanskrit *iṣ* 'seek', OCS *iskati* '*ibid*', Puhvel (HED 2:412) states categorically that the "more precise semantics established by Kümmel (Ersatzrituale 18-9) [...] [indicate that the] meaning is clearly 'announce' and in the mediopassive [e.g. *išiyaḫtari*] 'be revealed'".

Puhvel (HED 2:412) supports this suggestion by phonological arguments. He

185
Anecdotes (Palace Chronicle) of the Reign of Ḫattušili I (CTH 8)

suggests that the *-š-* in *i-ši-* may indicate any of the outcomes of **g(h)*y- in Hittite, namely i[z]-, i[ž]- or i[d^z]-(cf. Greek ζ and σσ/ττ). This would in turn allow a connection between this root and the Indo-Iranian root **adh-* which appears in Sanskrit *áha* (significantly, 2sg. *áttha*), and Avestan *āδa* both 'spoke', Old Persian *azdā* 'announcement' (< **adh-ta*). As attractive as this analysis is semantically, the phonology seems a bit weak and unsupportable. See Mayrhofer (I:84,93,130).

#41. *iškalla(i)*-'slit', 'slash'

Metaphorical extension in cognates includes
14. Cognition middle

Attestation 3rd singular present iš-kal-la-i / iš-gal-la-i

(Kronasser 1966:382,529; Friedrich 1971:122; Puhvel HED 2:413ff)

The 3rd singular present form appears in legal texts, where the item 'slashed' is often an ear:

ták-ku LÚ-*EL.LUM* GEŠTUG-*an ku-iš-ki* ***iš-gal-la-i***

'if someone **slashes** the ear of a free man'

(KBo VI 4 I 37[186] = Laws § XIV 37, in Friedrich 1971:52)

ták-ku ÌR-*an na-aš-ma* GEME-*an* GEŠTUG-*an ku-iš-ki* ***iš-kal-la-i***

'if someone **slashes** the ear of a male or female slave'

(KBo VI 4 I 38-9 = Laws § XV 38,39, in Friedrich 1971:52)

The IE root is **(s)kel-* 'split, cut' (Watkins 1982:1539). Suggested cognates include Greek σκάλλω 'chop, scrape', Armenian *skalim* 'split, be splintered', Lithuanian *skélti* 'split', Old Norse *skilja* 'separate', the Germanic doublets *skull* 'shaven, cut thing' and *shell*

186
KBo VI 4 is a "Late Parallel Version" of the Laws (CTH 291), in Friedrich 1971.

'piece cut off'.

It is important to note that in cognate items, this verb can be used in a metaphorical sense to describe intellectual capabilities -- mentally sorting, splitting, or separating one thing from another. This extension is seen both in Greek, where the extended meanings of σκάλλω include 'search, probe' (LSJ II:1604), and in Old Norse *skil* 'discernment, judgement (< "incisiveness") > English *skill.* The same extension process applies in the root **skei-* which also means 'cut, split' and is seen in Latin *scīre* 'know' (< 'to separate one thing from another'; cf. the semantics of *ḫatta-* : *ḫattatar* HED 3:262)

An interesting suggestion is Frisk's (1973:716) Latin *secāre* 'cut, mow'. Palmer (1954:17) notes that this verb is often included as part of the "Occidental" vocabulary which Italic is claimed to share with Celtic and Germanic (but not with Greek, Armenian and Indo-Iranian). These items are "so numerous and such fundamental constituents of vocabulary that the coincidences, so the argument runs, cannot be due to chance but reflect a common period of civilization". Palmer is clearly sceptical of this conclusion, and of the methods which underlie it. The existence of cognates in Hittite, Greek and Armenian, for this verb (and several others which occur as *-ḫi* verbs in Hittite) indicate that such conclusions about a "common period of civilization" are in need of revisitation. For other cognate suggestions, see Watkins (1982:1539), Puhvel (HED 2:414), Mallory and Adams (1995:538,539).

#42. *išk*-'salve, smear, daub, anoint'

[Common in ritual, religious ceremony, medicine]
Cognate meanings involve 13. Emotion middle

Similar in meaning to *šartai-* 'daub', this verb is common in descriptions of ritual anointings, both priestly and regal, as well as "practical smearing for grooming and medical purposes" (Puhvel HED 2:423).

Attestation 1st singular present iš-ga-aḫ-ḫi (Kronasser 1966:502; HED 2:421)

n-an tuikkuš ***išgaḫḫi***

'**I salve** his limbs' (KUB VII 1 I 40[187])

-mi forms of this verb are used as well in contexts involving smearing salves. The *-mi* forms seem especially common when the action involves an animal, rather than a human. Thus,

namma IŠTU YÀ UDU ANŠU.KUR.R[A.HI.A...] *tepu* ***iskimi***

'**I** also **smear** the horses with a bit of sheepfat'

187
Ritual of Ayatarša, Wattiti, & Šušumanniga (CTH 390). Note the double accusative.

(KUB XXIX 44 Vs I 14[188]; Kammenhuber 1961:150; HED 2:421,422)

Oettinger (1979:327) suggests that *išk-* is bi-morphemic, deriving from **is-* + *ske-*, and indicates a link between this root and Sanskrit *íṣ* 'refreshment, strength', thence to *išnáti*. Puhvel (HED 2:423), while agreeing on formal grounds with Oettinger's analysis, and citing Hittite "e.g. *duskizzi, duskiyazi, dusgai* 'is glad' from **tus-ske-*, cognate with Skt. *túṣyati* 'is glad'") as support, seems very dubious about the semantics involved in linking **is-* to Vedic *íṣ* 'refreshment, strength'. Mallory and Adams (1995:261ff) seem to have no such hesitation, and give **h$_{1/4}$eis-* 'refresh (using a liquid, renew the strength of' as the source of Vedic *íṣ* 'refreshment, strength', Avestan *ī̆š-* 'strength', *aēša-* 'strong', and via extended **h$_{1/4}$is-ske/o-* 'salve' (as in Oettinger) to Hittite *išk(ya)*. See also Frisk (1973:704). Mayrhofer (I:93) as well links Sanskrit *íṣ-* to Tocharian B *aise* 'power, surplus'.

Mallory and Adams (1995:262) call **h$_{1/4}$eis-* 'refresh' "an old word in PIE which at least in Indic and Greek came to have a specifically medical meaning", citing Sanskrit *íṣ-kṛti-* 'healing', Greek ἰάομαι 'heal, cure' and ἰᾱτρός 'doctor' (see also LSJ I: 815 for numerous Greek lexical items derived from this root referring to healing). Medical meaning is also clear in [later?] Hittite 3rd singular *-mi* forms, including an iterative derivative *iškeškizzi,* which appear in what was probably a rather unpleasant medical treatment:

[...] *ŪL paššariš n-an hapurin* EGIR-*pa damaški* [...] [...] *iškizzi namma-an*

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Treaty of An II, with Ritual introduction (CTH 285)

hapurin parā huittiy[azi...] [...SI]G$_5$-*ri n-an I*[*ŠT*]*U* A.BAR-*pat* ***iškeškizzi***

'[if he is] not circumcised [?], he forces back his foreskin, salves..., and then draws his foreskin forward ..., [until he] gets well, he keeps **salving** it with lead' (KUB XLIV 61 Rs.25-27) (Puhvel HED 2:423).

A connection between root *$*h_{1/4}eis$*- 'refresh' and Greek ἱερός 'holy, hallowed, consecrated' has been severally suggested (Walde 1973:106; Oettinger 1979:327; Mallory and Adams 1995:261). LSJ (I:820ff) cite numerous lexical items which refer to consecration, e.g. ἱεράομαι 'be a priest', or divine inspiration e.g. ἱερόληπτος 'inspired'.

Walde (1973:107) connects Latin *īra* 'wrath', which would lend support to Watkins' contention (1982:1514) that meanings associated with this root, especially suffixed *o*-grade derivatives, often refer to intense feelings ("words denoting passion"). Under this designation would belong Avestan *aēšma-* 'anger' and Greek οἶστρος 'gadfly' but with secondary meanings of "any vehement desire, insane passion [...] madness, frenzy" (LSJ II:1210), whence English *estrus.*

It is possible that there are two different (but perhaps related) roots involved here: see Mallory and Adams (1995:262) who note that there is "probably" not a connection between this root and *$*h_1eis$*- 'set in motion' (see also Walde 1973:106).[189]

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If there were such a connection, then root *išk-* would possibly be related to *išḫuwa(i)* root also linked to *$*h_1eis$*- 'set in motion'. This would provide another alternation between *-k-* and *-ḫ-*. However, such a relationship seems semantically improbable.

#43. *iškar*-'pierce, stick'

[Ritual word]

This verb is very common in descriptions of ritual, with a variety of objects, including stones, clay figures, bits of bread or meat.

Attestation 1st singular present iš-ka-a-ar-ḫi / iš-ga-a-ar-ḫi

(Kronasser 1966:294,583; Neu 1983:79= althethitischen Ritualtexten)

išpannit ***iškārḫi***

'**I stab** with a spit' (KUB XXXI 1+KBo III 16 II 7)[190]

nu-šmaš kattan NA_4.HI.A ***iškārḫi***

'**I stick** stones beneath them' (them = clay images of deities) (KBo XVII 96 I 13-14)

Attestation 3rd singular present iš-ka-ar-i / iš-ga-ar-i / iš-qa-a-ri

(Kronasser 1966:329,514,558; Neu 1983:79)

190
Naram-Sin in Anatolia (CTH 311)

[*nu*-AL]AM IM *araḫzanda* ***iš-ka-ri*** */ iš-ga-a-ri*

'**she sticks** the clay figures all around' (KBo XII 126 I 8)[191]

There is what Melchert (1994:180) refers to as a "peculiar" derivative form *išgaru/iḫ* '(ritual) vessel'/ 'blood bowl'?(see also Kronasser 1966:329, HED 2:420) which "is surely a foreign word and has nothing to do with *išgar*-"[192]. (Final *-ḫ* is not allowed in Hittite).

The obvious connection is with IE **(s)ker-* 'cut'. Cognates are numerous and would include Greek κείρω 'cut', Sanskrit *kṛntáti* 'cuts', Old Irish *scaraid* 'divides', Old Norse *skera* 'cut', Tocharian A *kärṣt* 'cut' and many others (for a fuller list, see Mallory and Adams (1997:143, who also elaborate problems with present stem correspondences (or lack thereof) among the various daughters) or Gamkrelidze and Ivanov (1995:612). Bomhard and Kerns (1994:407, 408) list more extensive cognates.

The participle is both active and adjectival (passive-like)

iš-ga-ra-an	'studded'	
iš-ga-ra-an-ta	'stuck'	
iš-ga-ra-an-teš	'hewing/sticking to'	(Kronasser 1966:514)

191
Ritual of Alli (CTH 402)

192
See Onians (1973 [1951]:107-108) for ritual cutting of hair, the "first act of the sacrifice". Along with blood, hair was considered to be one of the seats of the human soul.

#44. *iškit(t)aḫḫ-* 'signal, warn'

14. Cognition middle
also perhaps 13. Emotion middle (d) speech action (issuing a warning)

This is a factitive verb derived (with suffix *-aḫḫ*) possibly from an unattested lexeme *iškit(t)-* which would have had a sense of 'warning' or perhaps 'pointing out danger'. Related Hittite derivatives include *sākiya-* 'make known', *sagai-* 'omen'. Compare Latin *scītus* 'clever, shrew', *sāgiō* 'perceive acutely', *sāgus* 'prophetic', *sāga* 'wise woman', *sagāx* 'sagacious, wise, keen-scented' (Mallory and Adams 1997:505), all of which refer to cognitive abilities used in the service (usually defence) of the community. Also cognate would be Greek middle verb ἡγέομαι 'direct, lead the way' (LSJ I:763) (also 'think', 'believe', hence an interesting convergence of meanings).

Attestation 3rd singular present iš-kit-(t)a-aḫ-ḫi / iš-ki-da-a-aḫ-ḫi

GAL *MEŠEDI* ***iškittaḫḫi***

'the chief of the guard **signals**' (KUB X 1 I 11)[193]

(See also Kronasser (1966:432), HED 2:426 for additional attestations, all 3rd singular)

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The Hittite KI.LAM Festival (CTH 627. Ic)

#45. *išk/ḫunaḫḫ-* 'stain, stigmatize, denounce', 'designate'

13. Emotion middle (d) speech action

Most important about this root is the stem interchange of /k/ and /ḫ/, which is evidence for an alternation of these two phones in Hittite[194] (see also Nilsson 1994, Reflexes of IE laryngeals in four Finnish words); Melchert 1994:170; Puhvel HED 2:426; Puhvel 1978[195] (A Greek-Hittite etymological match: αἰσχύνω- : *išku̯na-* 'make ugly'); Kronasser 1966:98ff).

Morphologically, only the 3rd singular preterite attestation (with aorist (?) *-š*) indicates membership in the *ḫi* conjugation: thus *iš-ku-na-aḫ-ḫi-iš* 'has designated' (e.g. an heir to the throne) (Kronasser 1966:430). This verb is attested only once in Hittite literature (Bryce 1998:72), and problems in interpreting the meaning of this verb result in concomitant problems in reconstructing the early history of the Old Hittite kingdom. The sole citation is from the Testament of Ḫattušili (KUB I 16 + KUB XL 65 (CTH 6), edited by Sommer and Falkenstein (1938), cited here in translation, where Ḫattušili is speaking before a group of warriors and dignitaries, announcing his plans to denote his grandson Muršili as his

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See the full discussion of the alternation of *ḫ* ~ *k*, and its consequences for the positions outlined in Chapter Four.

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Reprinted in *Analecta Indoeuropaea* (1981), 373-378.

successor.[196] He is recalling the rebellion against his grandfather (who, though unnamed, was probably the "original Labarna, founder of the Hittite dynasty" (Bryce 1998:72):

> Did not my grandfather's sons set aside his words? He appointed (??) (*iš-ku-na-aḫ-ḫi-iš*) his son Labarna in (the city of) Šanaḫuitta. But subsequently his servants and the great men defied his word and placed Papaḫdilmaḫ (on the throne)' (Testament §20, III 41,42, adapted from Bryce 1998:70).

It is possible that there are two related verbs involved in this root:

(1) *iškuna-* a denominative causative meaning 'stain', cognate with Greek αἰσχύνω 'make ugly, disfigure'. (See Puhvel (1978:138-143) for a full discussion of this Greek-Hittite etymological match). The Greek verb is used in an extended metaphorical "moral sense" of 'dishonour, tarnish' (LSJ I:43). Certain Hittite usages (see Puhvel HED 2:426) have similar meanings of 'degrade', 'demote'.

(2) *iškunaḫḫ-* a [cognitive] factitive from the causative meaning 'proclaim, designate' (make marked = designate), cognate with Lithuanian *iškùs* 'clear, obvious' (Puhvel HED 2:428) and perhaps Vedic *skauti, skunóti* from Cl.5,9

196 Bryce (1998:67) suggests that this was probably one of his final acts before his death.

root *sku-* 'poke, tear'. For Sanskrit root see Hill and Harrison (1991:209); Monier-Willliams (1998:1257).

The meaning inherent in both stems points to an original meaning of marking possessions (cattle, for instance) by tearing, poking, staining etc. their flesh. This literal meaning, which inheres in the first stem, and is clearly pejorative, was apparently extended to include a 'marking' or designating' of an heir or successor, as in the second root. Very little is known about PIE methods of identifying or marking possessions, 'branding' livestock, etc. The suggested links between the two stems remain highly speculative and hard to motivate (see HED 2:426ff) who acknowledges the etymological difficulties).

#46. *išpai-* 'grow fat, prosper', 'be satisfied'

16.(c) i. Spontaneous events associated with animate beings

Puhvel (HED 2:431) suggests that the original sense of the IE root (his **speE*$_1$ -(-*y*-)) was the concrete 'be filled (with food, rarely with drink)'. Because "A full belly has remained an archetypal image of prosperity", the semantic extension was to 'thrive'. He indicates that Pedersen "reversed the semantics", assuming an original meaning of 'thrive'. Many agree with Pedersen, but the semantic shift could have been, in principle, either way.

Watkins (1982:1541, who cites Pok. 1. *sp(h)ēi-* 983)), gives the source root as IE **spē* or **spēi-* 'thrive, prosper'. Hittite -*ḫi* verb *išpai-* is cognate with Sanskrit *ātmanepada* verb *sphāyate*, (> *sphāy-* cl. 1 Ā > *sphāyate* (note that the -*y*- is part of the root, not of a derivational suffix) 'to grow fat, swell, increase'. Both the Sanskrit and Greek evidence suggests that, as in Pokorny, the root phoneme was aspirated [p^h], not plain [p] (see also Kronasser 1966:538). Monier-Williams suggest cognates Lithuanian *spėti,* Slavic *spěti* 'predict, foretell' (1998:1270) (in Czech, *u-spěti* means 'to succeed', 'be successful'). Mallory and Adams (1997:3,459) add Latin *spē-s-* 'hope' ("an old *s*-stem (cf. Old Latin *spēres* and the denominative verb *spērare*) (Palmer 1954:250)), *pro-sperus*, Old High German *spuon* 'thrive, prosper'. See also Mayrhofer (III:541); Kimball (1999:430).

Attestation 3rd singular present iš-pa-a-i

[...*n*-]*as za Ú-UL* ***iš-pa-a-i***

'...and he is not filled' (Bo 4491, 5 in HED 2:430)

Note that, as above, the verb is regularly used with *-za*.

Jasanoff (1978:64) lists *išpai-* among the verbs (including *-ḫi* verbs *dāi, pāi* and *išḫāi*) which he says "continue an otherwise extinct present type in which an ablauting root [...] was followed by an invariant *i*-element and the "activized" middle endings [...] in the 3 sg."

Sturtevant (1928a:2) lists this verb among his 3rd class of *ḫi* conjugation verbs "with original *ēi*" (see also 1927c:219ff).

#47. *išpand-* 'libate'

[Ritual word]

This particular *-ḫi* verb is the lexical item used to represent what Burkert (1985:70) calls "one of the most common sacral acts during prehistoric times and especially in the civilizations of the Bronze Age" namely libations, the outpourings of liquid in the service of the gods ("Invocation and prayer are inseparable from libation").The libation, both in Greek and in Anatolian culture, was the "purest and highest" of the acts which defined piety. By the *spondai* (the Greek cognate libation, involving wine, honey, oil or water, as in Hittite), the Greeks appeased the gods, brought rain, fertility, peace between enemies, rest for the souls of the dead. Gamkrelidze and Ivanov (1995:708) include *išpand-* among several terms describing "manifestations of relatively high intellectual activity [...] revealed in an elaborate priestly terminology and mythology" which can be reconstructed for IE, including ritual, religious and legal terms (often by dialectal area). In addition to **sphe/ont'*- 'perform sacrificial libation, offer sacrifice' (in Hittite *šipant-*, Latin *spondeō*, Greek σπένδω), they discuss **Has-* 'ritual hearth, altar' in Hittite *ḫašša-*, *Latin āra* (literally 'ash-place' 'fireplace' HED 3:223-224). The Hittite verbs describing these most important intellectual and religious activities are *-ḫi* verbs: #47 *išpand-* 'libate', *ḫaš-* 'open' (see #27), #101 *šipant-* 'sacrifice'.

I am discussing this verb separately from #101 *šipand-* 'sacrifice', although, of course, they are ultimately the same verb. I am doing this for two related reasons: spelling and meaning. Although as Melchert (1994:29) says, "if a word is spelled sometimes with a vowel

on one side of a consonant, and sometimes on the other [as is *išpand ~ šipand*], then it is likely that neither vowel is real" and these different spellings are simply alternate ways of representing a consonant cluster. Nevertheless, the situation with *išpand ~ šipand* is complex and subject to differing opinions about the "reality" of the vowels and the significance of the two different spellings (see Melchert (1994:31,32 for an overview of the issue). There is evidence that the spelling with initial *i-* is older. It is rare, and occurs almost exclusively in Old Hittite, as in the citation below (with original spelling *-ḫé).* The meaning with this spelling is regularly the literal 'pour (some liquid libation, such as wine)'. The more common "standard" spelling – *ši-(ip)-pa-an-t/dV* - (Melchert 1994:32) -- occurs in later texts, often with the more extensive, less literal, meaning 'sacrifice'. Thus, the early spelling usually has the original meaning 'pour (a libation)', i.e., as an accompaniment to a ritual); the later spelling more often than not has the meaning 'sacrifice' (i.e., the literal meaning has been extended). In this way, the later spelling parallels the later meaning.

Attestation 1st person present iš-pa-an-taḫ-ḫi/iš-pa-an-taḫ-ḫé

This is the standard verb for 'libating' used in the Ritual for the Royal Couple:

NINDA *ḫar-ši-i*]*n pár-aš-ḫa* GEŠTIN-*an* ***iš-pa-an-taḫ-ḫi***

'I break thick bread; **I drink** wine' (KBo XVII [197]I III 14-15, in StBoT 8:30)

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Ritual for the Royal Couple (CTH 416)

Also [NIND]A *ḫar-ši-in pá[r-a]š-ḫa-ri* ***iš-pa-an-taḫ-ḫi*** (*ibid iš-pa-an-taḫ-ḫé*)

'**I** break thick bread and **libate**' (KBo XVII 1 IV 10 = StBoT:36)

iš-pa-an-taḫ-ḫé

'**I pour**' (KBo XVII 3 IV 1; see Otten and Souček 1969:77,115)

GEŠTIN-*an* ***iš-pa-an-taḫ-ḫi***

'**I pour** wine' (KBo XVII 6 III 6)

Attestation 3rd singular present iš-pa-an-ti

The item libated is usually beer or wine:

iš-pa-an-ti / ***ši-pa-an-ti***

'**(S)he libates**... (wine, beer)' (so, among many other examples, KUB II 13[198] I 48, KBo V 2 II 58, KUB VI 45 IV; see Kronasser 1966:522ff)

The third singular (with meaning 'pour', spelling with initial *š*-) occurs often with cognate accusative which, incidently, is always spelled with the initial vowel:

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Monthly Festivals (CTH 591), Ammiḫatna (CTH 471), Muwatalli's Prayer to All Gods Through the Storm-God of Lightning (CTH 381).

išpanduwan KÙ.BABBAR GEŠTIN *udai nu* ^{GIŠ}BANŠUR-*i* [*pira*]*n* 3-Š*U* ***šipanti***

'brings a silver libation vessel with wine and **libates** before the table 3 times'.

(KBo XVII 75[199] I 59-60)

Cognates for this "widespread and ancient" IE root (Mallory and Adams 1997:351) are many. Meanings include both the actual pouring of libation (as in Greek σπένδω 'pour a libation') and the extended meaning of 'conclude a pact', 'take one another as mutual guarantors' (as in Greek middle σπένδομαι). The Greek hendiadys σπονδαὶ καὶ συμμαχία (which combines a term from the realm of obligation and one from the realm of friendship) is typical of the vocabulary and syntax of treaty terminology common to the ancient Near East (Weinfeld 1973:192,197) (cf. εἰσελθεῖν εἰν τὰς σπονδάς 'enter into a covenant', συμμχίαν ἀνανεωσασθαι 'to renew a pact').[200] Benveniste (1973:470) notes that the Greek unites the meanings that appear separately in Hittite and Latin: cf. the meaning of σπονδαί explained by LSJ (II:1629 as "a solemn treaty or truce (because solemn drink-offerings were made on concluding them". The Latin cognate *spondeō* has the similar meaning 'promise, vow'. Presumably, the libation was the visible sign of the agreement. The

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Festival of Storm and Thunder (CTH 631)

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Weinfeld (1973:192 nt.48) says that the use of libation in covenant ceremonies is also preserved in the phrase "*lnsk mskh* 'to pour libation'" in Isaiah 30:1. In the passage which Weinfeld cites, is used in a metonymic sense for 'truce'. For other uses of the root נסך with the meaning 'make a libation', see Isaiah 29.19, Daniel 2.46 and other references in Davidson (1970 [1848]:552,553).

Tocharian cognate *spänt-* 'trust' has the extended meaning (< 'accept a guarantee').

It is this verb which is used in Hittite to describe the forming or solidifying a covenant. Note that in Greek, the verbs used for pouring libations (σπονδο-ποιέομαι 'pour a libation') as well as both forming and breaking covenants are "middle": σπονδῶν ποιήσασθαί τινι 'form a covenant with anyone', ὅρκια δηλήσασθαι/ψεύσασθαι 'be false to/trample on a covenant' (LSJ II:1251, 1629; Weinfeld 1973:197)). In Hittite, both these verbs are *-ḫi* verbs: *(i)špānt-* 'libate' > 'conclude a pact' vs. *šarra-* (which see) 'break a covenant'.

#48. *išpar(r)-* 'scatter'

Confusion swirls around this root: whether there is a single root, or two or three related stems involved (see HED 2:441 for an overview of the various disparate opinions). Repeated attempts have been made to separate the "simple" stem *išpar-* from the geminated *išparr-*.[201] Melchert (1994:80) explains the geminate in alternate stem *išpar(r)-* as arising from assimilation of a root final laryngeal, in this case *-h_1*, to the preceding *-r* (*/VRh $_x$V/ > */VRRV/. Citing this verb as "the best example" of this particular type of assimilation, Melchert derives *išparr-* 'kick flat' (weak stem) from **spérh$_1$-* 'kick, spurn' (See also Oettinger 1979:268). Mallory and Adams (1997:329) suggest that there may indeed be two roots here: "The Hittite form may be the result of conflating two separate IE roots, one meaning 'strew' and the other 'kick'. The underlying meanings of both 'kick' or 'move the feet' and the more abstract 'spurn' are attested in daughter languages'. Puhvel (HED 2:445) derives the [*-ḫi* verb] form *išpāri* from *o*-grade **spóre(y)*, with the various [*-mi* verb] derivatives, including various causatives *išparriya-* and *išparnu* from zero-grade form **spṛ-*.

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Puhvel (p. c.) considers the two (*išpar-* 'scatter' and *išparr-* 'escape') as separate roots. It is possible that the root *išpar(t/d)-* is also involved (see for instance Kimball (1999:430) who provides Sanskrit cognate *spardhate* 'contends, rivals' (a *gaṇa* 4 *ātmanepada*-only root, with aorist 3pl *aspṛdhran* (also 1999:286), as well as Armenian *sprdem* 'I escape'. For the Hittite root *išpart-*, see Kronasser 1966:392, 393.

Is it possible that the geminate C is an archaic causative strategy? [202] Thus the original, more basic "middle" self-directed *išpar-* 'flee' / 'fly' (= 'make self scarce'; 'betake oneself hence (on one's own feet)') vs. the more transitive and more outwardly directed *išparr-* 'make flee' (='scatter something'). I suggest the development would have been along the following lines:

1. **spérh$_1$-* in the middle (*-hi* conjugation) where the meaning 'escape' is primary. Here, the verb would be related to nominal elements referring to the lower extremities, including feet (ON *spor* 'footprint', Toch B dual form *sprāne* 'flanks' (?), 'legs', 'heel' (Old Irish *seir* 'heel') with the metaphorical/abstract meaning 'use/take to one's heels' = 'escape'. The assimilation process (as described by Melchert) would produce the Hittite stem *išparr-* 'escape' = use one's heels, legs, feet to one's own direct advantage.

2. **spérh$_1$-* also in the middle (*-hi* conjugation) meaning 'kick'' is would indicate a less direct self benefit: the outwardly directed use of one's lower extremities to assault an external combatant. The benefit is still to oneself (in one's own defence) but the use is directed outwardly. This is a subtle step on the way to the more transitive *-mi* conjugation forms (also attested).

The verb is attested in all three persons, most often in ritual context:

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There is a *-mi* verb causative from this root: *iš-pár-nu-mi*

Attestation 1st singular present iš-pár-aḫ-ḫi /iš-pá-ar-ḫi (Kronasser 1966:446, 452, 514)

parašdun ***iš-pár-aḫ-ḫi***

'**I scatter** plant material' (KUB XII 44 II 30)[203]

Attestation 2nd singular present iš-pá-ra-at-ti (Kronasser 1966:514; HED 2:441)

GÌR.MEŠ-*it* ***iš-pá-ar-at-ti***

'**You shatter** with your feet' (KUB XXI 276 III 29-30)[204]

(Note: compare the startlingly similar Vedic phrase *padā sphurá-*)

Attestation 3rd singular present iš-pa-ri /iš-pa-a-ri

nu GAL DUMU.MEŠ É.GAL *ilanaš piran ḫappurriyan* ***iš-pa-a-ri***

'The chief of the palace sons **scatters** *ḫ.* [stalks? foreskins?] before the staircase'

(KUB XX 46 III6)[205]

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203 Anna's Ritual for an Unfruitful Vineyard (CTH 392)

204 Puduḫepa to the Sun Goddess of Arinna (CTH 384)

205 Lists of Hurrian Gods (CTH 705)

n-uš GÍR.MEŠ-*aš* DÙ-zi *n-uš* KI-*an* ***iš-pa-ri*** *nu-šša*n *kūš* DINGIR.MEŠ *ašaši*

'he makes [idols] in the shape of daggers, **strews** them on the ground,

and sets up these deities' (KBo X 45 II 19-20)[206]

There are many cognates of this root, whose various divergent meanings indicate that the root during IE times "must have been richer in semantic shadings" (Puhvel HED 2:445) (or, perhaps, that the confusion between the meanings is truly ancient). Cognates with meanings referring to 'spreading' or 'strewing' include Greek σπείρω 'scatter', OE *sprœdan* 'spread', Latin *sparus* 'hunting spear' (whence English *spar, spear*) (= 'spread out' inanimate items). Meanings referring to 'spread out animate items' (often kicking feet= extended body parts) are seen in Sanskrit *sphuráti* 'darts, bounds, kicks', Lithuanian *spìrti* 'kick'. The meaning tends in some cognates to go toward the metaphorical 'spurn' (= 'kick out', thus Latin *spernō* 'I spurn', *asper* 'harsh' (< *apo-speros* 'spurning' lit: 'kicking away') (cf. English *spurn*) and perhaps Armenian *sparnam* 'threaten'). References to 'feet' are seen in Old Irish *seir* 'heel (< **speret-*), OE *spor* 'footstep, track' (whence English *spoor*). Bedding meanings come from the **ster-* Latin *strāmen* 'litter, bedding', OE *strēaw* (English *straw*, the original bedding, with reference either to the spread item itself–spreading of straw was regularly done with the feet----, or to the animate being spreading themselves out/ putting feet up). Further evidence of archaic mixing of both the meanings and form of the roots **ster-* and **sper-* may be seen in the three-way parallelism of Hittite phrase ^{GIŠ}NÁ

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Purification of a house; Ritual for Netherworld deities (CTH 446)

išpar, Homeric Greek λέχος στορέσαι 'make up a bed' [Iliad 9.621, 660] and Latin *lectum sternere* 'spread, make up a bed' or of Vedic *padā sphurá-* with Hittite GÌR-*it išpar-* 'spread with the foot'.

The participle is *išparrant-* 'spread'. (Often the item being 'spread' is bedding. See HED 2:445 for the motivational semantic link between the rhyming roots **sper-H* 'spread' (this root) and **ster-H*, whence several IE words referring to beds.)

#49. *išša-* 'do, work'

[Common in religious and/or ritual context]

This verb is the iterative form of *iya-*, *ie-* 'do' (HED 2:305), parallel in form to such fellow *-ḫi* verb pairs as # 20 *ḫalzešša* 'crave' from #19 *ḫalzai-* 'call', # 102 *šišša* 'press' from #94 *šai-* 'press, shoot', and #123 *warešša* 'help' from *warrai-* 'help' (= CLuv. **warraḫ-* in *warraḫit* - 'help'). Such verbs provide "highly suggestive" evidence that "all examples of iter. *-išš(a)-* in Hittite are formed to *ḫi-* verbs in *-i-* (*ḫalzišša-, šišša-*), all clear cases of which are enlargements of roots in final *$*-h_1$* [...] In all cases of final *$*-h_1i-$* (*$*seh_1$*(i)-, *$*werh_1i$*-), laryngeal-sonorant metathesis [...] would lead to *$*-ih_1s$*- whence *-išš-* (Melchert (1994:78); For phonology, see also Kimball (1999:134).

On the issue of the proposed shape and root-final laryngeal of this root, compare the so-called di-syllabic verbs (and Sanskrit *ṣet* ('with an *-i-*') verbs), which Sihler (1995:124) has shown were in fact mono-syllabic, of the shape $CVCH_1$, with a root final laryngeal consonant:

> The term *disyllabic root* (sometimes *disyllabic base*) reflects the long-held view that roots like **ǵenə-* 'beget' or **temə-* 'cut' (as then written) had two vowels, unlike the typical PIE root. Although the term is still used, it has been rendered inappropriate by the analysis of *ə as a syllabic consonant – a root like *$*ǵenH_1$*- being no more 'disyllabic' than a root like *$*serp$*- 'creep'[...] Pāṇini treated [Sanskrit] roots as falling into two classes, those to which certain suffixes were attached directly and those with a linking vowel *-i-* between the root and the suffix [...] As is now seen, the 'linking vowel' is neither a link nor a vowel, but the root-final laryngeal consonant: *$*ǵenH_1$*-*ter*- 'begetter' > *jani-tar-*.

Mallory and Adams (1995:362) list the underlying root as *$i̯eh_1$- 'do, make; act vigorously' and cite cognates Tocharian A *ya*- 'do, make', various derivatives as Lithuanian *jė́gà* 'strength, force', Greek ἥρως 'hero (<* 'one imbued with vigorous activity'), Avestan *yātu* 'witchcraft, sorcerer', Vedic *yātú* 'magic, ghost'.

The verb is regularly employed in the context of prayers, pleas, performance of rituals (see Kronasser 1956:200; Friedrich 1960:104; Kronasser 1966:553; HED 2:300). Although the verb can appear with *-za* (as can the simple verb *iya*- 'do'), especially in later documents, it is neither regular nor compulsory (Boley 1993:81ff). Note that spellings with *i-*, which tend to be early (Melchert 1994:133)[207] regularly do **not** comport with the particle *-za*. Oettinger (1979:466) points out that *-mi* forms of this verb are later. (See also Kronasser (1966:553).

The verb is attested in all three persons. Note the effect of the iterative verb in the first example, where the aspectual sense is of intense or repeated entreaty.

Attestation 1st singular present e-eš-ša-aḫ-ḫi / iš-ša-aḫ-ḫi

nu-za [...] *arkuwar* ***ēššaḫḫi***

'**I make** a plea' (KUB XIV 8 Rs. 20)[208]

207

Melchert (*ibid*) notes that this verb provides one of the clearest examples of the "lowering of /i/ to /e/ in N[ew] H[ittite]".

208

Second Plague Prayer (CTH 378.02)

^{D}UTU-*uš-ya-šmaš* SIG_5-*in* ***iššaḫḫi***

'...**I**, my majesty, **shall** also **treat** you well='do well by you' (KBo V 3 IV 30)[209]

n-at ***ēššaḫḫi-pat***

'I shall **carry** it **out**' (KBo XI 1 Vs. 24, 27)[210]

n-uš šēnuš ***iššaḫḫi***

'**I make** them into figures (KUB XXVII 38 I 19)[211]

nu SISKUR.SISKUR *kuedani parni* ***iššaḫḫi***

'in the house where **I perform** the ritual' (KUB VII 5 II 5)[212]

Attestation 2nd singular present

kuit-wa ***ēššatti***

209
Treaty with Ḫukkana of Hayaša (CTH 42) Šuppiluliuma I

210
Telipinu Proclamation: II. Hittite Version (CTH 19)

211
Ištanuvian festivals (In Hurrian) (CTH 775)

212
Ritual of Paškuwatti (against sexual impotence) (CTH 406)

'what **are you doing**?' (KUB II 11 Rs.6)[213]

nu-] *mu* [...] *ŪL aššanuwandan anduḫšan le* ***iššatti***

'**do not make** me persona non grata!' (KUB XXX 10 Rs. 22-23)[214]

Attestation 3rd singular present e-eš-ša-I (again, often in religious, ritual, legal context)

UD.KAM-*tili arkuwar* ***ēššai***

'**he** [daily] **makes** a plea' (KUB XXIV 1 IV 21)[215]

ēššai

'he [the priest] **celebrates** [= 'performs ritual']

šaḫḫann-a ***ēššai***

'he **does** corvée, feudal duty' (KBo VI 5 IV 4= Laws 1:41)[216]

213
Apology of Ḫattušili III (CTH 81)

214
Kantuzzili's Prayer (CTH 373)

215
Prayer to Telipinu (CTH 377)

216
Laws 1 to 100 (CTH 291)

kinun kāš kiššan ***iššai***

'now this one **will do** thus' (KBo XXII 1 Rs. 32)[217]

The supine of this verb often appears with the inchoative meaning 'begin to do something'. For more on this type of construction (i.e., supine *-wan* suffix is common with *-ḫi* verb iteratives, often with-*ḫi* verb *dāi-* 'put' as second element) in inchoative context, see Puhvel (1994a:161) or Epilecta (2002: 205-209):

ēššūwan teḫḫi

'I begin to make' (KUB XV 3 I 12)[218]

šaḫḫan] *ēššūwan dāi*

'he begins to do [feudal duty]' (KUB XXIX 24 = Laws 2:12)[219]

[*ēšhar*] *iššuwan dāi*

'he goes about shedding blood' (KUB I 16 II 24-25)[220]

217
Ḫattušili III on the Campaigns of Šuppiluliuma I (CTH 83.01)

218
Dreams of the Queen (CTH 584)

219
Laws (CTH 292)

220
Political Testament of Ḫattušili I (CTH 6)

#50. *ištamaš-* 'hear', 'listen to', 'obey'

15. Perception middle

Though attested as a *-mi* verb, it is heavily attested as a *-ḫi* verb in second person singular, with (as seems to be quite common, a modal meaning). All the following citations are from Puhvel (HED 2:453). Note: a) the heavy use of preverbs (*piran, parā, anda*), b) the common use of pronoun *zik* 'you' as a reflexive or emphatic element, and c) the common use of the verb in utterances addressed to a god (i.e. prayers).

Attestation 2nd person singular iš-ta-ma-aš-ti

zik mān memian piran parā ***ištamašti***

'if **you hear** of the matter beforehand' (KBo V 13 III 16-17)[221]

zig]*-an* [sic, despite expected *-at*: HED 2:453, with alternate zig-a line 44] ***ištamašti***

'you [yourself] hear it' (KBo V 4 Vs. 11, Rs. 44)[222]

221
Treaty with Kupanta-LAMMA (CTH 68)

222
Treaty with Targašnalli of Ḫapalla (CTH 67)

našma-kan mān ^{D}UTU-*ŠI kuedani anda idālu* ***ištamašti***

'if **you hear** in [or listen to] someone[speak] evil against my majesty'

(KBo V 3 I 27)[223]

našma-at zik-ma zikila ***ištamašti***

'or if **you hear** it yourself' (KBo V 3 II 29-30)

Note the use of the true reflexive *zik-ila* 'you yourself' (indeclinable suffix -*il*(*a*) means 'self' (Kronasser 1966:174; Sturtevant 1930:81).

[*nu* DINGI]R-*LAM le kuēlqa* ***ištamašti***

'you, god, do not **hear** anything!' (KBo XII 96 I 13)[224]

DINGIR-*LUM* EN-*YA* ***ištamašti***

'you, god my lord, **hear**' (KUB XLVIII 119 Vs. 15)[225]

Compare the archaic (Homeric) phrase, used, as is the Hittite verb, often in prayers: κλῦθί μευ, κλῦθί μου,'hear me!', 'give ear to me' (LSJ I:963).

223
Treaty with Ḫukkana of Ḫayaša (CTH 42)

224
d.LAMMA kursas (CTH 433)

225
Inventory of Sanctuaries by Tudḫaliya IV (CTH 525)

The root lexeme may be seen in Hittite divine name ^{D}Ištamanaššaš, the deity of hearing (i.e., who 'lends an ear' (HED 2:459) < *ištaman* 'ear') (see, for instance, KUB XX 24 IV 31 (= Festival for the Underworld Deities (CTH 645)). As I noted above, verbs referring to the 'head-bound' senses (i.e. eyes or ears), regularly have the extended metaphorical cognitive meaning 'perceive', or 'understand'. The proto-Anatolian meaning could have been simply 'head orifice', judging from related verb *išta(n)ḫ-* 'taste' (cf. *iš-taḫ-ta,* in the Old Hittite Fragments Naming the City of Zalpa (CTH 3) (KBo III 38) (Kronasser 1966:423). Although the Luvian cognate *tūm(m)an(t)-* means 'ear', IE cognates seem to refer more to the mouth: Greek στόμα 'mouth', Avestan *staman-* 'maw', NHG *stimme* 'voice' (Mallory and Adams 1997:387).

#51. *ištap(p)*- 'close', 'enclose', 'cause to stand' (?)

[Ritual use]

Two main opinions have been put forward concerning the origin of this root (which seem to reflect the two stems as suggested by Melchert, below):

1. A connection with Sanskrit *stabh*- 'fix' (also *stambh*-, connected with *skambh*-) as in the *bhū gaṇa ātmanepada* verb *stámbhate*, whose meaning, in the RV was "to fix firmly, support, sustain, prop (especially the heavens), RV [...] to stop, arrest, make stiff [...] to become stiff" (Monier-Williams 1998:1258). Monier-Williams (1998:1256,7) suggests that *skambh*- or *skabh*- are probably "mere" phonetic variation of *stambh*- also a *bhū gaṇa ātmanepada* verb (*skambhate*) (Hill and Harrison 1991:209) whose meaning in the RV is 'to prop, make firm', or 'check' 'keep away', as in RV 10.76. 4a,b (also Mayrhofer (III:511) who gives RV perfect form *tastámbha*). If **stembh*- is the source, cognates would include, in addition to above, Avestan *stəmbana* 'support', Tocharian A,B *stäm*- 'stand' TochB *ś(c)änm*- (< *ś(c)äm*—) (Mallory and Adams 1997:543 who suggest that this root is related to **steh*$_2$- 'stand (up)'.

ápa hata rakṣáso bhaṅgurā́vata **skabhāyáta** nírṛtiṃ sédhatā́matim
'Drive ye the treacherous demons far away from us: **keep** Nirṛti **afar**
and banish penury' [RV 10.76.4a,b]

Here would also belong Greek στέμβω 'entwine' (Frisk 1973:788; Puhvel HED 2:474).

2. A connection with Sanskrit causative *sthāpáyati* 'make to stand, stop, arrest' as in Sturtevant 1928:3,4), which is "secondarily associated with the root *sthā-* (cf. OLith. *stapýti*[*s*] 'stand still', ON *stefja* 'curb, restrain'" (Puhvel HED 2:475; also Mallory and Adams 1997:543). On the causative notion in the Hittite verb, see below.

Melchert (1994:270) says that *ištap(p)* is possibly from **stVmb*(^{h}): "A sequence */-mb-/ **may** be assimilated to /-bb-/" (stress in original), thus "I also prefer to derive Hitt. *ištapp-* 'stop up, shut' from **stémb*^{h}- thus /stabb-/ [...] The single /-b-/ in *ištāpi* is analogical to the type of *aki/akkanzi* and *išpāri/išpārranzi* [...] HLuv. (*261)*ta-p(a)-* 'close up, block off' can be read as /tab-/ or /tamb-/. If (!) Lycian *teb-* means 'besiege' and is cognate [...] it would suggest that */-mb-/ > /-bb-/ is PA" (Melchert 1994:163).

Puhvel however (HED 2:474) says that the "frequent gemination of *-pp-* as the marked spelling variant points to **p* and thus **step-*, e.g. *istāphe* < **stópA$_1$ey* [...] It is conceivable that both variants **step-* and **steb(h)-* are represented in the Hittite paradigm".

Sturtevant (1930b:156) notes that *ištap-* is one of the few Hittite verbs which "contains an original ā"[226]. Given this fact, and the suggestions of a link with IE **steh$_2$-*

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"Other certain etymologies which involve IH *ā* without a trace of a contiguous *h* in Hittite are these: Hitt. *hapatiš* has IH long *ā* in its second syllable, as appears from Gk. ὀπηδός [...] Hitt. [...] *man* 'if' must be the same word as Gr. μᾶν. Hittite *mamahhi* 'I say', *memai* 'he says' is identical with Gr. μέμνημαι [...] It is one of the few *hi*-conjugation verbs to preserve the reduplication". Sturtevant (1930b:156) notes that Hittite *tittanu-* 'cause to stand' "furnishes us the explanation of the curious reduplication of Skt. *tiṣṭhāmi*". (See Sihler (1995:499) for speculations concerning the remote history of Hittite causative *-nu-*.)

'stand (up)', Sanskrit *sthā-* 'stay', I suggest that the second *-p-* (which appears in attested forms with a clearly causative meaning) is the same element which appears in the type of (Sanskrit) roots described by Burrow (1955:357), an archaic causative morpheme:

> Roots in *ā* commonly insert *-p-* before the causative suffix: *dāpáyati, sthāpáyati, māpáyati*, etc., from *dā-* 'to give', *sthā-* 'to stand', *mā-* 'to measure', etc. This *-p-* is an old suffix or enlargement which is known from comparative evidence to have been associated with certain of such roots (Lith. *stapýtis* 'to stand still'), and it has been extended to the whole class in the causative. It is further applied to the root *r-* (*arpáyati*) and to a number of roots in *–i*: *adhyāpayati* from *adhi* + *i* 'to study', etc. In *ropáyati* 'plants' (*ruh-* 'to grow') it replaces the final consonant of the root.

The following attestations, some of the many from the Ritual for the Royal Couple (StBoT 8 IV 34-36) with the "old" ending *- ḫé*, contain cognate accusatives:

Attestation 1st singular present iš-ta-a-ap-ḫé (Otten and Souček 1969:115)

ta-an an-da III-*iš* LUGAL-*uš* SAL.LUGAL- *ša*

zi-e-ri-i̯a al-la-pa-aḫ-ḫa-an-zi

iš-tap-pu-ul-li-še-ta šu-li-i-aš [(*t*)]*a* ***iš-ta-a-ap-ḫé***

'The king and the queen spit three times into the bowl;

its lid is leaden -- then **I shut** it'

iš-tap-pu-ul-li-še-ta šu-li-i-aš [(*t*)]*a* ***iš-ta-a-ap-ḫé*** (KBo XVII 3 IV 32-33)[227]

'Its lid is of lead, and **I close** [it]'

Attestation 3rd singular present iš-ta-a-pi (Kronasser 1966:12; HED 2:471ff)

É.IN.NU.DA ***iš-ta-a-pi***

'**He shuts** the straw-house' (KBo VI 26 I 7-8)[228]

nu LÚÚ.HÚB GIŠAB.HI.A *anda* ***iš-ta-a-pi***

'the deaf man **shuts** the windows' (KBo V 11 IV 14)[229]

nu-kan ḫatteššar ***iš-ta-a-pi***

'**He closes** the hole' (KUB XXIII 137 II 27, in HED 2:471)

227
Ritual for the Royal Couple (CTH 416)

228
Laws (CTH 292)

229
Instructions for the Gateman (CTH 263)

Sturtevant comments extensively on this interesting root (see 1928a:3,4; 1930b:156). He notes (1928a:3) that this verb is, as in the citations above, "frequent in ritual texts with the meaning 'cover' ". See also Benveniste (1932b:139).

#52. *idalawa(ḫḫ)-* 'treat badly'

13. Emotion middle (b) 2-participant

This is not a factitive, despite the (optional) element (*ḫḫ*). The meaning is not 'make bad', but 'treat badly' (HED 2:490) Though also attested as a *-mi* verb, *idalawa(ḫ)* is attested as a *-ḫi* verb in second person singular, with a distinctly modal meaning. Note the alternate spellings, with and without the laryngeal.

Attestation 2nd singular present i-da-(a-)la-a-u-wa-aḫ-ti /i-da-la-wa-at-ti (Kronasser 1966:427) (sic dupl. of below, KBo V 13 IV 5-6) (Kronasser 1966:98))

n-an-zan SIG_2*-in ēšša* ***idalawaḫti-ma-an*** *le kuitki mān-an* ***idalawaḫti-ma*** *kuitki*

'treat it well, and do not **mistreat** it in any way; but if **you mistreat** it..'

(KUB VI 41 IV 12-14[230], cited in HED 2:490)

The underlying *l/n* stem IE noun **h₁éd̥ol-*, **h₁edunós-* 'evil, pain', is seen (with *-l* stem) in Luvian *ādduwal* 'evil', Tocharian B *yolo* 'evil'; from the oblique stem (*-n*) come Greek ὀδύνη 'pain, suffering', Old Irish *idu* 'pains' (especially birth-pangs), Armenian *erkn* 'birthpangs' (Mallory and Adams 1997:413). The distribution (which splits the "peripherals"

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Treaty with Kupanta-LAMMA (CTH 68)

Old Irish, Tocharian, Anatolian)suggests the word is exceedingly old. The suggestion has been made that the ultimate source is verb *h_1ed- 'bite'.

#53. *yaya-* (*y* = *i̯*) meaning unknown

Puhvel (HED 2:504) identifies this verb as an "intransitive *-ḫi* conjugation verb" and indicates that the verb is unclear in both meaning and, thus, etymology. It regularly occurs in combination with the *-ḫi* verb *tarnai-* 'release', in statements describing medical treatments, as in the following:

Attestation 3rd singular present ya-ya-i/ya-ya-a-i

namma ***ya-ya-a-i*** *katta-ya-an-za-kan tarnai*

'he ? and lets him (a patient in a medical treatment) down'

(KUB XLIV 61 Vs.9, in HED 2:504)

ŪL tarnāi ***yayai***

'does not release and ?' (KBo XXI[231] 76,77)

The reduplicated form of this verb suggests that it may be an iterative or a causative version of the verb *(i)ya* 'go'. Given the above context, the meaning would refer to some action in concert with 'releasing' (or perhaps 'discharging'?) a patient, perhaps 'make go=

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Fragments of Medical Rituals (CTH 461)

'gets (the patient) up/going'[232]

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See HED 3:461 for a suggestion by Melchert having to do with a cry of pain uttered by a patient during painful evacuation.

12. Positionals
[Ritual use]

The long root vowel of this verb clearly shows its relation to the *o*-grade of the IE perfect: as in fellow *-ḫi* verbs *māld* 'recite, vow' and (*i*) *šipānt* 'libate', 'sacrifice' , the long *ā* of *kānk-* is the reflex of */o/ in an "accented closed syllable" (Melchert 1994:105; also Sturtevant 1933:239). I have argued for the significance of lengthened grade to voice. On this matter, it should be noted that this is the same "persistent" **-o-* grade that characterises not only several verbs of the *-ḫi* conjugation, but also what are considered "deponent root presents" in other languages[233] (Jasanoff 1978:49). Thus,

> ...although middle root presents in Indo-European regularly show zero-grade when they are opposed to athematic actives with full grade [...] **full-grade middles are the rule in presents *media tantum*** (cf. Ved. *cáṣṭe* 'sees', *váste* 'wears', *śáye* 'lies') (Jasanoff 1978:118-119).[Emphasis added:SR]

Concerning the matter of the original velar consonant, Melchert suggests the original stop *#k-* is from */k/, with PA form **ḱónk-* (1994:94). The phonology here is problematic,

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See Jasanoff (1978) for this argument and examples in Tocharian, Germanic and Balto-Slavic. Such presents are often "derived from root aorist injunctives by the substitution of primary for secondary middle endings" (1978:118).

however. Old Hittite spellings (as can be seen in the examples below) show either the voiced or voiceless velar[234]. Oettinger (1979:551-4) suggests that Hittite spellings of words with initial dental or velar stops accurately reflected "expected" etymological ones (thus words with etymological voiceless stops are almost always written with signs with initial voiceless stops, and similarly with initial voiced stops). Kimball (1999:87) is dubious. She questions whether Oettinger's statistics are reliable enough to back up his categorical claims.

The 1st person singular appears often, with both spellings, (i.e. newer *-i*, older *-e*). It is often used in the description of hanging ritual items, be it fabric or bits of thread. In the first example, it appears in a description of a ritual (KUB IX 31 I 5) where : "a (sometimes multiple) object of ritual (*kelu* (c))[235] suspended in a gateway" (Puhvel HED 4:143):

Attestation 1st singular present ga-an-ga-aḫ-ḫi / kán-ga-aḫ-ḫi

kelun ***gangaḫḫi*** *nu-šši ḫuppali* ZABAR [*kariu*]*lli-šši*t [?]

'I **hang up** k.; in its netting it has bronze....' (KUB IX 31 I 5)[236]

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Oettinger (1979:420) claims that only the voiced initial appears in the later language.

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Puhvel (HED 4:143) explains the variant spellings of this word as evidence that it is "a morphologically ill-integrated foreignism, perhaps [...] a borrowed Hurrian ritual term" parallel in "opacity" to Hurrian *ki-e-lu, gi-e-lu, gi-lu*)

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Zarpiya's Ritual (Luwian) (CTH 757)

The following examples, attested with both the "older" *-e* spelling and with *-i*, are from the Ritual for the Royal Couple (Otten and Souček 1969:36)

[*tá*]*k-kan* [*g*]*āpinam kuwāpitta 1-an* ***gāngaḫḫi***

'I **hang** one thread on each' (KBo XVII 1 IV 17)

Also with final vowel *-e*:

...kuwāpitta 1-an ***gāngaḫḫe***

'I **hang** one [thread] on each' (dupl. XVII 3 IV 13, in HED 4:49)

Here, the same "formulaic"-type phraseology appears in a description of preparations for the Ritual of Anniwiyani, cited in Sturtevant and Bechtel (1935:104,112, and using his citation conventions), where *-ḫi* verbs are very common. Notice that the other verb in this particular citation (verse 21) is also a *-ḫi* verb:

(3.21) *na-aš-ta* ^{GIŠ}BANŠUR *I-NA* É.ŠA(G) *an-da te-iḫ-ḫi*

'Next I set the table within the house

(3.22) *na-aš-ta* ^{TÚG}*ku-ri-eš-šar kat-ta* ***kán-ga-aḫ-ḫi***

Next **I hang** the strip of cloth (across it)' (VBoT 24 III 22)[237]

[237]Anniwiyani's Ritual (CTH 393)

Attestation 3rd singular present ka-a-an-ki / ga-an-ki (Kronasser 1966:521)

3rd singular forms are common in OH ritual texts: cf. Otten and Souček (1969), Neu (1983:91)

...mān-kan kalulupi-šmi ***kānk****[i*

..'when **he hangs** [it] on their fingers' (KBo XVII 2 I 7)[238]

n-at-kan ḫantezzi āpiti kattanta ***ganki*** (KUB XV 31 II 19-20)[239]

'He hangs it down into the first pit'

GÙB-*laz* TÚG *kureššar*HI.A *ANA* GIŠ BANŠUR *piran katta* ***gangai***

'on the left **she hangs** widths of fabric alongside the table' (KUB VII 60 II 4-6)[240]

Puhvel suggests that the Old Hittite form *gāngaḫḫe* and alternates *kānki*, *kankanzi* [241]

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Ritual for the Royal Couple (CTH 416)

239

Evocation (CTH 484)

240

Evocation of Enemy Gods at the Frontier (CTH 423)

241

The "significant" alternations of 3rd singular *ka-a-an-ki* vs. 3rd plural *ka-an-ka-an-zi* (as in the Ritual for the Royal Couple) are "traces" of a moveable accent (thus Jasanoff 1978:49; Kronasser 1966:521).

"point to *ḱonk - A_2e (*y*), *ḱon-ke(*y*), ḱn̥k-´, and formally most closely match the Gothic perfect *haíhah* < *ḱe-ḱonke* (Matthew 27:5 *ushaíhah sik* 'he hanged himself'" (1997:51). Cognate Germanic forms (ON *hanga*, preterite *hekk*, Gothic *hahan*) shown both transitive and intransitive uses ('hang/be hung up'); the extended figurative sense of 'keep hanging' = 'keep in suspense' adheres in Latin and Sanskrit cognates of *kāṅk-*, thus, Latin [deponent] *cunctor* 'delay', Sanskrit ["intransitive" *ātmanepada*] *śáṅkate* 'waver, hesitate, doubt, fear'. Note that Hittite analogue of these *media tantum* forms is NOT a form such as **ganga(tta)ri* but rather the *-ḫi* verb *gāngaḫḫe*, *ga/kāṅki*.

The morphologically and semantically similar Tocharian B *śäṅk* 'delay, hesitate' may also be cognate (Mallory and Adams 1997:255), suggesting a Narten root (see Narten 1968), with strong grade *ḱonk-*, weak grade *ḱénk*. (See the discussions in Jasanoff 1978:49ff,83)).

#55. *karap-* 'eat up, devour'

2. Reflexive (and related middle) situations (c) Indirect middle (verbs of ingestion)

This verb appears to refer to inelegant, zealous ingestion of food, much as the verb *šārap* 'slurp' (which see) refers to overzealous ingestion of liquids. As such, it often has wolves, dogs, ravenous insects or demonic deities as subjects, as in the citation below, with the "normal" verb for human ingestion being *ed-*) (HED 4:73).

This verb is attested as a *-ḫi* verb only in the third singular, although Sturtevant (1933:257) cites (without reference) 1st singular *ka-ri-ip-ḫi* where, he notes, the *-ḫi* ending is "attached directly to a final consonant of the stem".

Attestation 3rd singular present ka-ra-a-pi/ ka-a-ra-pi[242]

(Sturtevant 1933:283; Kronasser 1966:520; Oettinger 1979:53)

90 (27) *ták-ku* UR.ZÍR-*aš* ḲÀ ŠAḪ ***ka-ra-a-pi*** ...

'if a dog **devours** pigfat...' (KBo VI 2 IV 2)[243]

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Kimball (1999:272) claims the vowel quality of *karap* has been influenced by the semantically similar *šārap*: the plene writing of the third singular forms (below) as "probably due to the influence of *sārapi* 'swallows, slurps' (e.g. 3 sg. pres. *sa-a-ra-pi* KUB XXXIV 97 L.15, U) < **sórbh-ei* : Lat. *sorbeō*, Gr ῥοφέω". On this point see also Oettinger (1979:426).

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Laws 1 to 100 (CTH 292)

Kimball (1999:272) suggests an *o*-grade ***ghróbh-***, ***ghrebh-*** as source, also seen in cognate Sanskrit aorist *agrabham* 'I seized'. *Agrabham* is also suggested by Sturtevant (1933:31), but Puhvel (HED 4:73) considers this "improbable" on semantic grounds. Puhvel (*ibid*) agrees that *karap* has an *o*-grade IE perfect as source, noting *a:e* ablaut in the weak grade of the root[244]). Sturtevant (1933:239) also remarks on the fact *karap*, as well as *šak-* 'know' and *ar-* 'arrive' (*-ḫi* verbs all) "show *e* instead of *a* in the plural".

The more probable cognate seems to be Sanskrit *ātmanepada ja(m)bhate* 'snap at' or 'swallow' (see Mayrhofer 1956:419) (< *ātmanepada jṛmbhate* 'opens the mouth'), seen in the Vedic example cited below. As in Hittite, the subject is an animal, but an animal which regularly stands symbolically for the gods (note the perfect verb (present tense!) paired with *ātmanepada jámbhe*):

jámbhe rásasya vāvṛdhe

'[the Bull among the cows] strengthens as **he drinks** the rain' [RV 1.37.5c]

The imperative is *kar-ap* 'eat!'. The *-š* preterite is attested *ka-ri-pa-aš* 'he devoured'.

For more discussion of this verb see Sturtevant 1933:283; Kronasser 1956:198; Kronasser 1966:520; Oettinger 1979:53, 449; HED 4:72-74.

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Seen in fellow *-ḫi* verbs: *ak-* 'die', *ašaš-* 'seat', *ḫan-* 'draw water', *ḫaš-* 'give birth', *šak-* 'know', *šarap-* 'slurp'.

#56. *karmalašša-* 'suffer harm'

This verb is an iterative version of a basic *karmalai-* 'suffer harm'. It appears only in a late parallel version of earlier types of compensation Laws (Friedrich 1971:52). It apparently is meant to cover a situation which developed involving a type of deliberate, "aggravated, unmitigated bone-breaking and extended durative recuperation", indicated by the iterative forms of both verbs (*karmalašša-* and fellow *-ḫi* verb *duwarna* 'break' [245] (HED 4:90).

Attestation 3rd singular present kar-ma-la-aš-ša-i (Kronasser 1966:555)

X (28) *ták-ku* LÚ *EL.LUM* ŠU-*ZU na-aš-ma* GÌR-*ŠU ku-iš-ki du-wa-ar-ni-iz-zi*
na-aš ma-a-an ***kar-ma-la-aš-ša-i*** *nu-uš-ši* 20 GÌN KÙ.BABBAR *pa-a-i*
ma-an-aš Ú.UL-ma ***kar-ma-la-aš-ša-i*** *nu-uš-ši* 10 GÌN KÙ.BABBAR *pa-a-i*
'if someone breaks a freeman's hand or foot,
if **he suffers harm (= is incapacitated)**, he gives him 20 shekels of silver;
if **he does not suffer harm (= is** not **incapacitated)**,
he gives him 10 shekels of silver'. (KBo VI 4 I 28-29)[246]

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See Melchert (1994:78) for the argument that "all examples of iter[ative] *-išš(a)-* in Hittite are formed to *ḫi-* verbs in *-i-*". See entries *ḫalzešša-* 'crave', *šišša* 'impress', as well as *duwarna-* 'break'.

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Laws (CTH 291)

#57. *kartimmiyaḫ(ḫ)*-'anger'

13. Emotion middle

This verb appears in the Birth Rituals:

Attestation 3rd singular present k [(ar-)] tim-mi-ya-aḫ-ḫi

ma-an-kán ***k*** [(***ar***-)] ***tim-mi-ya-aḫ-ḫi*** [*ku-in-ki*?]

'Were someone to anger [someone]'...or 'If someone **angers** [someone]'

(KBo XVII 65 41, Beckman (1983:136))

The Hittite word *kir-/ kart-* 'heart'[247] ultimately underlies this causative/factitive verb. There is not sufficient evidence from other sources to allow us to assume that the Hittites saw the heart as the seat of anger, although it is certainly possible that they did (cf OCS *srŭdĭce* 'heart' > *srŭditi sę* 'be angry'). The IE root **ḱerd-* 'heart' most probably referred more to thought processes or belief[248] (cf Mallory and Adams 1997:262,263 and reference therein), rather than to specifically 'anger'. The Hittites, however, being singularly

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With cognates throughout the IE world.

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Hittite certainly preserved this type of meaning in metaphorical expression using 'heart': see, for instance, *karta šai* 'remember' (lit: 'press to heart')(under #94 *šai* 'press') or *karta dai* 'believe' (lit: 'put in heart') under #106 *dai-* 'put').

astute, may have made the link between the *emotional* feelings of anger and the physiological response of an adrenaline influenced strongly beating heart. See Sturtevant (1931d:34), or Puhvel (HED 4:110ff).

#58. *kiš-* 'become'

5. Impersonal 16. Spontaneous events (c) associated with (i) animate beings

This verb is identified variously as "deponent" (Friedrich 1960:108), *media tantum* (Kronasser 1966:514, 522; Neu 1983:99; Puhvel HED 4:191), or "medio-passive" (Sturtevant 1933:289). It is considered the suppletive passive to the verb *iya* 'do, make'. Puhvel (HED 4:198) notes the "lack of non finite inventory" associated with this verb.

It is heavily attested with *-ri* endings in "impersonal-type" constructions (*ŪL kišari* 'it can't be done'/ 'it's impossible') and with the "reflexive" particle *-za*.

Whether the "active" forms of this verb are already lost at the oldest layer of attestation is a moot point: there are forms attested without the (later) *-ri* suffix. The order of morphemes in forms with *-ri* would indicate that this was a truly ancient form which 'led the charge' in the 'emancipation' of the passive from the ruins of the former binary voice opposition, as is attested with later developing "passive" forms both in Sanskrit and Greek.

The reader will please note these points in the following example: The ending *-ḫa* is considered to be the original ending of the *-ḫi* conjugation, with the endings in *-a* consigned to the preterite after the introduction of the hic-et-nunc tense particle *-i*.[249]The present

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Sturtevant (1933:257) "Hittite *ḫe* and IE *aˣi* can both be derived from IH *ḫaˣi* . Perhaps the rarity of the spelling with *ḫe* indicates that the analogy of final *-i* of the primary endings of the *-mi* conjugation had nearly banished original *-e* from the *-ḫi* conjugation at the time when our texts were written". Further (Sturtevant (1933:258) : "The preterite of the *ḫi* conjugation is not an inherited category [...] a new preterite was developed under the influence of the tense-system of the *mi*-conjugation. [...] When the ending of the pres[ent] 2 s. was changed

meaning is clear in this example from the "Fragments naming the city of Zalpa[250]". Muršili I (the adopted grandson of Ḫattušili "the first clearly attested Hittite king" (Bryce 1998:65)[251] is understood to be the speaker:

Attestation 1st singular "preterite present" ki-iš-ḫa

ūk-wa LUGAL-*uš*-(*š*)*miš* ***kišḫa***

'**I shall become** your king' (KBo XXII 2 Rs 15[252])

With *-ḫa* as the original 1st person present ending of what eventually became the *-ḫi*

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from *ta* to *ti* under the influence of the *mi*-conjugation [...] the original form remained in its preterite value". On these chronological points, see also Neu 1968a (=StBoT 6:135). As I indicated earlier, I believe there is much evidence for assuming the final *-a* of several of these forms to be a dummy vowel, with these "present" forms exactly parallel the injunctives of the IE "m" series: "One of the earliest derivative categories was that of specific indicative pre *m* sents. This was implemented by the addition of a deictic -i ('here and now') to four of the endings, *-m,-s, -t, -(e)nt*, the so-called primary endings. The corresponding unextended endings, while still retaining some degree of their multifunctionality, came increasingly to be used with preterital meaning (by relegation, of course), the so-called secondary endings" (Kerns and Schwartz 1972:4).

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The city of Zalpa is named in the Anitta-Text (as ^{URU}Za-a-al-pa-aš, see Neu 1974 (=StBoT 18):12).

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We have information about this early king from three sources: 1. The (bilingual) Annals (KBo X 1, KBo X 2 = CTH 4), the Testament (KUB I 16, KUB XL 65 = CTH 6), and the (considerably latter) Edict of Telepinu (CHT 19). According to Sturtevant (1935:85) this king ruled during "the first half of the eighteenth century", from the city of Kuššaraš located in the bend of the Ḫalys river (see Map). Bryce gives his dates as 1650-1620 (1998:xiii).

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Fragments Naming the City of Zalpa (CTH 3)

conjugation (Sturtevant 1933:260ff), the arrangement of morphemes in such forms as *ki-iš-ḫa-(ḫa)-ri* certainly suggest such a chronology, with the "passive" *-ri* as a latter addition. It is important to realize and remember that first singular "middle" endings in *-ri* [that is, with *-ri* as the only suffix, appended directly to the root] do not exist (Sturtevant (1933:264). The only citable first person singular forms end in *-ḫari* or in *-ḫaḫari*. (An example would be *e-eš-ḫa-ḫa-ri* from *eš* 'sit'.) I quote Sturtevant's wording: "If we detach the tense sign *ri*, as we should have to do from any other midd. form ending in *ri*, there remains a personal ending *ha* or *haha*. The pret. 1 s. ends in *hat* [...] e.g. *eshat* (*e-eš-ḫa-at*), *eshahat* (*e-eš-ḫa-ḫa-at*)[...] here again, the removal of the tense sign leaves an ending *ha* or *haha*" (which clearly does NOT have preterite value, or else there would be no need for the addition of the preterite marker *-t*.)

See this form (*ki-iš-ḫat*) in the 1st singular preterite from the Apology of Ḫattušili, with Sturtevant and Bechtel's citation format:

(3.12) [*nu-za*] *am-mu-uk* LUGAL KUR ^{URU}*ḪA-TAK-PIŠ* ***ki-iš-ḫa-ḫa-at***

SAL.LUGAL-ma-za (3.13) [*zi-ik*] KUR^{UR}]^{U}*ḪA-TAK-PIŠ ki-iš-ta-at*

'And **I became** king of the land of ḪAKPIŠŠAŠ

and you became queen of the land of ḪAKPIŠŠAŠ'

(Sturtevant and Bechtel 1935:75)[253]

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The older form is buried in the later addition of "medio-passive" *-ri*. Note as well that both forms are accompanied by the "reflexive" particle *-za*. That this is a transitional text in the "emancipation" or development of the passive is suggested by passage which follows:

Not all of these second singular preterites are with *-za:*

1st singular *ammuk kinun ANA* DINGIR .MEŠ ^{LÚ}SANGA ***kišḫat***

'I am become a priest to the gods' (KUB XIV 12 Vs.4[254], in HED 4:194)

2nd singular *ANA* ^{D}*Hebat* GEMÉ ***kištat***

'Thou art become a maidservant to Hebat'

(KBo XVII 65 Rs.57[255] in HED 4:194)

Attestation 2nd singular "preterite-present" ki-iš-ta

LÚ.MEŠ-*aš-miš* [*I*]*e* ***kišta*** *gāinaš-miš le* ***kišta***

'my man [sic] **become** not! My kinsman **become** not!'

(KUB XXIX 1 I 11[256], in HED 4:191)

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ma-aḫ-ḫa-an-ma ú-it IŠ-TU É LUGAL *ḫa-an-ne-(m)eš-šar*
'When, however, an indictment was brought again from the palace'

Here the metonymic use of the phrase É LUGAL suggests a transitional meaning between an inanimate and an animate agent. Later still, unequivocally animate agents are attested (see the examples in Chapter 7 of Volume I).

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Third Plague Prayer (CTH 378.03)

255
When a Woman Conceives (CTH 489)

256
Foundation ritual (CTH 414)

The 2nd person singular is also attested with the addition of the suffix *-ti* and the 'reflexive' particle *-za*: *nu-za apel kīštati* 'you become his [ally]' (KUB XIX 50 III 13[257], in HED IV:191).

"Impersonal" types of 3rd singular are extremely common. The following are typical of such usages (the first two might be construed as the Hittite version of 'okay'):

Attestation 3rd singular present ki-i-ša

āššu ***kišta***

'good (things) will **happen**' (KBo XIII 31 I 3)

ara ***kišta***

'it will be **right**' (KUB XXXIX 9 Vs 12[258], in Otten, Totenrituale 54)

ḫudāk ***kišta***

'suddenly **occurs**' (KBo XXV 139)[259]

257
Treaty with Manapa-Tarḫunta of Šeḫa (CTH 69)

258
Funerary rituals: fragments (CTH 450.III)

259
Palaic ritual (CTH 752)

natta ***kīša***

'[it] doesn't **happen**' (KUB XXXVI 105 Rs.15)[260]

GE_6-*anza* ***kīša***

'night **falls**' (KUB XIII 4 III 46)[261]

n-ašta kuedani ḫāli waštul anda ***kīša***

'on whose watch an offence **happens**/is committed'[262]

Not all third singulars of the form *kīša* are "impersonal", however:

t-aš ^{GIŠ}TUKUL-*li* ***kīša***

'He **becomes** an artisan' (KBo VI 2[263] + XIX 1 II 22)

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Anecdotes (Palace Chronicle) of the Reign of Ḫattušili I (CTH 8)

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Instructions for the Priests and Temple Officials (CTH 264)

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This last citation is a clear example of lexical "passive": compare the "active" expression *waštul* [...] *iyazi* '(s)he commits an offense'. The above is also attested with the *-ri* suffix, but the translation is passive, with *waštul* as the subject: *waštul kīšari* 'an offense is committed'.

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^{URU}KÙ.BABBAR-*ši* LUGAL-*uš* ***kiša***

'..**becomes** king at Ḫattuša' (KUB VI 28 Rs.19)[264]

Some suggested cognates for this very old verb have been OHG *kēran*, German *kehren* 'turn' from a root of the shape **geys* (but see Kimball 1999:208,209 for a discussion of phonological problems associated with this suggestion). Semantically, Greek πέλομαι 'turns, becomes', Latin *vertō* and Sanskrit *vartate* 'turns, becomes' offer "semantic analogues" (*šiuniš kišat: Caesar in deum versus*) (Puhvel HED 4:198).

Puhvel suggests that Latin *ges-* is cognate: "This draws Lat[in] *ges-* out of its isolation and amounts to one more remarkable Hittite-Latin isolexeme" (HED 4:198). This explanation would throw light on the "obscure" etymology of *gerō* 'I do'[265] as "transparently **ges-*, cf. pple *gestus* < *ges-tos* (Sihler 1995:171).

On the issue of what root formation underlies this very important verb, Tischler (1983:585,586) repeats Eichner's (1973:78) suggestion of an acrostatic middle of the shape

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Oracle Fragments (CTH 582)

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gerō (< *ges-o*) is a member of the "simple thematic" third conjugation which in Latin is a "closed, relic class" (Sihler 1995: 532) which includes much basic vocabulary (as does the Hittite *-ḫi* conjugation), including *legō* 'gather', *tegō* 'cover', *dīcō* 'point out, say', *dūcō* 'lead', *gerō* 'carry on', *agō* 'impel' as well as deponents *ūtor* 'use',enjoy', *sequor* 'follow' and many others. Cognates of root presents of this conjugation are almost exclusively *-ḫi* verbs: *malla-* / *molō* 'grind' (both from **melH*), *da* / *dō* 'give' (both from **deH-*), *dāi*/ *con-dō* 'put (together)' (both from **deH*$_3$). Sihler (1995:533) says that the "selfsame" stems underlie, for example, such perfect forms as *moluī* and participle *molitus.*

**geis-e/o-re* 'is turned'[266]. In a more up-to-date analysis, however, Kimball (1999:208) says that the acrostatic middle has the shape **keis-*, seen in Sanskrit noun *ceṣṭā* 'movement' and denominative *ceṣṭāti* 'stirs, acts, moves'. She says that **keis-* "should be an extended form of **kei-* 'move' in e.g. Skt. *cyavate*, Gk. κίω, and Latin *cīēre* 'set in motion'. Mallory and Adams (1997:506) add Old Persian *ašiyava* 'set out', Albanian *qoj* 'wake', Greek σεύω, Armenian *c'vem* 'set off', Tocharian B *śä* 'set in motion'. Bomhard and Kerns (1994:461) suggested reconstruction **k^{y}[^{h}]a/ey-* is instructive here, as it would explain most of the irregular reflexes from such a root.

Is it possible that verbs *ki* 'be located', *ki-š* 'become', 'take place' (with aspectual aorist *-š-* suffix) and *ki-š-t* (with aspectual *-š-* suffix plus preterite tense particle *-t-*) are related? (cf. Greek κεῖ-μαι, etc.)

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"Acrostatic" means that the accent is on the first (root) syllable only, and has only full grade (in nouns, at least). This type occurs in "ancient paradigms" (Sihler 1995:278).

#59. *kururiyaḫ(ḫ)*- 'wage war (on)', 'act hostile to'

3. Reciprocal domain (c) Naturally reciprocal events or (e) Naturally collective actions

On the issue of 'reciprocity': exchange may be either with friendly or unfriendly intent, as here. This is another *-ḫi* verb which bears the factitive/causative formant *-aḫḫ-* (Sturtevant 1933:72), indicating the presence of an animate agent who 'makes' one into an enemy, but with a slight twist. Puhvel (HED 4:285) calls this verb "a rare deverbative factitive like *kartimmiyaḫḫ*- 'make angry' from *kartimmiya*- 'be angry'". The base of this particular verb is the verbal derivative *kurur-iya*[267]- 'make war'= 'be hostile' (matching Akkadian *naq/kāru* 'be hostile') which Watkins (1975:77, cited in HED 4:284) saw as some type of stative, **kurure*-, and, ultimately, from base noun *kurur*- , a neuter noun meaning 'enmity, hostility, warfare', etc.

Attestation 2nd singular present ku-ru-u-ri-ya-aḫ-ti (Kronasser 1966:431; HED4:284)

zi-ik-ma-aš-ši SIG_5*-iš-ti nu-uš-ši Ú-UL* ***ku-ru-ri-ya-aḫ-ti***

'but [be] **you** warm to him, and **do not make war on/act hostile to** him'

(Bronzetafel aus Boğazköy IV,9-10 = Otten 1988:26)

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Note the similarity in morphological location and meaning to Sanskrit *-ya-* 'act like' = Hittite *- (i)ya-* 'act like'. Morpheme *-ya-* in Sanskrit is instrumental in the development of the passive, (as is generally believed, via the 4th (= *div-) gaṇa*).

Many have connected this root with Sanskrit *krūrá* 'slaughter, atrocity'[268], Avestan *ɣrūrō* (Mayrhofer II:280ff, Frisk 1973:29, where the Avestan form is spelled *xrūra*), Greek κρυερός 'icy, cold, chilling' (which contains an inherited suffix which appears in "adjectives belonging to the most ancient stock of words" (Palmer 1980:258), but perhaps more likely Greek κρέας 'flesh' (< κρεϝας L, see below)), Latin *crūdus* (In early Latin, *r* and *d* alternate, cf. *cruor*, Italic *rado* 'scarce < Latin *rārus* (Sihler 1995:151[269]). The root noun that underlies the Sanskrit form *krūrá* is *krávi* 'raw flesh', an old neuter *i*-stem (Burrow 1955:176), sometimes extended by archaic suffix *-s*. It is attested in the Vedas, but disappears in the Classical language (Burrow 1955:39). The word appears to be part of the oldest level of the lexicon inherited from IE. On this point, I cite Mallory and Adams (1995:71):

> It has been argued that the lexical distinction between '(inside) blood' and '(outside)blood' in PIE is emphasized by derivatives and extensions of meaning that indicate two opposed metaphorical sets. According to this hypothesis, the root for '(outside) blood' **kréuh$_a$-*[270] yields words signifying aggression, e.g. Bret *kriz* 'cruel', Lat *crūdēlis* 'cruel' [...] and dying, seen metaphorically in terms of the hardening (or freezing) of 'outside blood', e.g., OIr *crūaid* 'hard', Latin *crusta* 'crust', Latv *kreve* 'coagulated blood', OInd

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Compounds involving this morpheme refer to very horrible things: not only 'bloody and terrible deeds, cruelty, harshness', but also women of 'terrible or fierce disposition' or 'formidably smelling costive bowels which are unaffected by strong purgatives' (see Monier-Williams 1998:322ff)

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But there is more to it than that: see Sihler (1995:226).

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The other root for 'inner (or 'flowing') blood', **h$_1$ésh$_2$r-*, associated with the concept of life-giving fluid and, by extension, the patrilinear line, is also attested in Hittite, Greek, Sanskrit, Armenian, Latvian, Tocharian (see Mallory and Adams 1995:71 for a full list).

krūdáyati 'makes thick, harden' and OHG *hroso* 'ice', Grk κρύος 'icy cold', Latv *kruv-es-is* 'frozen mud'. [SR: Here is the link between the Greek cognates, referring to 'cold/freezing' and 'flesh']

No etymology of this old and basis form is definitive, and a thorough investigation of the various intriguing leads is, regrettably, far beyond the bounds of this study. Two possibilities for further research might include the phonological implications of a link between Hittite *kurur-*, Sanskrit *kráv-is* and Latin *furor* 'rage'; the original consonant would have had to have been the "plain" velar *k-*, as this word has undergone neither palatalization (which would have indicated k^{j}) nor labialization (which would have indicated k^{w}) (Burrow 1955:67,75). A second possibility is a connection with Sumerian KÚR (= Akkadian *nakru)* 'enemy'.

Suffice it to say that cognates of this item belong to the oldest layer of the lexicons of Hittite, Sanskrit, Greek and Latin.

 # 60. *lāḫ-, lāḫu-, laḫ(ḫ)u-, laḫ(ḫ)uwa-*'pour', 'pour out';'to empty (a container), 'flow', 'overflow'(intransitive).
In some passages, 'spit' seems an acceptable meaning.

Depending on meaning, level of spontaneity, could be one of several Kemmer categories. Meanings involving 'washing' or 'grooming' (pouring bath water) could be subsumed under **7. Grooming.** However, given the consistent and common use in ritual context, it seems more likely to fall under **14. Cognition middle** (verbs involving deliberation, intent).

For the importance of pouring various liquids, both in Hittite rituals specifically and in the broader context of Near Eastern religious rituals in general, see Burkert (1979:41ff), and especially Puhvel HED 5:16-25. The latter notes that this verb is "influenced semantically by Akk. *šapāku* [...] especially by the technical sense of 'pour metal for casting'. But unlike *šapāku*, which also means 'heap up' (solids), *laḫ(ḫ)u(wa)-* is strictly confined to liquids. Even fine-grained solid "pourables" like salt (MUN) usually require *isḫuwa-* [...] or *suḫḫa-*" (HED 5:23).

The root is spelled variously *lāḫ-* (CHD), *lāḫu-* (HHP), called an "u-Stamm" by Kronasser (1956:198), so probably the labio-velar element should be included as part of the root (but see below). Puhvel (HED 5:23) identifies monosyllabic *lahw-* (not **lahu-*, which would have yielded **lah(h)umeni* [rather than *lahueni*] [...] O Hitt. *lahw-* gradually evolved to the younger type *lah(h)uwa-*, perhaps by mutual paradigmatic rapprochement with the semi-synonym *ishuwa(i)-*". Kimball (1999:398) suggests an IE source either as **lóh$_2$-w-* (strong stem), or **léh$_2$-w-* (weak stem) "if *lāhu* was originally an **h$_2$-* present". Melchert (1994:72) agrees that this verb derives from a *u*-present of the shape given in Kimball, not **léh$_3$-u,* in Melchert's words, "contrary to a number of claims". Palmer (1980:87) comments

that "in Linear B the verbal stem is *lewo-* as opposed to later λο[Ϝ]ε". Sihler (1995:44) posits PIE root "*$lewH_3$- 'wash' > *low- > L *lavō*: G λο(Ϝ)έω (the latter from **lewo-* as in Myc. *re-wo-te-re-jo* 'for bathing'). See as well Chadwick and Baumbach (1963:218) who cite Mycenaean *lewotrokhowoi* 'bath pourers' (descriptive of women). These authors note that Homeric λοετρόν may be a metathesized form of *lewotron* ("or vice versa").

Melchert cites evidence for an (uncharacterized) stem *laḫ(ḫ)-* (< *$lóh_2$-/*$léh_2$-) one of the athematic *-ḫi* verbs which manifested an earlier qualitative ablaut, subsequently lost "by regular phonological changes". Analogical remodelling (after the type *išpāri/išparranzi* type) would account for a 3rd singular **lāḫi*, "which also leads to *lāḫu-* beside *laḫḫu-*" (1994:72). The verb is very common and is attested in all three persons:

Attestation 1st singular present la-ḫu-uḫ-ḫi

EGIR-*anda ma-šši-kan išši-šši* ***la-ḫu-uḫ-ḫi***

'but thereupon **I pour** [the medical concoction] into his mouth'

(KUB VII 1 I 29[271], in Kronasser (1966:525) "'ich gieße' (magische Medizin dem Patienten in den Mund)", (KUB VII 1 I 27 (Kronasser 1966:79,80); KUB 7.1 i 30 (CHD)) (Also Sturtevant 1931a:118).

Attestation 2nd singular present la-aḫ-ḫu-ut-ti

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Ritual of Ayatarša, Wattiti, & Šušumanniga (CTH 390)

nu wātar EGIR-*pa* ^{GIŠ}PISÀN ***la-aḫ-ḫu-ut-ti***

nu kī-ma EGIR-*an artaḫḫiya* ***la-aḫ-ḫu-ut-ti***

'**You pour** the water down the drain;

but afterwards **you pour** it into the sewer'

(KUB XXX 34 IV 14, 15[272] in HED 5:16, (Kronasser 1956:198 also 1966:80) also CHD.

The following spelling is probably the most common of the numerous scribal variations for the 3rd singular of this verb – *lāhuwai* is also common. Kronasser (1966:79) describes some 50 or so variations involving *wa/u* alternations, of which 20 are spelled as below:

Attestation 3rd singular present la-a-ḫu-i [273]

The 3rd singular of this verb is heavily used in ritual contexts, in descriptions involving pouring (or spitting) (out) liquids which have been used during various rituals (including birth and medical rituals). Fluids poured (out) in such contexts may include *wātar* 'water', both plain and 'holy' (*šuppi wātar)*, *waššíi*HI.A 'medicaments', GEŠTIN 'wine',

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Iriya (CTH 401.03)

273

Also *la-a-ḫu-i* several times in Neu 1980:223,224;1983:106. (CHD KBo 17.1 i 16,17)(StBoT 1969:18 = ARK). There are numerous 3rd singular forms of this verb cited in Neu (1983:106).

'water', both plain and 'holy' (*šuppi wātar)*, *waššíHI.A* 'medicaments', GEŠTIN 'wine', KAŠ 'beer' (including "light" beer -- KA.DÙ NAG, and even (perhaps) a brand name (?) "falcon" beer --SÚR.DÙ.A ^{MUŠEN} NAG), KAŠ-GEŠTIN 'beer-wine', YÀ.DÙG.GA 'good oil', as well as honey, butter, sweet oil and other unspecified 'mixed stuff' (see Puhvel HED 5:17ff).The following is a typical example of such a usage, from the Ritual for the Royal Couple. Note the use of the *-ḫi* verb *ar(r)a-* 'wash' in the same passage. Note also that in this particular passage, 'spit' (carried by the semantic range of 'empty a liquid', as above) seems a better translation than 'pour'[274].

... LUGAL-*uš* III-*ŠU a-i-iš-še-et a-ar-ri ḫu-ur-ti-i̯a*-[(*li*)]-*i̯a* ***la-a-ḫu-i***

...king+NOM 3-his mouth+INSTwash+3sg receptacle+LOC/DIR[275] pour+3sg

SAL.LUGAL-*ša* III-*ŠU a-i-iš-še-et* [(*a-a*)]*r-ri na-at ḫu-ur-ti-i̯a-li-i̯a la-a-ḫu-i*

queen+NOM 3-her mouth+INST wash+3sg and-that receptacle+LOC pour+3sg

'The king washes his mouth three times and **spits** into the bowl.

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Puhvel suggests that the ritual involves a washing of the face (with 'mouth' metonymic for 'face'), rather than use mouthwash, and let the water drop into a bowl (p.c.).

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It is hard to tell whether this word is locative or the directive case. Luraghi (1998:177ff) indicates that "The directive is preserved as a case distinct from dative-locative only in Old Hittite, where it is used with nouns denoting inanimate entities to express 'motion towards', in sentences containing verbs of motion [...] Both in later Hittite and in the other Anatolian languages, the directive merges with the dative-locative; this is also the case in Old Hittite with the stems in *-i-*." She indicates as well (1997:12) that "*lahuwa-*, 'to pour', normally takes the directive case in Old Hittite". Puhvel (HED 3:408) lists the lexical item "*hurutil-* (n.), name of a dish", i.e., without an *-i-* in the stem, which would make the case ending *-i̯a* (locative), not *-a* (directive). For *ḫurtiyalla-* see HED 3:437.

The queen washes her mouth three times and **spits** it (= the water) into the bowl'

(Ritual for the Royal Couple Vs.I 15,16 (StBoT 8:18)

Here is another example, again, from an Old Hittite ritual:

nu	I ^{DUG} *huppar*	KAŠ *tagan*	*dapian*	***lahuwanzi***
conj.	1 bowl	beer	earth+LOC [276] entire	pour+3pl

'**They pour** a whole bowl of beer on the ground'

Althethitische Ritualtexte in Umschrift (StBoT 25:23, iv 56)

Importantly, this verb appears as well in descriptions of what Puhvel (HED 5:20) indicates was to the Hittites a "flowing", "humoral" conception of the human soul (the same notion occurs in the Epilogue of the Code of Hammurabi). Such meaning is seen in the following passage:

nu-wa-kan apel ZI-*an* DINGIR.MEŠ *uwitenaš iwar arḫa* ***lāḫḫuwatin***

'**pour away** his soul like water, ye gods!' (KUB X 3 III 1-2[277], cited in HED 5:20)

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Luraghi (1997:12) notes that "the bare stem locative occurs with motion verbs in Old Hittite already, covering not only the function of the locative case, but that of the directive, too" as in the above example.

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ANTAḪŠUM 2nd day (CTH 606)

Kronasser (1956:198) suggests the following cognates: Greek λούω, Latin *lavāre* [or *lav-ĕ-re*]'wash'. On the vowel correspondence, see Palmer (1954:215) who notes that "*ov* > *av* in the syllable preceding the accent: *cavēre*, cf. κο[Ϝ]έω, [...] *laváre*, cf. λό[Ϝ]ω". Sihler (1995:581) posits the reduplicated **lawawai* > **laawei* as the source of the Latin long vowel perfect *lāvī*(a member of the *-uī* type, possibly formed to *seṭ* root (**léh*$_2$- ?), or to an extended stem ending in *-v-* (**léh*$_2$*-w*?). Sihler also mentions the possibility that the *-vī/-uī* suffix, which is "peculiar to L[atin]", might have its origins in the perfect participle in **-wos-* The Hittite extended form *laḫ(ḫ)u-wai* seems to suggest that Sihler's analysis may be worth pursuing. (See also Puhvel HED 5:24 for opinion here, as well as explanations of "stray [cognate] forms in various languages", including Armenian *loganam* 'bathe', Old Irish *lōthar* 'basin', etc.

The Greek cognate verb λούω (contracted from λοέω) has the sense of 'wash the body'-- other lexical items were employed for the washing of hands and feet (νίζω), or of clothes (πλύνω) (LSJ II:1061,1062). The Latin cognate *lav-* as well originally had a clear "middle" sense of 'wash (oneself)' and showed voice developments similar to that of the cognate Hittite verb *laḫ(ḫ)u-*. Ernout and Thomas (1953 [1951]:203ff) indicate that in Latin, as in Hittite (where the verb has both *-mi* and *-ḫi* forms), *lav-* as well had parallel forms : "l'actif apparaît parfois à côté du médio-passif avec une valeur analogue. Anciennement, *lauo, -as* "je me lave" s'opposait à *lauo, -is* "je lave"; il a été remplacé dans cette fonction par le médio-passif *lauor*". The authors note, however, that the "middle" sense of this verb persevered in the perfect: "le parfait *laui* s'emploie encore avec le sens moyen comme

reuerti, en face de *reuertor*." As well, in a syntactic development similar to that of Hittite, which used the reflexive particle -*z*(*a*)- with increasing frequency to "double mark" the reflexive notion (cf. Flobert 1975:390, "le réfléchi redondant"), later Latin also "tendait à substituer le pronominal au médio-passif: *se dedere*, *se exercere*, *se tegere* sont plus courants que *dedi*, *exerceri*, *tegi* au sens réfléchi".

#61. *lā(i)*- 'loose'

[Often in symbolic, ritual context]

lā(i) 'loose' is the antonym of *-ḫi* verb *ḫamank* 'bind'. Melchert (1994:176,177) claims that the stem-shape represents a "complex contraction" resulting from the loss of **two** *y*'s of an iterative-causative form, which he gives as **loh$_1$éye/o*-[sic]. Puhvel (HED 5:32) provides the root **laya*- "parallel to *hay-āye* [whence *hāi* 'trust'][...]and **say-āye* [whence *sāi* 'rage']". Most consider the original (base) root-shape to have been diphthongal, thus **leu*- (so Bird 1982:52; Watkins 1982:1526). See below for the suggested root shape proposed by Mallory and Adams (1997:588). Given the admitted "phonological discrepancies" between the suggested root shapes and various cognates, it is possible that there is a derivational process at work here: the "simple" root shape **leu*- whence the attested *-mi* forms (Kronasser 1966:464)[278], and a characterised *o*-grade which would account for what Puhvel calls the "rare" third person singular *ḫi* form *lā(i)*.[279]

Kimball (1999:133,4) relates *lā(i)*- to reduplicated *lilā(i)*- 'pacify, conciliate' (<**líloh$_1$-o*) with *i*-reduplication as in Cuneiform Luvian *li-i-la-an-t*[*i*]. She repeats Melchert's (1984:98-100) observation that several *-ḫi* verbs with OH *i*-reduplication

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As well as the neuter noun *luzzi* 'corvée'.

279
o-grade is typical in iterative-causative stems (Sihler 1995:503ff).

"functioned as iteratives to unreduplicated *ḫi* verbs".

Puhvel (HED 5:76) repeats several suggestions which have identified the modal negative *le* (also spelled *li-e*) as an "imperative relic form of the verb *la(i)* 'let (loose)'"[280].

Attestation 3rd singular present la-ai (Kronasser 1966:464; examples from HED 5:29)

la-a-i

'**frees** [from the hex the sheep and the ox]' (KBo XVII 54 I6)[281]

'**unwinds** [a cord]' (KUB XVII 27 II 37, 38)[282]

GÌR.HI.A-*ŠU* ***lāi***

'**frees** his feet' (KBo XIII 137, 8)[283]

n-an-kan šašti dāi n-an-kan arḫa ***lāi***

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In this regard, see his remarks concerning the typological similarity of prohibitions with *le* in Hittite with the Uralic "prohibitive negation verb" (Puhvel HED 5:77). See also entry *nāḫ-naḫ(ḫ)-* 'fear'.

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Fragments of Incantations (CTH 458)

282

Ritual for Ḫannaḫhanna + Gulšeš (CTH 434)

283

Naming the people of Kuruštama (CTH 654)

'he puts it on a bed and **he lets it loose**' [i.e., a symbolic launching of the year]

(VAT 7470 II 7-8, in HED 5:29)

n-an kišširan arḫa lāi iš[kiš] arḫa ***lāi***

'lets loose his hand, **lets loose** his back' (KBo XIV 133 III 7-8[284], in HED 5:29)

arḫa ***lāi***

'**he unharnesses** [horses]' (KUB I 13 I 6)[285]

The verb is attested with *-š* preterite: *la-i-iš* 'he loosed' (Kronasser 1966:464).

Sturtevant (1933:138) relates this verb to Greek λύω 'loose', Latin *solvo* 'loose, unharness'. Mallory and Adams (1997:481) claim this last usage to be the original (seen in Latin *(so)lūtus* and in Greek verbal adjective λυτός 'that which can be untied'). From this basic meaning of a literal 'untying', they argue, comes the more metaphorical 'release' (buying back for a ransom, as in Greek λυτρόομαι 'I ransom'). However, Latin *luō* with meaning 'redeem, pay for' is certainly morphologically prior to its derivatives (both *solvo* and *solūtus* < **se-luō-(t)*-), suggesting that the more "middle", metaphorical meaning is

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284
Tešub and Ḫebat: II. Ḫebat (CTH 706)

285
Kikkuli (CTH 284)

prior.

Cognates (with the simple form **leu-* (n)) include Tocharian A.B *lu* 'send', Gothic *lun* 'ransom', Lithuanian *liátis* 'cease, stop', Vedic *lunāti* 'cuts (off)'. Mallory and Adams (1997:588) give the underlying etymon as **leh$_1$-e$_{\underset{\wedge}{i}}$e/o-* and note that the same form that results in Hittite *lā(i)-* 'let go', also underlies the PIE word **leh$_1$d-* 'grow slack', 'become tired', with numerous cognates in Germanic, Slavic , Greek, Tocharian B, among others. They suggest the root may be related to homophonous **leh$_1$d-* 'let', 'leave'.

#62. *la/āk-* 'lie, recline' (in Old Hittite) 'knock out(tooth)', 'tumble'

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8. Nontranslational motion 9. Change in body posture

Puhvel (HED 5:33-37) suggests that there is evidence for two stems here, an intransitive *lak-* 'lie' (attested in Old Hititte) "seen in *lāki,* formally resembling the Gothic preterite *lag* < **loghe* 'he lay' beside the old stative present **legyō* [...] and a *lagai-* 'lay' which points to **loghāye-* (perhaps denominatively innovational for a transitive/causative **loghéye-*. *lagai* [which, note, is the characterised 'causative' stem] underlies the mediopassive *lagāri* and especially *lagāittari* 'is laid'. [...] the polarized paradigms of a mediopassive *lagāri* and *laknu* [...] left *lak-* a diathetically ambivalent Old Hittite curiosity, the only transitive survival of which in the later language was the legal archaism denoting tooth bashing" [as in example below]. In this way, the Hittite data directly parallel the voice developments described by Kuryłowicz for Sanskrit (1964:87) where the fundamental [and original] contrast between active and middle (*várdhati* 'he grows' (trans.) vs. *várdhate* 'he grows' (intrans.)) gives rise to the extended contrast of middle and characterized (iterative/causative) active (*várdhati* 'he grows' > *vardháyati* 'he grows' (transitive iterative)). (See Lehmann 1974 for arguments that the development of a "true" passive depends on the prior existence of a clearly marked causative). The verb is attested only in 3rd singular. Both of the following are from the Laws, cited in Sturtevant and Bechtel and using their conventions:

Attestation 3rd singular present la-a-ki (KBo VI 2 I 9[286] and 11= Laws 1:7-8)

(1.16) *ták-ku* LÚ.GÀL.LU-*an EL-LAM ku-iš-ki da-šu-wa-aḫ-ḫi*

na-aš-ma KAxUD-ŠU ***la-a-ki***...

'if anyone blinds a freeman or **knocks out** his teeth...'

(1.19) *ták-ku* ERUM[now ÌR]-*an na-aš-ma* GÌM [GEME]-*an ku-iš-ki da-šu-wa-aḫ-ḫi*

na-aš-ma [KAxUD-Š]U ***la-a-ki*** (1.20) 10 ZU KUBABBAR pa-a-i

'If anyone blinds a male or female slave

or **knocks out** his teeth, he pays ten half-shekels of silver...'

(Sturtevant and Bechtel 1935:212-213)

The 3rd person ('impersonal') form in *-r* means 'fall', 'be toppled': thus

mānkan antuḫšaš ***la-ga-a-ri***

'if a man **falls/is knocked** down' (Kronasser 1966:515; CHD:18)

The chronology of the two forms is important: Oettinger (1979:425) clearly states that the *-ri* forms are later: although the third singular *-ḫi* form occurs in Old Hittite (die ältere

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Laws 1 to 100 (CTH 291) I. one tablet version

Sprache): "Im Junghethitischen werden fientive Oppositionsbildungen geschaffen [...] zu denen wiederum ein transitives laknu[287]- gebildet wird, das das alte lāg-^{hhi} ersetzt". He goes on to draw an important parallel with *-ḫi* verb *kišt-* 'become extinct' (figuratively 'disappear') "Das Paar lagāri: laknuzi hatte in kištari 'verlöscht' : kišt(a)nuzi- 'löscht aus' ein Vorbild".

Kimball (1999:130) suggests that this root is "perhaps from perfect **lógʰ-e* [...] for the IE perfect, cf. perhaps λελο(γ)χυῖα [sic:SR] ·λεχὼ γενομένη (Hesych.)"[288]. LSJ note that λελοχυῖα is the perfect participle of λέχομαι 'lie down' (II:1043), adding that the active has a causal sense of 'lull to sleep' (λέξον με Iliad 24.635). The Hittite *ḫi* verb *lak-* is thus related (in its original Old Hittite meaning) to Greek "middle" voice λέχομαι 'lie down' (also, obviously, to λέχος 'bed', 'couch'). Puhvel (HED 5:36) reinforces the link:"the etymon (IE **legh-* 'lie down') [...] first proposed by Sturtevant (Lg. 6:216-7 [1930] [...] remains beyond doubt".

Mallory and Adams (1997:352) note the "striking" parallels between this root and root **sed-* 'sit' with regard to the often confusing diathesis. So Puhvel (HED 5:36): "the diathesis was either a stative 'lain' (= been lying) or a transitive 'laid', leading to confusion comparable to the sad fate of lie, lay, lain beside, lay, laid, laid in contemporary English".

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This form is not attested at all in Old Hittite (HED 5:34).

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Kimball further notes that "Reflexes of **ó* are also found in several *hi*-conjugation singulars which may be derived from *o*-grade singular perfects, and perhaps from *o*-grade presents" (1999:130). So *lāk* 'topple, knock out, make crooked'. OH attestations 3sg *la-a-ki* 2sg imperative *la-a-ak* = [lāgi], [lāk] perhaps from perfect **lógʰ-e*".

#63. *lilakk-* 'topple'

This is one of the (relatively) few *-ḫi* verbs which shows reduplication[289] (a morphological feature associated with the perfect, though NOT, importantly, the earliest types). Puhvel (HED 5:36) suggests the reduplication has iterative-durative force. Van Brock (1964:130) indicates a more 'stative' sense, claiming that the reduplicated *lilakk-* "doit signifier plus que le simple *lak-* 'ployer'; [...] le sens est plutôt 'maintenir ployé, ployer de telle sorte qu'ils ne se redresser plus'" ("must signify more than the simple *lak-* 'bend'[...]the sense is more 'stay bent, bend so it is impossible to get unbent') [SR's translation[...].note the "middle" morphology of the French here.]

Both Puhvel (HED 5:36) and Melchert (1994:19) comment on the "surprising", "unexpected" appearance of the geminate C in this root (a not uncommon feature of several reduplicated forms in Hittite: Melchert cites (*ibid*) further examples, *titti-* 'install' from **dʰeh₁-* 'place', *titti* 'suckle' from **dʰeh₁(i)-*, perhaps *kikkiš-* 'happen' from **geis*). Greek τίτθη 'wet nurse' would doubtless belong here too. See further examples of this type in Van Brock (1964), also discussion in Oettinger (1979:433).

Attestation 3rd singular present li-la-ak-ki (Kronasser 1966:515)

289
"Simple" reduplication in *-i-* (Van Brock 1964:121ff).

ḫūwappas-a-kan LÚ.MEŠ-*uš* [GIŠ-*ru*] *mān* ***lilakki***

'[he who] **topples** evil men like trees' (KUB XXIV 8 I 3-4)[290]

290

Appu tale (CTH 360) (Also KBo VII 18, in Van Brock 1964:130)

#64. *lilḫuwai-* 'pour out (liquids)'

[Ritual usage]

lilḫuwai- is common in ceremonial contexts: rituals, weddings, births, etc, pouring ritual fluids, including oil, wine, sometimes water to wash the feet of a deity (KUB XLV 5 II 21).

Attestation	3rd singular present	li-il-ḫu-wa-i, li-el-ḫu-wa-i, li-el-ḫu-u-wa-i, le-el-ḫu-wa-i, li-la-ḫu-i

The following citation (with preverb *parā*) is from the Birth Rituals, a section which probably refers to the washing of the new-born by one of the female practitioners involved in the ritual:

-k]án pa-ra-a ***le-el-ḫu-wa-i***

'she **pours** forth' (KBo XII 112[291] Rs. 3, in Beckman 1983:68, commentary on 70)

nu-šši ***li-il-ḫu-wa-i*** YÀ-*an* ŠAG.DU-*ši*

291 Birth Ritual (CTH 477) KBo XII 112

'he shall **pour** oil on her head' (VBoT 1[292], 14 in HED 5:81)

The reduplication has an interesting semantic thrust here: whereas *laḫu(wai)-* seems to indicate pouring liquids for a single recipient, this reduplicated verb is often used when the liquids are poured for several recipients, or into several vessels[293]:

LÚ.SANGA-*ma-kan* [...] GEŠTIN *ḫā[n]i* [...] *na-aš-šan katta damēdaš*

ANA GAL.HI.A ***lelḫuwai***

'The priest decants the wine and **pours** it out into other cups'

(ABoT 7[294] (+) V 8ff, cited in Van Brock 1964:126)

This verb is apparently not attested until the Middle Hittite period (CHD:59), but see Beckman's commentary on the dating of texts which contain it (1983:70). See Kronasser (1966:548).

292

Letter from Amenophis III to the King of Arzawa (CTH 151)

293

Compare Greek: imperfect ἐδίδουν 'gave to several people' vs. aorist ἔδωκα 'gave to a single person'.

294

The Hittite *hišuwaš* Festival (CTH 628.IIf)

#65. *lil(l)ipa(i)-* 'lick (up)'

2.Reflexive (and related middle) situations (c) verbs of ingestion.

Van Brock (1964:133ff) comments that the reduplication is not surprising in this verb, as licking up usually involves several "coups de langue". Both the simplex *lip(ai)-* and the reduplicated version here mean 'lick' or 'lap'. The simplex usually refers to animals licking and is inflected as a *-mi* verb (see HED 5:100 for examples). In the following citation, it is the reduplicated *-ḫi* verb which describes the actions of the insatiable Hedammu, the Hittite/Hurrian snake-like demon who lives in the sea and loves Ištar[295]:

Attestation 3rd singular present le-el-li-pa-a-i (CHD:61)

LI]M-*tili-ya azzik-kizzi* [...*mil*]*it* GIM-*an katta paški*[*zzi*] [...G]IM-*an* ***lellipāi***

'[Hedammu] gobbles [...] by the thousand, [...] like honey he gulps

down, like [...] **he quaffs**' (KUB VIII 67 IV 18-20[296], in CHD:61)

295

See Hoffner (1990:48-52) for a translation and brief discussion of this myth (probably of Hurrian origin) which, along with the Song of Silver (see discussion under *išḫamai-* 'sing', belongs to the Kumarbi Cycle "the most important group of myths in the Hittite language" (Hoffner 1990:38).

296

Ḫedammu (CTH 345.02)

Puhvel draws attention to the seemingly "aberrant" 3rd plural form *lilipanti*, where the *t* has not affricated. He suggests (HED 5:101) that this is a simple archaism, rather than "improbably Luwoid in this old text" as suggested by Watkins (1975:182).

#66. *mai-/miya-/miešš-* 'grow', 'reach maturity, reach term' (of a baby), 'increase', 'thrive', 'prosper'

16. Spontaneous events associated either with (i) animate beings 'grow' or (ii) inanimate 'ripen'

According to the CHD (1994, L-N:115), "*mai-* essentially describes growth. When the process is viewed in its final stages, as in the intransitive participles $^{(LÚ)}$*mayant-* [...] it may require the English translation 'mature', 'ripe'". Sturtevant (1927a:111) cites *miya-huwanza* 'old man' (lit: 'ripe(ned) being'). Root *mai-* forms the basis for the adjective *am(m)iyant* 'small' (with "petrified IE privative prefix *$n̥$ (> *an-*)"and "inner-Hittite [suffix] *-nt-*" (HED 1:47)) with the literal meaning 'not-grown' (compare Greek ἀναυξής 'not increasing', intransitive 'not waxing or growing' (LSJ I:124)).

Attestation 3rd singular present ma-i/ ma-a-i (Kronasser 1966:169,541)

ma-a-i (KUB XVII 10[297] i 14 or KBo III 7[298] i 7, in Sturtevant 1933:247)

'ripens, prospers'

297

Myth of Telipinu: first version (CTH 324.01). See Hoffner (1990:25-28) for a translation of this Old Anatolian myth.

298

Illuyanka (CTH 321)

Also attested (in the Birth Rituals) is the "mixed" 3rd singular preterite *of mai-/miya-*, *mi-e-eš-ta*[299]

nu-uš-ši-kán IGI-*an-da* ***mi-e-eš-ta***

'and before his eyes **he was born**' (KUB XLIV 4 + KBo XIII 241 rev. 6 in Beckman 1983:176,177)

Beckman's comment (1983:184) is that "Here the Active [sic] must share the meaning "be born" usually expressed by the Middle". The more straightforward Occam's Razor-type explanation, is, of course, what I propose here. The *-ḫi* form which underlies this preterite is the original "Middle" diathesis; "active" *-mi* forms and forms in *-ri* are arguably later developments. See, for instance, the extraordinarily interesting 1st singular preterite form *mi-eš-ḫa-ti* (KUB XXX 10 obv 11[?], cited in Neu 1968b:46). This form, acknowledged to be old (*ältere Sprache*), bears the (aspectual?) root-characterizing *-š*[300], the person indicator *-ḫa*,

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Sturtevant (1933: 231) comments extensively on these forms in *-št-*. "There can be no doubt that the ending *s* is identical to the suffix of the IE *s*-aorist [...] These forms [...] fit into the framework of the IE *s*-aorist quite as well as the verbs with pret[erite] in *st*. The Hittite difference between the two groups is due solely to the fact that forms used as preterites of the *hi*-conjugation and more or less isolated from other *mi*-conjugation forms tended to retain the phonologically correct final *s* < *st*, while such forms as ***tamas* 'oppressed' beside *tamaszi* (*da-ma-aš-zi*) 'oppressed' tended to become *tamast* (*ta-ma-aš-ta*) on the analogy of the pair *paizi* 'goes', *pait* 'went', etc.".

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See Sturtevant 1933:228 for this suffix "which appears in IE present and aorist stems, forms Hittite verb stems and also preterites of the hi-conjugation". The position of the element here,

with present tense value, or else there would be no need for the preterite marker *-ti*. (Obviously, the final *-i* has no present-tense value here (cf. Sturtevant 1933:263, 264, or Friedrich 1960:77).

Cognates in Greek tap into the very heart of religious and philosophical observance. As in Hittite, several Greek words from this root refer to birth, mothers and mothering, midwifery, etc. (LSJ II:1072ff), including μαῖα 'good mother' (in Homeric usage, usually addressed to older women, including Eurycleia, nurse of Odysseus (Od. 19. 482)), also Μαῖα 'mother of Hermes', μαιάς 'the business of midwifery', μαιόομαι 'of a midwife, to deliver a woman'.[301] The 'midwifery' meaning is often used metaphorically in Greek, referring to the Socratic method of 'delivering' the knowledge already in the minds of others. Thus Plato (Theaetetus 151c.) refers to himself as the philosophical 'midwife', bringing forth the truth from his interlocutors.

Sanskrit verb *mímīte* 'is conceived', 'grows (as a fetus in the womb)' is cognate, as

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i.e., before the voice marker *-ḫ-* or tense ending *-t-*, argues against the "typical" *-ḫi* conjugation preterite meaning of *-š-* in this particular lexeme. Aspect is acknowledged to be prior to tense. Given the age of this lexeme, it seems possible that the *-š-* here has an earlier aspectual significance. The preterite marker *-t(i)*, from the 3rd person singular of the *-mi* conjugation, is indirect evidence both for the original present-tense value of *-ḫa*, as well as the later addition of the *-ti* ending (Sturtevant 1933:254) to verbs of this type. The use of the *-mi* conjugation marker of the 3rd person singular marker *-t-* here could be similar in function to the 3rd plural marker elsewhere (in *-ri* forms).

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As in Hittite, Greek "middle" voice verbs referring to birthing may refer either to the job of the midwife 'deliver a woman' or to the actions of the woman herself 'deliver/give birth to a baby'. An active verb (only late), refers to the actions of dawn bringing forth the day.

is Tocharian B *maiwe* 'young man, youth' (Mallory and Adams 1997:249; also Mayrhofer (II:638ff).

It is possible that words derived from this root meaning 'large' (Sanskrit *maha/máhi* 'great', Greek μέγας 'large', Latin *magnus* 'large', Hittite *me-ik-ki*) may belong here, although not without a few phonological mysteries:

> PIE *$meǵH_2$- 'big' is guaranteed for In[do-]Ir[anian] and G[reek] and perhaps Hittite. But Celtic and Italic–for example-, L[atin] *magnus* 'big' –uniformly reflect an etymon **mag*-: though the number of forms involved is large, not one shows a trace of *-H_2-, or *e*-grade, or any morphological details similar to those of *$meǵH_2$-. This **mag*- is nevertheless generally presumed to be somehow connected with *$meǵH_2$- (Sihler 1995:99 nt.1).

Discussing this link, Frisk (1973:190) adds Armenian *mec* 'groß' and comments on the "unklares h" of the Sanskrit form[302].

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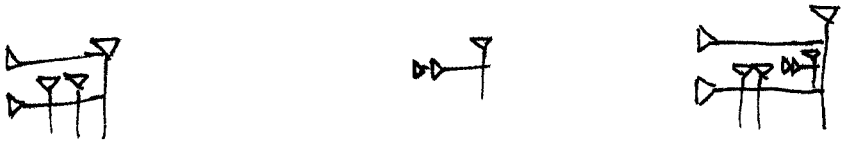
Given the scenario I have proposed in Chapter Four, this would be another example of the coarticulated phoneme *k/gh* showing the same type of reflex pattern(s) as did the first person personal pronoun **egh*-: *h* in Sanskrit (***a**ham* 'I'), γ in the inter-vocalic Greek environment ἐγώ 'I', and the 'hardened' -*k*- in Hittite *uk*- 'I'. See relevant discussion of roots **mek'*- (or *$*meǵ(h)$*-, or *$*meĝ$*-) 'great' and *$*mag^h$*- 'earth' in Bomhard and Kerns 1995:667, 674 respectively. Pokorny (1959:708) apparently considers these roots to be derivationally related (or identical), as does Watkins (1982:1528). The proclivity for these "doubly articulated" phonemes to metathesize could well account for the "a" colouring of the vowel: thus **mehg* > **mag*-.

If these words are cognate, I would add Sanskrit *mah-* (originally *magh-*) 'magnify', honour' (cf Vedic *ātmanepada mahate*), and its derivative *Mahī* (f) 'the great world', 'the Earth'. This latter links the notion of the nurturing 'earth' mother as the source of all life, a common theme in the female-centered religions that preceded the more male-centered IE religions in the Anatolian region[303]:

> The Lydian and Lycian languages belong to the Anatolian branch of Indo-European, as does the language of the Hittite empire. All the evidence points to an Anatolia which was inhabited mostly by non-Indo-European, matrilineal peoples; the Indo-Europeans were outsiders. Though in the minority, they managed to secure power in the region. The Hittites left extensive records which, among other things, chronicle their dealings with the indigenous Hattic people of central Anatolia. These documents constitute a unique

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I point out here that the Sumerian logogram AMA [ummu] 'mother' is a "compound" of the sign for 'receptacle' or 'container' and the sign for 'divinity':



PISAN + DINGIR = AMA 'mother'

(cf. PISAN-DUB-BA 'container for tablets' (= 'receptacle of the divine (power)')

^{LÚ} pisanṭuppû 'archivist)

history; they show how a patrilineal elite with a male god succeeded in revamping local customs and ideology [...] (Winn 1995:260).

Alternately, and perhaps more accurately, the root of the Hittite verb may be IE **mē* 'measure', as in RV 3.29.11 *ánimīta mātári* ' (Agni) was formed inside the mother'; cf. Greek μέτρον ἥβης (see HED 6).

For discussion and citations, see Kronasser (1966:536, 540, 555); CHD:113.

#67. *malla-* 'mill, crush, grind'

[No clear "middle" category, but central to IE culture and civilization]

There are two IE roots which have to do with the processing of grain. Watkins (1982:1506) cites **al-* (whence Greek ἀλέω 'grind', 'bruise' (found only in compounds in Homer κατ-αλέω), ἄλευρον 'flour', and numerous derivatives referring to wheaten cakes, etc.). In Mesopotamia, the grinding of grain was considered one of the three essentials of a civilised life, over which the goddesses presided (Frymer-Kensky 1992:35). A similar perception must have obtained (or endured) in Greek culture: cf. βίος ἀληλεμένος 'the civilized life' (i.e., one which employs processed corn, not raw (LSJ I:63)). The CHD(126) also indicates that in Hittite culture, milling was normally an activity of females. The Greek evidence as well points to the importance of women as the millers:

> Homeric Greek has only a feminine agent noun for the verb 'to grind', namely ἀλετρίς, and so does Mycenaean Greek, me-re-ti-ri-ja; the masculine form ἀλέτης exists but means 'millstone' (Puhvel 2002:302).

The older, original IE root which refers to grain and grinding is **melH* (Sihler

1995:532) [304]. This is the source of Hittite *mallai-* 'grind', *memal* 'porridge', Latin *molō* 'grind' (Buck 1952:48)[305], Gothic *malan*, Old Irish *melid*, OCS *meɬjõ*. Reflecting the importance of women in the activity of grinding, as above, in some dialects, the word for 'woman' is related to the root **mel-* (perhaps in Latin *mulier*, although there are alternate eymologies) : SAL^{NA4} ARÀ ' (woman) miller, literally 'woman of the mill'.

This root is one of several *-ḫi* verbs (another being *hank-* 'hang' which see) which Jasanoff (1978:44) indicates provide strong evidence that Indo-European possessed an archaic type of present tense, "characterized not by the regular active endings (**-mi*, **-si*, **-ti*, etc.), but by an archaic form of the middle endings similar to those traditionally reconstructed for the perfect. The decisive evidence for this view is provided by Hittite, where cognates of verbs like *malan* and *molō* typically belong to the *ḫi* conjugation". These "acrostatic[306] presents [...] [are] characterized by *o*-grade in the active singular and *e*-grade elsewhere". I believe what we see in the Hittite *-ḫi* conjugation is the direct reflex of just such a type of "archaic" present tense; the endings of this conjugation mirror the original archaic middle endings of the "other" present tense which existed in binary (voice) opposition to the *-mi*

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Sihler indicates that IE root presents of this type represent "the most basic formation of all". He further notes that the "root class was a relic class in all of the daughter languages" (Sihler 1995:492). These uncharacterised "eventive" stems could be either present (durative) or aorist (punctual).

305

A third conjugation root present: further evidence for its antiquity.

306

As explain earlier, an acrostatic form is a PIE inflectional type where the accent is fixed on the root syllable.

conjugation. This system both parallels the original binary voice opposition of the two other archaic IE languages (Vedic Sanskrit and Greek), and also reflects the type of objective/subjective flexion such as seen in Uralic languages, even to the point of employing identical markers of this opposition.

Attestation 3rd singular present ma-al-la-i (Kronasser 1966:545)

m[a-al-l]a-a-i (KBo XV 35)[307]

Kronasser 1956:196; Kronasser 1966:528,545, 589; Jasanoff 1978: 44; CHD:125.

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Stormgod of Kuliwišna (CTH 330.01)

#68. *māld-* 'recite, vow (something)', pray' ("use words magically").

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13. Emotion middle (d) speech action

This very important *-ḫi* verb is used in prayer, and religious ritual utterances in general. The CHD gives the meaning as either a "solemn, public declaration or pronouncement" or a private recitation (prayer), and comments on the common co-occurrence in this usage with the word *duddumili* 'quietly, silently, secretly'. The sense of religious utterances as public reportage, as 'directing ritual words to god' for the benefit of the entire community, may have adhered as well in the Hittite usage. Later (post OH) "reflexive"usages developed, usually with the particle *-za* or the enclitic dative *-ši,* meaning 'to vow (something)' (CHD 133).

On the centrality and importance of this verb, Benveniste (1973:500) comments that this is:

> one of the rare cases where Hittite provides evidence which is of immediate use for the reconstruction of an institutional term relating to religion [...] With the identification of the Hittite verb *maltāi-* 'to recite invocations, to pray', with its derivative neuter noun *maldeššar* 'prayer, invocation', an Indo-European term common to a number of languages came to light. This Hittite verb links up with forms previously known only from Baltic and Slavic, and this established a peculiar connexion between dialects which otherwise have no special interconnexions. Hittite *maltāi-* may be compared with Lithuanian *meldžiù melsti* [sic] 'to pray', *maldà* 'prayer'; OSl. *moljǫ* with the middle form *moliti (sę)* translating respectively *déomai, parakalô* of the Gospel and *proséukhomai*; Polish *modlić się* 'to pray', *modla* 'prayer', Czech *modla* 'idol, temple'[...] The sense which appears everywhere of 'to pray, recite a prayer, implore' reveals a group consisting of Hittite, Baltic, Slavic, and

Armenian with perhaps the addition, though with a weakened sense, of the family of the German *melden*, OHG *meldōn, meljan* 'to say, announce, report'.

Bird (1982:55) cites Pokorny root #1199 **meldh-* 'to direct ritual words to God' but Kimball (1999:130) indicates that this not likely the form of the root, as "*e*-grade *méld(h)*- would have become *mēld-* " and suggests rather "*o*-grade perfect **móld(h)*- (perhaps perf. **móld(h)-e)*". Cognates with *e* (as Ger. *melden* 'announce, recount, tell') may be explained by "*e/o* ablaut, since Indo-Hittite *ō* was merged in Hittite *a* " (Mudge 1931:252). Other cognates of this "widespread and old" IE root include OE *meld(i)an* 'announce, declare, proclaim, reveal', Lithuanian *malda* 'prayer', OCS *moljõ* 'pray', Armenian *malt'em* 'pray' (Mallory and Adams 1997:449).

Gamkrelidze and Ivanov (1995:703) reinforce the importance of this verb to religious observance, listing it under derivatives of **meld^h*- 'offer prayerful words to a god', one of the "Indo-European terms for religious rites".

Attestation (NH) 1st singular present ma-al-ta-aḫ-ḫi

ma-al-da-aḫ-ḫi (Kimball 1999:130)

Attestation (OH) 3rd singular present ma-al-ta-i (Kronasser 1956:197)

The following attestation is of particular interest as it contains a reference to the language "Ḫa-at-ti". This word originally referred to the non-Hittite indigenous people of Asia Minor whose name was adopted by the founders of the Hittite empire. To the Hittites themselves, the adverbial designation " (Ḫ)a-at-ti-li"referred to this original language, not to their own language that we have come to know as "Hittite" (from Biblical Hebrew *Ḫitti-*):

(*Ḫ*)*a-at-ti-li ki-iš-ša-an* ***ma-al-di***

'he **recites** thus in Hattic' (KUB I 14[308] ii 14, in Sturtevant 1933:28)

Also *ma-al-t/di* 'recites' (KUB XXVIII 95 II 2[309]), 'preaches' (StBoT 25.59 I 12)[310]

See also Kronasser 1956:191,197; Kronasser 1966:521,522; Benveniste 1973:500; Oettinger 1979:443ff; Luraghi 1990:160; Kimball 1999:115,130, 347, 443; CHD:132.

308
Hattian (CTH 744)

309
Hattian (CTH 744)

310
= Luraghi's example #517 from "Old Hittite originals" (1990:160). This seems to be mis-cited: the verb does not appear in the Ritual for the Royal Couple (StBoT 25).

#69. *maniyaḫ(ḫ)*- 'distribute'; 'entrust', 'assign', 'show', 'hand out', 'have in hand', 'handle' administer'

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3. Reciprocal domain

The root of this verb is one of the IE words for 'hand'[311], an *r/n* stem which Mallory and Adams (1997:254) reconstruct as **méh$_{a_o}$r*, (genitive *mḫ$_a$nós*) cognate with Latin *manus* 'hand', 'power', Greek μάρη 'hand' (also an *r/n* stem)[312]. Whereas **ĝhés-r* 'hand' was "solely an anatomical term", **méh$_{a_o}$r* symbolized or implied the more metaphorical 'power' (Mallory and Adams 1997:255). The meaning, thus, of the Hittite verb is 'hand over', 'turn power over', 'rule'. Gamkrelidze and Ivanov (1995:706,7) indicate that this item [in their version, from **mḪr-/n-(t^h)*- 'hand, power; put into (someone's) possession, govern']is one of a number of IE terms having to do with law which are "inextricably bound up with ritual terminology, which shows that the law was inseparable from the ritual conceptions that determined the legal norms of the ancient Indo-Europeans. The legal norms of the society were part of the ritual system, controlled by priests who combined the functions of directing spiritual activity and regulating basic societal norms". Related are *maniyaḫḫ*- 'hand over, turn power over, rule', *maniyaḫḫai*- 'government, power', Greek μάρπτω 'I grasp' and

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The other being **ĝhés-r* (Mallory and Adams 1997:255).

312

Puhvel (p.c.) points out that the very authenticity of Greek μάρη 'hand' (and hence the heteroclicy with *manus*) is under serious attack.

numerous others. For a discussion of the link with words referring to 'hand', see also Oettinger (1979:458).

This verb has a later MH form in *-ri*. It is sometimes classed as a *-mi* verb, although, as here, it is clearly attested as a *-ḫi* verb. Not surprisingly, given the semantics of *maniyaḫ(ḫ)-* , the verb is regularly used with the dative case. In this type of use, it has the meaning 'entrust, assign, show, teach' (but see below); when used without the dative, the meaning is 'to distribute' (CHD:163). This last meaning is seen in the following (1st singular preterite) attestation from the Annals of Muršili II (who reigned c.1321-1295). The reference is to the total defeat of the city of Aripša. The citation begins 'I took the city of Aripša is battle[...]'

[*n*]*a-an* ^{URU}*Ḫa-at-tu-ši ḫu-u-ma-an-ti-i ša-a-ru-ú-i* ***ma-ni-ia-aḫ-ḫu-un***

'and **I distributed** it as booty to all of the city of Ḫattuša'

(KBo IV 4 Rs.IV 13, in Götze 1967:134))

In the following attestation, the meaning is perhaps best rendered as 'abandon' (= 'hand over'). The plea is addressed by a suppliant delegation from the city of Dukkamma to the approaching Muršili II, that he would show more leniency to them than he had to Aripša:

Attestation 2nd singular present ma-ni-ya-aḫ-ti (Kronasser 1966:426,432)

2. 233 (491)

as *Ḫ.* + DAT/LOC sack + INF do not hand over + 2nd sg. *ḫi*

'do not **consign** us for plunder to Ḫattuša'

(KBo IV 4 iv. 21[313], in Götze 1967:136, or KBo V 9 iii 19)[314]

Attestation 3rd singular present ma-ni-aḫ-ḫi (Kronasser 1966:426, 432)

ma-ni-ia-aḫ-[(*ḫi*)] (KUB XLIII 26 iv 3)[315]

The second singular imperative is *ma-ni-ya-aḫ* (Kronasser 1966:426, 432)

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Extensive Annals of Muršili II : years 9-11 (CTH 61 II.05) Extensive Annals of Muršili: years 9-11 (CTH 61 II.05)

314

Treaty with Duppi-Tešub of Amurru: Hittite version (CTH 62.II)Treaty with Duppi-Tešub of Amurru: Hittite version (CTH 62.II)

315

Festival of Storm and Thunder (CTH 631)

#70. *man(n)i(n)kuwaḫ-* 'approach' (OH meaning); 'make short'

The CHD:170 says that this verb is attested later as a 1st sg. *-mi* verb (as is the previous verb) but in OH, one finds:

Attestation 3rd singular present ma-an-ni-in-ku-wa-aḫ-ḫi '(s)he approaches'

maḫḫanma NIN.DINGIR *INA* URU*Wargatanwi* ***ma-an-ni-in-ku-wa-aḫ-ḫi***

'but when the NIN.DINGIR-priestess **approaches** W.' (KUB XI 32[316] iii 26 (OH))

Sturtevant (1938d:240) suggests that this verb may be a factitive (denominative) verb made from an (implied, although unattested) adjective **maninkus* or **maninkuwas* 'short' (see Mallory and Adams (1997:528) for the source of *maninku-* 'short')[317]. Sturtevant's remarks on these types of verbs are instructive, especially as they relate to verbs with formative *-aḫ-*. These, he notes (1931a:121), are often "a curious mixture of the two conjugations [...] A majority of the forms may belong equally well to either conjugation". He suggests (*ibid*) that the "first personal endings of the *hi*-conjugation would fuse with the suffix *-ah* to form

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Festival for Tetešḫapi (CTH 738)

317
**mn̥n-énkʷo-* > *man(n)inkua-* 'at hand' (cf. Latin *longinquus*, etc.)

present **idalawahhi* and preterite *idalawahhun*". The latter was indistinguishable from a *mi-* conjugation form with the ending *un*.

#71. *mark-* 'divide'

[Ritual use]

Kronasser (1966:413) lists *mark-* as a *mi*-verb, with the meaning 'divide, dissect'. However, the verb is also clearly attested (with the causative suffix *-aḫ-*) in the OH Ritual for the Royal Couple as a 1st person singular *-ḫi* verb. It is used in one of the many rituals involving thread/string/bits of coloured wool (see also Puhvel HED 3:3):

Attestation 1st singular present ma-a-ar-ka-aḫ-ḫi 'I divide'

> *...ta ḫa-a-aḫ-ḫa-al-li-it ga-a-pi-na-an da-a-aḫ-ḫé ka-lu-lu-pí-iš-mi ḫu-la-li-an ku-i-ta an-da ...ga-a-pí-na-an ka-lu-lu-pí-iz-mi-it ḫa-aḫ-ḫa-al-li-it* ***ma-a-ar-ka-aḫ-ḫi***
>
> 'with *ḫ.* [a certain type of greenery] I take the thread and what is wound on their finger[s] ... **I divide** the thread with their finger[s] [and] with *ḫaḫḫal...*'
>
> (KBo XVII 3[318] IV 27-28, 30) (Otten and Souček (1969:38))

Possible cognates include Latin *mereo* (for deponent *mereor*, see Flobert 1975:198ff), Greek μέρος, 'share, portion' (LSJ II:1105), μείρομαι 'receive as one's portion, divide'

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Ritual for the Royal Couple (CTH 416)

(LSJ II 1093). These last lexemes and what they signify (i.e., the apportioning of one's fate or lot, including life span) are central to IE belief systems, and are embodied in the goddess Moira, she who decides the fate and futures of all (see for instance Dietrich 1965:59-90; Gordon 1981:1,2; Burkert 1985). Palmer considers the name of the Gaulish goddess Ro-Smerta also cognate (1954:21), but this is better connected with the IE root for thought processes **men-* (as 'the one who recalls ahead' Puhvel 2002:265), also Sanskrit *smárati* 'remembers', Latin *memor*.

Puhvel (HED 6) connects *-kán mark* 'cut up, carve (meat)' with Latin *com-mercārī* 'to trade' as a term of the meat industry, and more widely relating to the distribution of wares.

#72. *maušš-/mu-* 'fall'

9. Change in body posture

This verb appears in an Old Hittite description of a journey of a human soul through the Underworld. The Hittite text (KUB XLIII 60) was composed some 1200 years before similar Greek texts, such as the famous "Orphic gold leaves", which described the passage of a soul through the realms of the dead (see especially Burkert 1983:293ff). Although the text is a late copy, the "language of the archetype is clearly Old Hittite" (Watkins 1995:284). Hoffner's (1988) version is entitled 'The Voyage of the Immortal Human Soul', although, as Watkins (1995:284) points out, the soul is never actually described in Hittite as "immortal", as there is no Hittite word for such a concept (although one meaning of *ukturi-* is 'everlasting'). Watkins explains:

> The Hittite word for 'soul' is *ištanza* [...] in this text written Sumerographically as ZI-*anza*. Its regular accompanying word or epithet is *dandukiš* 'human, mortal' (lines 4,27 [-*ieš* gen. sg.?]) abstract *dandukišnaš* (gen.sg.) in line 32, taken by Hoffner and myself as elliptic for *dandukišnaš* DUMU-*aš* 'son of mortality = 'mortal'. The word *dandukiš* 'human being' is opposed to DINGIR 'god', e.g. KB o 3.60 ii 14-16. On the other hand the soul clearly survives the death of the body, and the dead person (*akkant-*) has

a soul (ZI). In that sense we may perhaps understand 'immortal'.

As we know from Greek texts detailing such journeys of the soul to the underworld (e.g. Burkert 1985:289ff), the travelling soul encounters two bodies of water, either pools or rivers. By partaking of the first of these sacred streams, the soul may forget its former life, a precursor to reincarnation. Evil doers remain mired in the muck[319] at this stage, unable to progress to the next pool, where the souls of the worthy drink and *remember* past lives. Then, by the grace of Persephone, "external bliss and apotheosis" is conferred on the blessed, who go on to reside in "the Isle of the Blessed and the company of heroes. The verbal *symbolon* of that blessed state is the utterance 'I/you as domestic animal fell into the milk'" (Watkins 1995:283).

Compare the Hittite version of such a journey of a soul to the "dark earth". I repeat Watkins' (1995) "tentative" version of lines 25-34 (complete with his glossing conventions) of the "difficult" and "fragmentary" KUB XLIII 60, where lines 33, 34 "'I (shall) fall into the river, I shall fall into the pool' sounds strangely like the Dionysiac-Orphic *symbolon* 'a ram/kid, I fell into the milk'" (Watkins 1995:289):

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Muddy water as the "cheerless diet of the dead", is a Mesopotamian topos, according to (Watkins 1995:289), who notes the morphological similarities between the Hittite word for filthy, muddy water, *mirmirr-uš* "a noun with expressive reduplication apparently built on the root of Hittite *mer(r)*, *mir(r)*- 'disappear, vanish, cease to exist [...]and the Greek word for 'liquid mire, muddy liquid, filth', βόρβορ-ος, likewise with expressive reduplication".

26 [Z]I-anza=wa=kan uriš[!] ZI-anza=wa=kan uriš

kuel=wa=kan ZI-anza uriš tandukieš=wa=kan

28 ZI-anza uriš nu kuin KASKAL-an ḫarzi

uran KASKAL-an ḫarzi marnuwalan KASKAL-an ḫarzi

30 š=an=z=apa KASKAL-ši LÚ.KASKAL-laš ḫandāit

šu[!]ppi ^{D}UTU-aš ZI-anza DINGIR-nan (annan?) ZI-anza

32 dandukišnaš kuwat arušan paimi

dāšanatan paimi ÍD-p[a m]ūḫḫi luli[ya

34 muḫḫi ...

The last lines of this passage, cited in isolation below, provide the 1st singular attestation, where the journeying soul is speaking:

Attestation 1st singular present [mu]-u-uḫ-ḫi 'I fall'

ÍD-*p*[*a* ***mu***]-***u-ḫ-ḫi*** *luli*[*ya*] ***mu-uḫ-ḫi***

'I **will fall** into a river, **I will fall** into a pond'

(KUB XLIII 60[320], 33,34 OH (17th-16th century)/NS(13th century copy); also in Puhvel HED

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Incantation and Myth (CTH 457)

5:113)

Importantly, the *-ḫi* verb is used when the (animate) soul 'falls' (as above) but *-mi* of a thing (as a celestial phenomenon (stars, moons, etc.)). Thus, as in the following from a star omen:

[*pa-aḫ-ḫ*] *ur ? kán nepiši* ZAG-*az ma-uš-zi*

'[fi]re falls to the right in the sky' (KUB VIII 24[321] ii 5-7, in CHD:212)

Kronasser (1956:200,201) relates *maušš-* to Latin *mouēre* (< **meu-*/**mou-* with ancient iterative(?) durative (?) extension *-š*), Lithuanian *máu-ti,* Sanskrit *muṣ-* 'steal', and with the metaphorical meaning 'deprive of'. Mallory and Adams (1997:388) suggest that two stems are both relevant and related: 1. **meu*(h_x)- 'move', in, for example, Latin *moveō* 'set in motion', Lithuanian *máuju* 'put on or off', Greek ἀμύνομαι 'defend oneself against', Vedic *mīvati* 'pushes', Tocharian A *mew-* 'move, shake', B *miw* 'shake', with the Indo-Iranian and Tocharian "< **meih*$_x$-*u̯*- by dissimilation from **meuh*$_x$-*u̯*-") and 2. **meus-* 'move, remove' an "old enlargement of the preceding verb which was also widespread in IE. On both the eastern and western fringes of the IE territory, it shows a tendency (not shared by Tocharian) to come to mean 'steal'". Words from this extended root include Vedic *muṣ-* 'steal', Khotanese *muśśa* (< *muš-ya-*) 'steal', Tocharian A,B *musnā* 'lift', *musk-* 'disappear'.

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Astral Omens (CTH 535.01)

See also Mayrhofer (1963:659) for further morphological speculations.

Kimball (1999:223) suggests that the paradigm of *māu(šš)-, mū-* has been heavily influenced by *au(š)-, u-* 'see'. The similarities are many (see HED 1-2:243). She notes that "middle" forms appear in copies of Old Hittite texts. Both she and Kronasser (1966:385) cite the following 2nd singular present (modal) form *ma-uš-ta*, a hapax found only in the prohibition 'do not fall!' :

Attestation 2nd singular "preterite present" ma-uš-ta

le ***ma-uš-ta***

'Do not fall!' (KUB I 16[322] III 52)

The CHD (211) indicates that this verb is usually used with local particles *=kan, =šan, =ašta* (from OH). Melchert (1994:148) proposes diphthongal PA preform ***móws*** 'fall'.

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Political Testament of Ḫattušili I (CTH 6)

#73. *mema-* 'speak', 'say', 'testify'

13.(d) Emotion middle. Speech action (Given place of human speech, I prefer listing as 14. Cognition middle)

As is well known, verbs referring to human speech regularly show "middle" marking throughout the family: cf. Latin *loquor*, Greek μῡθέομαι, Sanskrit *brū* 'speak, say, tell' (*bhāṣe* 'I speak *bhāṣā*' = Vedic Sanskrit).[323] Mallory and Adams (1997:536) comment on why so many IE words can be reconstructed which refer either to the ability to speak, or to the actual utterance:

> ...the large number of verbs with this general meaning does suggest the importance that PIE speakers gave to the ability to speak. Indeed G[amkrelidze and] I[vanov] have suggested that in PIE society there was a dualistic separation between speaking/non-speaking which equated with human/animal[324]. They based this on the observation that the root **men-*

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With regard to the archaic morphology of the Sanskrit *ad- gaṇa* verb *brū* (whose participle is *ātmanepada*-only *bruvāṇa* 'speaking, saying, telling'), Macdonell (1975:336) cites the following *ātmanepada* forms:

1st sg.	*bruv-é*
2nd sg.	*brū-ṣé*
3rd sg.	*brū-té* and *bruv-é*

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"In Hittite, the speaking/non speaking feature plays a special role in the human-animal

'think', the rational act which is (they suggest) uniquely human, also yields terms for 'speaking', e.g. Lith[uanian] *miñti* 'call, name', Latv[ian] *minêt* 'recall, name', O[ld] R[ussian] *měniti* 'speak', Hittite *memma-* 'speak', Luv[ian] *māmmanna-* 'speech'.

This particular verb describes the power of speech itself (CHD 256), regardless of what is said. It is used in such speech acts as vows, curses, quotations, recitations, prayers. Kimball (1999:41) indicates that the two verbs *-ḫalzāi-* 'call out' ("alone and with the preverb *peran*") and *mēma-* 'speak, say' (significantly, both *-ḫi* verbs), were employed in the process of reading out a tablet[325].

Watkins (1995:255ff, nt.3) brings attention to parallels between the Hittite phrase *anda memai* 'say into', commonly used with spells and utterances in ritual, and constructions in other IE languages involving preverbs and verbs of "perception and cognition" (e.g. Greek ἔννεπε, Latin *inquit*) in similar usages.

mema- is attested in all three persons. It is heavily attested in OH documents, both

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opposition. The opposition can be discerned in ritual text, especially in the Middle Hittite hymn to the sun [...] An analogous classification based on speech vs. lack of speech is further attested in the Latin tradition, which indicates the great age of this classification" (Gamkrelidze and Ivanov 1995:392,393). As I have exemplified in Volume I Chapter 1, this classification was also important in Sanskrit, where the *ātmanepada* voice is used for humans, the *parasmaipada* for animals.

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mema- is clearly a "proliferating" term for 'speak', the archaic word being *te-/tar-*, the former stem *te-* connected with IE **dhē* "since the earliest days of hittitology" (Puhvel 2002:13).

with 1st sg. ending *-ḫi* and older *-ḫé* (KBo XI 19[326] Vs. 3; Friedrich 1960:104; Kronasser 1966:370, 546).

Attestation	1st singular	me-e-ma-aḫ-ḫé	
		me-e-ma-aḫ-ḫi	(Kronasser 1966:370,546)

The following, both from the Ritual for the Royal Couple, are typical usages (see Otten and Souček (1969:118) for a full list of citations of this verb from this text):

ta x[*ki-i*]*š-ša-an* ***me-e-ma-aḫ-ḫé*** *tu-u̯a-at-tu* DIN[(GIR.^{MEŠ}-*eš*)]

'and then **I speak** as follows: "Have mercy, ye Gods!"' (Vs. II 9 (5))

For this older spelling, see also Neu (1980:22) Althethitische Ritualtexte in Umschrift = STBoT 25). The next citation is also from the Ritual for the Royal Couple (Otten 1969:40= StBoT 8):

]X *ki-it-ta ta ki-i*[*š-ša-an* ***me-***]***e-ma-aḫ-ḫé***

'seated (?) **I speak** thus:...' (KBo XVII 7[327] iv 4)

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Hurrian: Ritual of Šalašu (CTH 788)

327
Ritual for the Royal Couple (CTH 416)

a-ap-pa-an-an-da-ma-aš-še ke-e ***me-e-ma-aḫ-ḫi*** ...

'and after to him **I speak** these [words]...' (Vs. III 4 (3))

The following usage introduces the Apology of Ḫattušili, where Ḫattušili begins with a formulaic praising of the goddess:

ŠA ^{D}*IŠTAR pa-ra-a ḫa-an-da-an-da-tar* ***me-ma-aḫ-ḫi***

'**I tell** Ištar's divine power!' (CTH 81[328], in Sturtevant and Bechtel 1935:43,44)

The following example is from the Ritual of Anniwiyani:

(4.1) [*na-aš-ta*] ^{ZÁ} *pa-aš-ši-lu-uš IŠ-TU* KAŠ *ki-iš-ta-nu-mi*

(4.2) [*nu-ki-i*]*š-ša-an* ***me-ma-aḫ-ḫi***

'Next I quench (i.e. cool) the bits of gravel with beer, and **I speak** thus:...'

(CTH 393[329], in Sturtevant and Bechtel 1935:114,115)

The meaning of the *-ḫi* verb *mema* can include 'talk to oneself, soliloquize'. The CHD notes (256) that this usage is often **without** the particle *-za*.

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Apology of Ḫattušili III (CTH 81)

329

Anniwiyani's Ritual (CTH 393)

nuzza DUMU.NITA.MEŠ *karti=šmi piran me-e-mi-ir*

'and the sons said to themselves' (lit: 'spoke before their heart')

(KBo XXII 2[330] obv.13-14, quoted in CHD:260)

mema appears in a *figura etymologica* in the following:

Attestation 2nd singular present me-e-ma-(at)-ti

me-mi-ia-an-na-aš-ši lē ***mematti***

'and don't **you speak** to her' (i.e., a certain "palace woman")

Attestation 3rd singular present me-ma-i, me-e-ma-i, me-e-ma-a-i

(Kronasser 1966:546)

Third person singular forms are very common in rituals. In the following citation, *ananeššhiyaš* refers to the "target or purpose of bird or lamb offerings in Hurroid rituals" (Puhvel HED 1:59) (note also the *figura etymologica*)):

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Fragments Naming the City of Zalpa (CTH 3)

2. 248 (506)

nu ŠA YÀ.DÙG.GA *ananešhiyaš memiyanuš* ***memai***

'**He speaks** the words of the good oil of *ananešhiyaš*' (KUB XV 31[331] i 17-18).

In the following ritual preparation text (cited in Puhvel HED 1:57,58) all verbs are *-ḫi* verbs:

namma-kan anāḫita ^{DUG}*āḫrušḫiaz dāi n-at-šan* ^{DUG} *ḫuprušḫiya*

ḫaššī parā dāi nu ***memai*** *ānuiš anaḫuēš kelu*

'then he takes morsels from the censer and places them in the tureen

on the hearth and **says** [Hurrian]' (KUB XII 12[332] v 2-5)

The verb is often used when particular languages are mentioned. The following is from the Consecration of a Temple, where the language is Hattic:

Ḫa-at-ti-li ***me-ma-i***

'**He recites** in Hattic' (KUB II 2[333] iv15, cited in Sturtevant 1933:28)

Preterite forms of this verb are important: Sturtevant (1933:231) cites both *memaš*

331
Evocation (CTH 484)

332
The Hittite ḫišuwaš Festival (CTH 628.IIb)

333
Consecration of a Temple (CTH 725)

(aorist preterite) and "contaminated" *memešt* (with both the older aorist *š* ending and the younger *-t*). Again, this may be an example of a "hypercharacterized" form common in the third person (see the discussion of such archaic mixed third person endings in chapter XX). Here is a third person preterite from the Apology of Ḫattušili (Sturtevant and Bechtel 1935:74,75, with their glossing and line conventions):

> *...nu-mu* ŠEŠ-*YA* (3.22) ***me-mi-iš-ta*** ^{I}*Ši-ip-pa-*LÚ*-iš-wa-kán Ú-UL an-da...*
>
> 'Then my brother **said** to me "Šippa-LÚ-is (is) not in (it)"'

Some morphological points connected with this well-attested verb are noteworthy. Sihler considers *mema-* significant because of the common *e*-reduplication, which, as do several other Hittite verbs of this type, provides evidence of "an abundance of eventives with *e*-reduplication [...] It is obvious that in the histories of G[reek] and L[atin] the few pres[ent] stems forms with *e*-reduplication were eliminated in favor of a uniform contrast between a present-tense-only *i*-reduplication and perf[ect]-only *e*-reduplication" (1995:487).

An interesting syntactic feature associated with this verb. From Melchert (1994:107):

> "The O[ld] H[ittite] ms. KBo XXII 1 shows the unique spelling [...]*me-ma-a-ḫi-ḫi-i* with unexpected plene spelling of the final vowel. As indicated by Watkins (1982b), the context independently suggests that these verbs occur in questions, and he plausibly interprets the plene spelling as showing a

secondary lengthened and accented final vowel marking the yes-no question (probably also with extra high pitch)".

Cognates include (middle voice) Greek μέμνημαι (often spelled with μμ, as in Homer (Frisk 1973:207)), Latin *memini* 'I remember' (which Mallory and Adams (1997:575) describe as "Probably the most ancient formation attested with this verb", but the Hittite is clearly older [SR], both from a root shape such as **mé-mn̥-me*, a reduplicated version of the IE root referring to thought **men-*. Related words within this semantic group (speech as the ultimate manifestation of mental ability) would include Vedic *mamné* 'thinks', Old Irish *moinethar* 'believes' Armenian *i-manam* 'understand' , Luvian *mimma* 'regard, favour' and several others (see Mallory and Adams (1997:575) for an extensive listing). Couvreur (1938:73) also has an interesting etymological discussion, both from phonological (involving sequences *mn* and *mm*) and semantic standpoints, and provides more possible cognates.

Sturtevant (1933:243); Kronasser (1956:187,196); Friedrich (1960:104); Kronasser (1966:318,370,407,447,546).

#74. *mimma-* 'refuse, decline'

13. Emotion middle

Melchert (1994:131) says that "verbs with *i*-reduplication such as *mimma-* 'refuse' **never** show plene spellings. Accent on the *i*-prefix is assured by the typical zero-grade of the root". See also Van Brock's remarks on this reduplication (1964:124).

Oettinger (1979:497) provides citations with both (-i- and -e-) spellings, indicating the spelling with *-i-* as older: "*me-im-ma-i* XXIII 68 + Vs.4' mh. [Middle Hittite], *mi-im-ma-i* KBo VI 2 + II 25' ah. [Old Hittite]". Melchert (1994:133) indicates that the spelling change (the lowering of /i/ in *mimma-* to /e/ in *memma-*) took place in the New Hittite period (post-Muršili II?).

Attestation	3rd singular present	mi-im-ma-i (OH)	(Kronasser 1966:546)
		me-im-ma-i (M/NH)	(Kronasser 1966:546)

mi-im-ma-i

'**he refuses** (to do something)' („er weigert sich", Kronasser 1966:303)

(Sturtevant 1933:133; Kronasser 1966:546).

This verb is attested with and without *-za* (CHD:263). Intransitive usages without *-za,* meaning 'refuse (to do something)', are more common in Old Hittite. This type of

intransitive use without *-za* is clear in this citation from the Laws (Friedrich 1971:127):

[*ták-ku* ***mi-i***]***m-ma-i-****ma*

'if **he refuses**' (Laws Table 1, § 95 (47)[334], in Friedrich 1971:46)

With the particle *-za* the meaning is the transitive 'refuse or regret (someone)' (Boley 1993:181). This latter type of meaning (transitive with *-za*) expanded significantly after the Old Hittite period.

Although one's first instinct is to assume that this is a *verba dicendi*, connected to *mema*(i)- 'speak', Mallory and Adams (1997:482) derive it rather from the root **men-* 'remain, stay', via present form **mimne/o*.[335] The source root **men-* has numerous "widespread and old" cognates, including Latin *maneō* 'remain', Vedic *man-* 'remain, Armenian *mnam* 'remain'. The authors say that, despite the homophony, this root is "Probably distinct from **men-* 'think' though there have certainly been secondary associations such as we find in Arm[enian] *mnam* 'remain' and 'expect'".

That root **men-* 'remain, stay' is the correct etymon is reinforced by Sturtevant's (1933:133) suggestions: he links Greek μίμνω, μεμένηκα 'stay, tarry'. "For the meaning,

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Laws 1 to 100 (CTH 291)

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Sturtevant (1933:244) makes a similar suggestion: "*mima-* (*mi-im-ma-i*, pret. *mi-im-ma-aš*) 'refuse' may come from IH *mimnā-*: Arm[enian] *mnan* 'remain, await', G[ree]k μεμένηκα 'I have remained'".

cf. Gk. μίμνων 'ass', μόνιμος 'steadfast', of a soldier, Welsh *amynedd,* OIr[ish] *ainmne* 'patience'". Kronasser (1956:196) as well, working from PIE source **memna*, makes the connection with Greek με-μένη-κα.

Oettinger (1979:497) has connected *mimma/memma* with the Sanskrit prohibitive particle *mā* (< **meh*$_1$, also seen in Greek μή 'not', Tocharian A *mar* 'not', Tocharian B *mā* 'not', Armenian *mi* 'not', etc.), with a literal meaning 'refuse (that) you wish', although Puhvel (HED 5:76ff) calls "speculative" such attempts to project the "*cave facias* model into prehistory".

#75. *nāḫ-, naḫ(ḫ)-* 'fear'

13. Emotion middle
[Term used in religious rites]

Kimball (1999:397) suggests two stems underlie this verb, similar in this morphological regard to fellow *-ḫi* verbs *šāḫ-*, *šaḫḫ-* 'clog', 'stuff' or *zāḫ-*, *zaḫḫ-* 'fight' : a strong *o*-grade stem *nāḫ* (< *$*nóh_2$-)*, and a weak *e*-grade *naḫḫ-* (< *$*néh_2$ -). This last stem is seen in Old Irish *nár* 'bashful, Middle Irish cognates *nār* (< *$*neh_2$-sro*) 'modest, diffident', *nāire* 'shame' (Mallory and Adams 1997:198).

This verb is clearly in the semantic realm of "middle voice", in that it refers to or describes (as do other verbs of thinking, reflecting, etc.) a certain psychological subject orientation[336]. The meaning includes not only 'fear', but 'reverence' (thus 'the reverent' = 'those who fear'. See Weinfeld (1973:195) for this usage in many Near Eastern languages). Gamkrelidze and Ivanov (1995:705) list this verb as descended from **naH-* 'fear, 'revere (gods), be ashamed' one of the IE terms involved in religious rites. The Hittite lexeme contains only the "reverential" meaning: the meaning 'shame' is a secondary development in Celtic only (cf. *náire* 'shame'). Bomhard and Kerns (1994:682) propose Proto-Nostratic root #563 *$*naħ$-/*$*nəħ$- 'to tremble, to shake ; to fear, to be afraid'.

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Significantly, despite the semantics of this verb, it does not associate with *-za* when it is used transitively (i.e., indicates the thing or person feared), and only optionally with the particle, especially in OH (Hoffner 1973b:526).

Hoffner (1973b:525) states that *nāḫ-* does not appear with *-za* when it takes an object (that of which one should be afraid)[337]. Even when it is used intransitively, in the meaning 'to be afraid', it takes this particle only on an irregular basis, and rarely in Old Hittite. Evidence such as this, he says (*ibid* 526), makes it "impossible to claim that *-za* construes with all verbs expressing emotional or rational activity".

naḫ(ḫ)- is attested in the 2nd person *li-e na-aḫ-ti* 'do not fear!' (Kronasser 1966:386) and the quite unique (non–*za*) reflexive *li-e-ta na-a-ḫi* 'don't (you) fear!' Compare a similar imperative construction using the participle of this verb in combination with *-za* and the auxiliary *eš-* 'be':

nu-za DINGIR.MEŠ-*aš* ZI-*ni me-ik-ki na-aḫ-ḫa-an-te-eš e-eš-tin*

'and be very much afraid of the will of the gods'

Held et al (1987:82), from whom this citation is taken, comment on the use of *-za* "since the subject of the sentence is in the 2nd plural *e-eš-tin* 'you be!'" Clearly, however, *-za* is not necessary in all such contexts:

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Although some verbs show precisely the opposite pattern (Hoffner 1973b:524ff), making it impossible to determine from the evidence the transitivising function of the particle: "In other words, the particle *-za* does not always mark the transitive in the transitive/intransitive transformation" (*ibid* 525). [He says the occurrences with *-za* seem often "erratic and unpredictable" usage].

nu k[amaršuwaš uddan mekki ***na-aḫ-ḫa-an-te-eš*** *e-eš-tin*

'in the matter of defecation, be very **afraid**!' (KUB XXXI 100[338] Rs. 8)

na-aḫ-ḫa-an-te-eš *e-eš-tin*

'be deferential!' (KUB I 16[339] iii 50)

In this regard, Boley's (1993:14,15) remarks are important. She states that although "It is perhaps obvious, but should be stated, that *-za* cannot correspond to a true reflexive pronoun, because it has no case. .. With the first and second persons plural, it is well known that *-za* is often supplanted by *-naš* and *-šmaš* respectively. These seem to be datives. This suggests that *-za* may be somewhat in the nature of an ethical dative". She remarks that although *-za* appears regularly with active verbs, it is very common in phrases with *eš-* 'be' and *kiš-* 'become'. In Old Hittite, however, *-za* is never used in nominal sentences.

Attestation 2nd singular present na-aḫ-ti

(Kronasser 1966:386) (CHD:338, 340; Puhvel HED 5:74ff)

Attestation 3rd singular present na-a-ḫi

338
Fragments of Instructions (CTH 275)

339
Political Testament of Ḫattušili I (CTH 6)

(KUB XLIX 3[340] II 3, also cited in Kimball 1999:397, also CHD:338,340)

This verb appears often in prohibitions, with the particle *le*, as in these unusual examples below. In the first OH example, the verb is used reflexively with an enclitic pronoun, but without an object.

lē-wa-tta na-a-ḫi[341] (also *le naḫti*)

'don't be afraid for yourself!'

(KUB XXXIII 24[342] i 43) (Puhvel HED 5:76; this example is also cited in Hoffner 1973b:526 as an example of a usage without *-za*, but with "an enclitic pronoun [...] referring back to the subject".)

Hoffner (1973b:526) reinforces the fact that, especially in Old Hittite documents, *-za* is not used. The next citation is from the Old Hittite Myth of Moon Falls from Heaven:

LUGAL-*uš-wa* *le-e* ***na-aḫ-ti***

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340 Bird Oracles (CTH 573)

341 Also *le naḫti* (Puhvel 2001:75,6 KUB XXX 33 I15, KUB XXX 36 II 8).

342 Disappearing Stormgod (CTH 325)

king-VOC[343]-QUOT prohib **fear**-2.sg.-*ḫi* (KBo XV 52 Vs.14)[344]

le-ya-aš ***na-a-ḫi***

'**Fear** them not!' (KBo XIII 131 Vs.14)[345]

Puhvel (HED 5:75ff) notes that such imperatives with *le* are "archaically idiomatic or rhetorical in kind". Such constructions have parallels elsewhere, as Latin *nētimē* 'Fear not!', Greek μὴ δείδιθι, Gothic *ni ōgs þus.* This type of archaic imperative, he adds, showed no tendency to spread, but was overtaken in "ordinary prose by the indicative; the latter is the mantle-bearer of the lost subjunctive or injunctive, in the manner of Lat[in] *nē crēdiderīs,* G[ree]k μὴ εἴπῃς, Ved[ic] *mā́ bhūḥ*. As opposed to such specific "aoristic" prohibition there is the old use of the present imperative also in Latin (*nētimē*), Greek (μὴ λέγε), and Vedic (*mā́ bháva*). Alternates such as here (*le naḫti* beside *le nāḫi*) indicate the amount of modal overlap in Hittite (with *-ḫi* second singular forms often manifesting very 'subjunctive-type' meaning). This is important for several reasons:

1. The Old Hittite imperatival *le* construction (used with *-ḫi* verbs) is *anterior* to the more productive "injunctive" type, which themselves are archaic. I have noted the modal

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Held et al (1987:55). This word should probably be read *ḫašš-uš* (Güterbock (1945:252)).

344
The Moon That Fell From Heaven

345
Iriya (CTH 401.02)

quality of several second singular *-ḫi* verb usages, reflecting the fact that, in many cases, certainly as with this verb (*le naḫti* beside *le nāḫi*), there was overlap in indicative and modal forms, to the point of the two being "indistinguishable" (Puhvel HED 5:77).

2. These forms give indirect evidence, yet again, for the more remote associations of Hittite. Discussing the various etymologies which have been put forward for *le* (see HED 5:77), Puhvel suggests that the most "cogent" connection may be with the Uralic prohibitive negation verb, as in e.g. Mansi *āl*, Mordvian *il'a*, Lappish *alē*, Finnish *älä*. This form was followed by the bare stem of the verb, so that such a form as Hittite **le dā* 'take not' "would originally have resembled in construction Finn[ish] *älä* tuo 'bring not'[...] Following modal grammaticalization of the stem as "imperative" (and ensuing paradigmatization), the negation verb was frozen as a negative adverb (parallel to IE **mē*), combining modally also with the injunctive-subjunctive".

#76. *nāi-* 'turn', 'lead'

11. Translational motion

This is one of a number of *-ḫi* verb "diphthongal" stems[346] which show distinctive inflectional patterns and *-ai-/-iya-* "apophony" (e.g. *nāi* : *neyanzi)* (perhaps reflecting an archaic present of an ablauting type). Verbs of this group include *ḫalzāi-* 'call', *išḫāi-* 'tie', *išḫamāi-* 'sing', *išpāi-* 'eat one's fill' = 'prosper', *māi-* 'grow, prosper', *pāi-* 'give', *dāi-* 'place', and *zāi-* 'cross' (see Kronasser 1966:536ff for a lengthy discussion of all these forms, 1966:539 specifically for *nai-*, and Friedrich 1960:100ff for full paradigms)[347].

This group of verbs has presented scholars with numerous morphological difficulties over the years. Wagner (1950:50ff) first suggested that inflectional patterns associated with these verbs support the reconstruction of an IE present type in **-ēi-/-ī-*. Risch argued that this type of stem reflects "true ablaut" rather than partial extensions in /y/, and noted also the frequent *ē*-vocalism in roots involved (both discussed in Puhvel 1960b:169).This last morphological feature of course suggests a stative sense, and perhaps an association with the third class of Germanic verbs (see Sihler 1995:569). Jasanoff (1979:63) argues to the

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About a dozen, according to Sturtevant (1933:246), who adds that all are "primary verbs".

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Each verb is a *-ḫi* verb. This fact is significant and begs an explanation. Perhaps it is not the stative aspect of these roots that provides the link between them, but the shared presence of an animate subject/agent (marked by the lengthened grade).

contrary, but his arguments are not entirely convincing.

Scholars disagree about the quality and source of the diphthong(s) in this verb (and others in its group). Whereas Puhvel, Melchert and Sihler suggest an *o*-grade source, Sturtevant seems to suggest two different sources: a long and a short diphthong, elaborated below. Part of the difficulty in identifying the quality of the diphthong is that the Akkadian script in which the Hittite scribes wrote did not possess diphthongs (Sturtevant 1933:49). Therefore, *ai* could be rendered by "any mechanism for writing *a* at the end of a syllable combined with any mechanism for writing *i* at the beginning (1933:60), e.g. *na-it-ti* = *na-a-it-ti* = *na-i-it-ti* =*nait* 'you turn', *na-a-i* = *nai* 'he turns'. Although IH short diphthongs became monothongized[348] ("All short *i*-diphthongs become Hittite *e* (often written *i*)(Sturtevant 1933:99), the long diphthong IH *āi* becomes *ai* (Sturtevant 1933:102)[349][...]. thus *neḫi* (*ne-iḫ-ḫi*) 'I lead, turn send' beside 3 s. *nai* (*na-a-i*) : Sanskrit 1st singular *ninaya* 'I led' (< IH *neiḫi)* beside 3rd singular *ninā́ya* (< IH *nēi*) (Sturtevant 1933:110).

Puhvel (1960:169) explains the radical *a*-vocalism in all these verbs as corresponding to "the *o*-forms of the strong active singular of the Indo-European perfect[...] Accordingly *sāi* [...]reflects **soE*^{y}*e*-"[350] etc. Speaking of the "original" stative (perfect) conjugation, Sihler

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Although Melchert (1994:148) insists, contra the 'received opinion', that "not all short diphthongs are monothongized in PA or even in Hittite".

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Sturtevant (1933:102,246) says that the *āi*- diphthong originates from a "long" diphthong (*ēi*) "IH *āi*, *ēi*, and *ōi* become Hittite *ai*".

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E^{y}_{1} is Puhvel's shorthand for a voiceless palatalized laryngeal (1960:171) lost in Hittite in

(1995:567) says "The stem of the stative was formed with the *o*-grade of the root in the sg., and the zero grade in the du. and pl.." This indicates that in addition to the characteristic endings shared by the two conjugations, the *o*-grade is one of the best examples of points of formal resemblance between PIE statives and the Hittite *-ḫi* conjugation.

Melchert's (1994:148) remarks on the vowel quality of these stems are confusing: He notes that stem **nóy-* [...] is "indirectly reflected in the imperative second singular *nai*, which [was] originally distinct from pres. 3rd. sg. *nāi*" (the imperative representing the bare stem). Such diphthongs "resisted the regular monophthongization in final position". Elsewhere, he says (1994:149) diphthong */*oy*/ was monothongized to /*e̯*:/ and shortened when unaccented. Thus (accented): sg. *nóy-* 'turn' (tr.) > *nēḫi*.

I am inclined to side with Sihler (1995:167) who says "the sequence **oH*$_1$ is reflected as *ay*, as in Hitt. stem *da-a-i-* 'put' < **dhoH*$_1$-". This solution would explain the alternations in vowel length, as **o* may appear as either *a/ā*, depending on accentual patterns. The root-final laryngeal could explain BOTH the final *-i* of the root as well as the fact, noted by Jasanoff (1979:64), that several of the verbs of this group show an **-i-* enlargement in languages outside Anatolian. Using *išḫāi-* 'tie' as an example, he cites Vedic forms *ásāt* 'tied' (**seh*$_2$*-t*) and perfect *siṣāya* (*(*se*)*soh*$_2$*-i̯-e*). He speculates

Superficially, it would be attractive to compare the Hittite verb with the latter

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words like this.

form: 3sg. *išḫāi* would then continue a preform **soh$_2$-i̯-ei* [...] the case of *išḫāi*, however, is isolated: no other verb of the *dāi-* class can be equated with an *i*-perfect elsewhere[...] [Rather, such verbs] continue an otherwise extinct present type in which an ablauting root [...] was followed by an invariant *i*-element and the "activized" middle endings.

Cognates of this verb are attested in Sanskrit (*náyate* 'he leads', and forms cited above) as well as in Old Irish *níath* 'hero'[i.e. 'leader'?] (< **nei-tos*) (Kronasser 1956:196) (contra Mallory and Adams (1997:346) who claim that this verb is attested only in Hittite and Indic[351]. *nāi-* is the second element in univerbated *-ḫi* verbs *ḫanna-* 'litigate' (Sturtevant 1933:213), *penna-* 'drive thither','accept', and *unna-* 'drive hither'.

This verb is attested in all persons: (Friedrich 1960:110ff; Kronasser 1966:541; Oettinger 1979:460,481).

Attestation 1st singular present ne-iḫ-ḫi (Kronasser 1966:541)

neḫḫi

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Mallory and Adams suggest a source **neih$_x$-* 'lead' (with, significantly, *o*-grade present **nóih$_x$ei*) (1997:346).

'I lead' (KUB IX 31[352] iii 23 in Kronasser 1966:541)

Attestation 2nd singular present ne-ya-at-ti / na-it-ti (Kronasser 1966:541)

na-it-ti

'you lead' (KUB I 16[353] iii 52,53, in CHD 3:349)

-šan para ***na-it-ti***

'**du** läßt **dich ablenken**' (cited in Kronasser 1966:541)

Attestation 3rd singular present na-a-i (Kronasser 1966:541)

nāi

'he leads'

The Chicago Hittite Dictionary (1980, Volume 3:350) notes that "unambiguous *ḫi* conjugation forms" of this verb (with the meaning 'turn') are often used to describe motions

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Ritual of Ašḫella against a plague in the army (CTH 394). For this form, Kronasser (1966:382) cites the semantic parallel Latin *comitor*.

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Political Testament of Ḫattušili I (CTH 6)

such as turning one's head, eyes, etc. The third singular *-ḫi* form appears in the intransitive usage below:

[*n*] *ašta* ^{LÚ}ḪUB.BI 1-*ŠU* **ne-i-ia**

'The acrobat **turns** once' (KBo IV 9[354] ii 9-10 in CHD 3:352)

Third singular present forms appear often in the Laws, regularly with preverbs including *appan arḫa*, *šarā* (cf. Friedrich 1971:127) as well as *para* (Kronasser 1966:541)

Other attested forms are rare and interesting, and I cite them here. There is the *t*-less 3rd person form parallel to the 3rd singular form cited above *ne-i-ya* (-a(ri)) meaning 'he leads' (Sihler 1995:463). Compare Latin *ī* < Latin Faliscan **-ai* -- the inherited ending **-a* "embellished with primary **-i*, whence - *ī*:" (Sihler 1995:570).

Sturtevant (1933:125) cites the important preterite form of this verb[355] which he considers "historically identical with the 3 s. of the IE *s*-aorist; hence Hittite ...*na-a-iš, na-iš* 'he led, turned, drove' = Skt. *naiṣ* 'he led'", which form provides "proof that in some words *ai* and *au* are monosyllabic" as they "correspond to diphthongs in the related languages; e.g.

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354 ANTAḪŠUM Festival Fragments (CTH 612)

355 Both 3rd singular preterite *naiš* and *naišt* (see note below) are heavily attested: see Kronasser 1966:36,406,542.

na-a-iš : Skt. *nais* 'he led'" (Sturtevant 1933:61)[356]. For this form, see, for instance, KBo III 4[357] iii 15. Oettinger (1979:461) compares 2nd singular preterite *naitta* 'you led' with Indic *ninétha* 'you led'. [Note the equivalence Hittite *-tt-* : Sanskrit *-th-*].

The 2nd singular imperative is the "bare" root *na-i* (Kronasser1966:542). Melchert observes that this form indirectly reflects the stem ***nóy-*. The imperative was "originally distinct from pres. 3rd sg. *nāi* [...] (thus already W. Cowgill, pers. comm.)" (1994:148).

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See Melchert (1994:179) for an analysis of third singular preterite *na-iš* as from *naišt* "with loss of **-t* in a final **/-st/* cluster". Such clusters would require a "prop" vowel to be maintained, which would explain the appearance of the dummy final vowel *-a*. Thus, it is not the *-a* which indicates preterite, but the consonantal item *-š-*. This fact is important for a correct interpretation of several clearly *present* forms which end in a dummy *-a*.

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Ten Year Annals of Muršili II (CTH 61.I)

#77. *nanna-* 'drive' (cattle), 'ride in'

Whereas most Hittite verbs with a nasal suffix (regularly *-nu-*) are secondary (derived) verbs, most often with causative meaning, belonging to the *-mi* conjugation, there is a special class of *-ḫi* verbs which show a suffix *-na*, most often, as here, with intensive force (Sturtevant 1931b:167). Sturtevant (1933:215, 247) suggests that this verb is a reduplicated version (with "intensive" meaning) of *nai* 'lead' (i.e., the meaning would be 'lead in a purposeful way', as of cattle) (ditto Van Brock 1964:130). It is one of several verbs which have plain and reduplicated forms from the same root. Sturtevant's subsequent remarks on these two formations are informative with regard to the relative chronology of the *-ḫi* and *-mi* conjugations, as well as further evidence of the links between the Hittite *-ḫi* conjugation and "middle" voice in other ancient IE languages:

> In Hitt[ite] the *na*-verbs and the *nu*-verbs are sharply distinguished not only in conjugation but in meaning. While the *na*-verbs normally have intensive meaning and may readily be equivalent to verbs without this extension, the *nu*-verbs are with few exceptions causative. While it is perhaps not necessary to assume that the Hitt[ite] distinction between the two categories was original, that is the simpler solution. If so, I can point out two survivals in IE. Gr[eek] ὄρνυμι 'incite', as well as the aorist ὦρσα, functions as a causative, **while the perfect ὄρωρα, as well as all middle forms, has the intransitive meaning 'arise, move'** [...]Since the presence of a tense suffix is quite anomalous in the perfect system of primitive IE and is comparatively rare in the Hitt[ite] *hi*-conjugation, it seems likely that the Hittite conjugation of the *na*-verbs is original. Their transfer to the present system was largely a result of their confusion with the *neu*-verbs; but one other factor may be named.
>
> 2. 268 (526)

> The first singular with suffix *hi* regularly yielded IE *-nai* and Sanskrit *-ne*. This form, **which actually survives in Sanskrit as first singular middle**, furnished a second bridge to the present system (1931b:171)[emphasis added: SR].

Attestation 1st singular present na-an-na-aḫ-ḫi (Kronasser 1966:565,566; Oettinger 1979:491; CHD:391)

Attestation 2nd singular present na-an-na-at-ti (Kronasser 1966:122; Oettinger 1979:491, (KBo XXIII 8 Vs.9); CHD:391))

Attestation 3rd singular present na-an-na-i

(Kronasser 1966:566; Oettinger 1979:491; CHD:391, KBo XVII 10 i 2)

Recall the distinction in Sanskrit: *parasmaipada* (transitive) *vahati* 'drive' but *ātmanepada vahate* 'ride in'. The CHD mentions time and time again that different constructions, forms and particles etc. are used to differentiate human (and gods') activity from animal. The following (CHD:392,3) is one example, but there are many others:

(1) If a person is riding in something, the *-ḫi* forms are used:

nu ABUYA maḫḫan ***na-an-na-i***

'as my father **was driving**' (KUB IXX 18[358] i 22-25, in CHD:392))

(2) If the reference is to driving animals, carts, etc., the *-mi* forms are used:

nu ANŠE-*in* (var, ANŠE-*an*) ***na-an-ni-an-zi***

'and **they drive** a donkey' (KBo XXII 2[359] obv. 7-8)

Van Brock (1964:130) comments on *nanna*, noting first the transitively ambiguous character of the simplex *nāi-/ neya* which can be "à la fois transitif et instransitif, soit "conduire, mener", soit "se conduire". On trouve dans les rituels des expressions du type GUD UDU-*ya neyanzi* (ou, avec préverbe *u- unnanzi*) "on amène un boeuf et le mouton", qui prouvent que *nāi-* suffit à décrire une opération portant sur plusieurs objects que l'on amène conjointement. Intransitif, "se conduire": *anda nāi-* "s'appliquer à", *parā nāi-* "se trainer", d'où "négliger" d'une part, d'autre part "rester longtemps".

She notes that although in general usages for the reduplicated verb are similar to those of the simplex, the transitive reduplicated verb is used (1) when the object of the verb is itself more numerous or more varied , i.e., involving a large group of animals or groups

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Deeds of Šuppiluliuma 9-17: II. 2nd and 3rd tablets (CTH 40) Muršili II

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Fragments Naming the City of Zalpa (CTH 3) Muršili I

of different types of animals, bulls, sheep, cows, etc. (2) when the action is complex or repeated: G]UD. MAḪ *ta* GUD. MAḪ *nanniyanzi* 'on amène un taureau et (encore) un taureau'. The following usage is also cited, which seems to involve a complex activity (perhaps poaching?):

GUD$^{ḫi.a}$-*Š]UNU* UDU$^{ḫi.a}$-*Š]UNU* ***nannir***

'**on emmena** leurs boeufs et leurs moutons'

(KUB XXVI 71[360] IV 10)(cited in Van Brock 1964:131).

Intransitive usages of the reduplicated verb are varied: it can be used in a context similar to *parā nāi-,* where 'following' a route involves a long, involved, or extended trip. This type of usage is clear from the following example (a fuller text of the example above), where the durative, ongoing activity described by the reduplicated verb provides the background to the sudden interruption of a single event:

*nu **ABU-YA** maḫḫan **nannai** nu-kan edani pangawi* ^{lú}KÚR 1-*anki-pat anda ḫandaizzi*

'et tandis que **mon père fait route**, il rejoint (rencontre?) d'un seul coup l'ennemi rassemblé

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Ammuna 'Chronicle' (CTH 18)

#78. *pai-* 'give'

3. Reciprocal domain (c) Naturally reciprocal events

This verb is one of several *-ḫi* "verba composita", (< *pe-* + **-ai*)[361] Kronasser (1956:197; Kronasser 1987:127,8, 538). Benveniste (1973:80) stresses the importance of the verbal root **-ai* 'attribute, allocate' (seen also in Tocharian *ai-* 'give' and several other derived forms (see entry #1 **-ai* for details), from both an historical and semantic perspective. Reciprocal notions involved in "giving and taking" were at the very heart of Indo-European culture and thought–an essential part of the mutual hospitality which insured the stability and adhesion of social groups (Benveniste 1973: 66-81; Mallory and Adams 1997:185ff and references therein). Hittite is the exception to the IE 'rule' that conveys the notion 'give' by the use of reflexes of **deh$_3$-*[362] . That this is so is part and parcel of the very notion of reciprocity:

The Indo-European languages, and apparently Indo-European itself, show a

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Arbeitman (1987:20) notes the lack of what might be considered the logical oppositional form to this, namely **wāi-* (< *u* + *-āi-*) (such as seen in pairs *peda-* 'take (thither)' vs. *uda-* 'bring (hither)'; *penna-* 'drive (thither)' vs. *unna* -'drive (hither)'.

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A derivative of **deh$_3$-* means 'take' in Hittite, but 'give' in other daughters: Latin *dō*, Sanskrit *dádāti,* Greek δίδωμι.

> certain interchange of words for 'take' and 'give'. Certainly this is so in part at least because taking and giving are reciprocal relationships, labelling either end of a single transaction [...] In addition, given that the notion of exchange (between people, between people and the gods) was apparently very important in PIE culture, it is perhaps not surprising that a given verb may show up in one stock with the meaning 'take' but in another with the meaning 'give'. (Mallory and Adams 1997:563)[363]

Because the verbal root *-*ai* already (by itself) conveys the meaning 'give', and because *pe-* is a directional preverb, I suspect the meaning of the verb *pai-* in Hittite is more 'offer (a gift) to' rather than the more straightforward 'give'. In this way two central aspects of "middle voice", the notion of deliberate intentional action (in the directional preverb) and the important cultural notion of reciprocity are combined both morphologically and semantically. In this context, it is important to note that uses of the semantically similar Homeric Greek verb δωρέομαι 'I give a gift' are more frequently *middle* voice (ῥεῖα θεὸς [...] ἵππους δωρήσαιτ' [aorist optative middle 3rd sg.] 'easily might a god **bestow** [...] horses' (Iliad 10.557) (LSJ I:464), only later in the "passive" .

This verb appears often in contexts involving some kind of exchange: bonds, promises, compensation, tribute, even bribes (CHD 1994:Volume P:44,45,46). It often

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Note *laman dai-* beside *laman pai-* in name giving (*Epilecta* 296; HED 5:56)

appears in idiomatic expressions (CHD 1994:40,41), such as the legal (treaty) terminological phrase *ḫappar pāi* 'give compensation' (KUB XXVI 19[364] I 15, in HED 3:125) .

With regard to the origin (and quality) of the root vowel, Melchert (1994:176) explains that the sequence **pe-* + *-ai* involved the deletion of the /e/ of the prefix, not contraction to a long vowel. Thus, **pe + ai > pai > pe* not, he insists, ***pāi*. This change must have taken place early (PA). (The vowel of this verb thus differs in quality from the root vowel of fellow *-ḫi* verb *lāi* 'loose' (#61) where the long vowel, as with other verbs of similar shape, derives from the "loss of two **y*'s" (Melchert 1994:177)). It is instructive that other verbs which involve an original prefixal element (such as *nai-* 'drive' (#76)) also show an /e/ in first singular forms: thus *peḫḫi* 'I give' *neḫḫi* 'I lead'. I suspect that it is not the prefix *per se* which is relevant but the archaic nature of the univerbation process, which produced the 'blended' /e/ rather than the sequence *a, i*.[365]

Attestation: 1st singular present ***pé-e-eḫ-ḫé*** (KUB XLIII 32 iii 7; KBo XVII 56.rev 3, cited in CHD) (See below for the many spelling variants of 1st singular form).

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Kaška treaties (CTH 140)

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The same coalescence phenomenon could have resulted in the older 1st person singular ending *-e* (from the original *-a* plus hic-et-nunc tense particle *-i*). Importantly, this *-i* was a tense marker: voice was marked by the cliticized consonantal opposition *m* ~ *ḫ*. Since Hittite *ḫ* derives from IE the "a" colouring laryngeal **-h_2*, whether the original state of affairs marking "high self involvement" was a purely consonantal ending (**-h_2*) or consonant + "stative" *-e* (*h_2e*), both would have resulted in what [originally] sounded like *-ḫa*.

First singular attestations (with both spellings) are common in OH texts. Here is an example from the Ritual for the Royal Couple: (Otten and Souček 1969:32 = STBoT 8 Rs. III 30-32):

[(*A-NA* LUGAL) *te-e-eḫ-ḫé* (*ti-iš*)-*š*]*u-um-mi-in-n*[*a*] *ḫa-li-i-na-aš* ***pi-e-iḫ-ḫ***[***é***]

'I take a clay cup from the king and **I give** it [back] to him' (KBo XVII 4[366] III 31)

The verb may be used to indicate the performance of a ritual itself. Thus:

-ta SISKUR.SISKUR ***píḫḫun***

'**I performed** a ritual for you' (KUB VII 1[367] I 6, in Kronasser 1966:542)

It is instructive to see some of the variants attested for this verb, as provided by, among others, Friedrich (1960:101) and Held et al (1987:42,43). Attested variants of the 1st person singular include:

pi-e-iḫ-ḫé 'I give'

pi-e-iḫ-ḫi 'I give'

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366 Ritual for the Royal Couple (CTH 416)

367 Ritual of Ayatarša, Wattiti, & Šušumanniga (CTH 390)

	pé-e-eḫ-ḫé	'I give' (see Neu 1980:16) Althethitische Ritualtexte in Umschrift = STBoT 25, where there are two examples of this form)
	pí-iḫ-ḫi	'I give'

Attestation 2nd person singular. Variants include:

pa-it-ti	'you give'
pa-iš-ti	'you give'
pi-eš-ti	'you give'

Note the "confusion" of person endings, as with fellow *-ḫi* verb *mema-* 'speak' with "contaminated" third singular *memešt* (with both *-š* and *-t*). This "contamination" appears also in the preterite: with (the older) *-š* preterite : *pa-iš* '(s)he gave' (numerous: Kronasser 1966: 36,378,542), and the newer "mixed" 2/3 endings: *pa-iš-ta* (Kronasser 1966: 36, 378, 536, 542). For these "mixed" endings the *-ḫi* conjugation verbs, see Sturtevant (1933:231) or Sihler 1997:570). See also discussion under entry *dāi-* 'put'.

Attestation	3rd person singular	pa-i	'(s)he gives'
		pa-a-i	'(s)he gives'

The third person singular form is very common in the Laws in the context of 'giving [back]' (as recompense), reinforcing the idea of 'reciprocity'. As Ceram notes, in the Hittite legal system, unlike in those of several other systems in the Ancient Near East, "...the guiding principle throughout was reparation rather than the then prevailing *lex talionis* or law of retaliation" (1956:203). Thus, from the Laws (in Sturtevant and Bechtel 1935:210,212)[368], I cite these various examples of the common usage of this verb in such a 'reciprocal' context:

1. (1.1)...*Ù* 4 SAG.DU ***pa-a-i*** 'he...**gives (as recompense)** four persons'
2. (1.4)...[*Ù* 2 SA]G.[D]U ***pa-a-i*** 'he...**gives (as recompense)** two persons'
3. (1.6)...*Ù* 2 SAG.DU ***pa-a-i*** 'he...**gives (as recompense)** two persons'
4. (1.8)...*Ù* 1 SAG.DU ***pa-a-i*** 'he...**gives (as recompense)** one person'

7. (1.16) *takku* LÚ.GÀL.LU-*an EL-LAM ku-iš-ki da-šu-wa-aḫ-ḫi*
na-aš-ma KAxDU-*ŠU la-a-ki* (1.17) *ka-ru-ú* 1 *MA-NA*
KUBABBAR *pí-eš-kir ki-nu-na* 20 *ZU* KUBABBAR ***pa-a-i***..
'If anyone blinds a free man or knocks out his teeth, formerly
they paid one pound of silver, but now **he pays** twenty
half-shekels of silver;'

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Laws 1 to 100 (CTH 291)

Gamkrelidze and Ivanov (1995:778) attest to the archaic nature of this univerbated lexeme: according to them "The word is borrowed from an early Indo-European dialect, possibly from Common Indo-European itself or from some regional dialect grouping other than Anatolian. It could not have come from Anatolian, since this Indo-European root was already prefixed with *p^h- in Proto-Anatolian: Hitt[ite] *pai-*, Luw[ian] *piya-*, Hier[glyphic] Luw[ian] *pia-*, Pal[aic] *piša-*;"

They suggest (1995:779) that Elamite *pini* 'gift, dedication' is an Anatolian loanword based on this root. Sturtevant (1927c:222) connects *pai-*, one of the "commonest" verbs of his third class (*-ḫi* verbs of "composite origin" as above), with Sanskrit *ātmanepada pyāyate* 'be exuberant, swell, overflow' (*bhū gaṇa* Ā only)[369]. He adds that "Other words from the base ***poyē-* are fairly common in the IE languages, and they indicate that the Skt. verb has preserved the original meaning pretty closely. A semantic development: 'be exuberant, overflow'> 'be generous' > 'give' is not improbable". This link involves the possibility that **py > p* in Hittite. However, the Sanskrit verb is most likely ultimately from root *pī/pi*, an *ātmanepada* only *bhū gaṇa*: verb *páyate*. (Melchert seems to suggest that *py-* can appear as *pi* in Hittite */py-/ > (pianzi)*.

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Monier-Williams (1998:652) cites perfect *papye*, aorist *apyāyi* passive *pyāyáte*

#79. *paḫš-* 'protect'

[Treaty and Covenant Vocabulary]

Sturtevant (1930b:152) reiterates Kuryłowicz' "brilliant" insight that the roots **pā-* 'pasture, feed' and **pō-* 'protect' (both < **peh₂-*) are *au fond qu'une seule*, proof enough for Sturtevant that "original full-grade *ā* might alternate with *ō*". In addition to its use in "bare" form (**peh₂-*), the root is much characterised *via* a variety of derivational suffixes. For the Hittite root, Melchert (1994:70) suggests source IE root **peh₂-s-*. Many seem to agree that the *-s-* was a later characterization[370]. Bader (1976) suggests that the extended form of the root (*la forme élargie*) with suffix *-s*, **pā-s*, and with meanings 'protect' or 'guard', occurs at the periphery of the IE world: she cites the Hittite root *paḫs* 'protect', Tocharian A *pās-* 'guard', 'practice moral behaviour', Latin *pāsti* (a 2nd person singular perfect form which, she notes, corresponds to Hittite *paḫḫašta*). It was these extended forms which in turn gave rise

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The *-s-* element is acknowledged to create aorist and present stems, thus, Sturtevant (1930b:152, 1931a:120). Nevertheless, Sturtevant considers the *-s* in Latin *pāstor, pāstus* etc. to have been "original", not analogical from the present stem *-sk-* derivatives. (In other words, this is not "iterative" *-šk-* but two separate consecutive morphemes: *-š-* + *-k-*. Bader's suggestion of the addition of a *-k-* suffix (as in Tocharian) would agree with this analysis). Is Sturtevant's suggestion that, to explain the long vowel, "one must assume a short vowel in IH ***pahs-*[i.e. *paḫš-*] even if from earlier ***pāhs-* [i.e., *pāḫš-*], and a lengthening in IE on loss of *h*" [i.e. *-h₂-*] at odds with Kimball's (1999:402) insistence that "**h₂* remained before **s*"?

to derivatives in *-k-*, thus Tocharian B *pāsk-* 'guard', Latin *pasco(r)*[371]. She indicates that the "pastoral" (animal-tending) notions associated with the root in other more western languages, is, in Hittite, covered by the root **wes-* 'graze', as in Hittite *wešiya*[372], a *-mi* verb meaning 'graze', (whence Hittite *weštara-* 'shepherd'), Avestan *vāstar* 'herdsman'.

In addition to meanings having to do with 'protecting' in Hittite, Weinfeld (1973:193) indicates that *paḫš-* is the verb used to express observance of a covenant. Noting that the terminology of covenant echoes throughout the ancient Near East, he cites (among others) Hittite *paḫš*, Akkadian *naṣāru* 'protect, guard', Hebrew *šmr/nṣr*, Greek διατήρειν as verbs employed in connection with keeping (or remembering) a promise.[373] (The phrase 'to keep an oath' is *lingain/lingauš paḫš-* (CHD:65 (Volume -L-), whereas 'to transgress an oath' is *lingain/lingauš šarra-* (which see). Both are *-ḫi* verbs).

Commonly cited cognates of both the 'simple' and characterized stems include Latin

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See entry #92. *pašk-* 'stick in' for a different analysis.

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The derivative *wellu-* 'pasture' (cf.Gamkrelidze and Ivanov (1995:722)) appears in the Hittite Burial Rite referring to the afterworld. It is a beautiful blessing: "And may bulls, sheep, horses, and mules be pastured on this field with him".

With regard to root **we-s* 'graze' in Hittite. I suspect that root **we-r* 'look, pay attention to, be careful' is also instructive here (see discussion of words related to this root in Gamkrelidze and Ivanov 1995:709 who note that "In Hittite and Latin–and hence in the Anatolian-Italic dialect area -- the word acquires the specialized meaning 'fear' (in ritual sense: Hitt[ite] *werite-* 'fear, tremble' [...] Lat[in] *uerērī* 'revere, fear, worship'". Latin Vesta?

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See entries *da-* 'take' and *dāi-* 'place' for parallels to Greek phrases used indicate making a covenant: ὅρκον τιθένι or ὅρκον διδόναι.

pāscō 'I pasture, nourish' (Kronasser (1956:43,191,195), Sanskrit *pāti* 'guards', Tocharian A *pās* 'guard, protect', practice moral behaviour' (Mallory and Adams 1997:198). Gamkrelidze and Ivanov (1995:779) link Elamite *baḫa* 'defender, defense' with this root, as one of a number of lexemes which although of Indo-European origin are, they suggest, "distinct from Anatolian and evidently go back to an older source, possibly a dialect of Common Indo-European".

On this last point, I note that as well as a discernible geographical distribution, there does appear to be a distinct chronology to the various stems. The fact that root *$*p\textcircled{ə}h_2$-and its derivatives are part of the oldest and most basic vocabulary is instructive in identifying and illuminating some of the more archaic processes of IE, many of which have implications for Hittite marking strategies. Although a fuller discussion would take me too far afield, I mention here certain points of interest relevant to this thesis which are evidenced by the various forms of this important lexical item.

I suggest that the chronological development may have proceeded along these lines:
Stage One:

An early "nerbal root" (cf. Semitic grammatical term *maṣdar*) *poh_2/pah_2- (*$p\textcircled{ə}h_2$- in some systems), with the general meaning 'protecting, guarding, looking after both animals and humans', as recognized by Kuryłowicz and reinforced by Sturtevant. It is impossible to tell which meaning is prior or more basic. I believe that the -h_2 is itself a characterisation of the simpler form, added to mark "personal"or "animate" (and surely "sentient") nature of the abilities needed to guard and protect the clan. This suggests that at a very early stage,

heteroclitic animate *-h_2/-m* stems, appeared in **both** nouns and verbs, and were opposed to neuter, inanimate *-r/-n* stems (which also appeared in both nouns and verbs). It is significant that BOTH members of this ancient (animate/inanimate) opposition are still transparently and profusely attested in Hittite.

This original stem appears in Sanskrit *pa/pā-* 'guarding, protecting, ruling', *ad gaṇa* verb *pā-* (Dhātupāṭha XX,15) (with archaic imperative *pāhi*), with RV meanings including 'keep, preserve, observe, attend to, follow', Old Persian *pā, paiti*, perhaps Elamite *baḫa* 'protector' (which would show both the laryngeal and its function as personal agentive indicator, as proposed above), Greek πά-ομαι, πέ-πα-μαι, πῶ-υ. Is Linear B *pa_2-si-re-u* 'lord' connected? Probably not.[374]

The early root may be seen in the first element of many of the IE words for 'father'

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Ventris and Chadwick (1956:121) comment that the Mycenaean title "*pa_2-si-re-u*" 'lord' [actually *qa-si-re-u*, see below] is "clearly to be connected with Homeric βασιλεύς [βα-σι-λε-ύς], who is not a king, but a kind of feudal lord, master of his own territory but owning allegiance to the king". Together with some 252 other ancient lexemes, Mycenaean words *pa_2-si-re-u* 'lord', *pa-te* 'father' and *po-me* 'shepherd' are identified by Ventris and Chadwick as "together with Hittite vocabulary, the earliest detailed evidence of Indo-European speech" (1956:385). The issue is complicated, however, by phonological developments. Hooker (1980:53) says that the discovery that the Linear B script had "a separate series of signs (conventionally transliterated as *qa, qe, qi, qo*) to represent the labiovelars in Mycenaean times or, at the very least, that they were regarded as different in origin from the sounds represented by the labial and dental series. Clear examples are: e-qe-ta = ἐπέτᾱς (< *ἐκ^{w}έτᾱς); mo-qo-so = Μόφος (<*Μόκ^{w}σος); qa-si-re-u = βασιλεύς (<*γ^{w}ασιλεύς); -qe = τε (*κ^{w}ε)". See Ventris and Chadwick (1956:46,47), Chadwick and Baumbach (1963:179 for references involving the βασιλεύς /*qa-si-re-u* issue). Puhvel (p.c.) says that *qa-si-re-u is* "**ḱwāyo, besides* * ḱewA* 'swell, be strong, rule' (κυέω, κύριος). The proof is spellings like τα ππαματα in inscriptions".

(actually, 'protector') (in Latin, Greek, Sanskrit[375], see below).

Stage Two: Various characterizations which reinforce agentivity:

Assuming that the ORIGINAL, ancient strategy, still visible in Hittite, which opposes animate agentivity (*-h_2/-m*) to inanimate (*-r/-n*) is becoming or is obsolete[376], new and/or additional strategies to indicate this meaning were required. Affixes whose function it was to indicate or reinforce the idea of agentivity, i.e., underscore the role or function of who is doing the 'protecting', are heavily attested. Thus Greek πο-ι-μήν 'shepherd' (a *set* root?, cf. Sanskrit *jan-i-tar* 'generator'[377]); the words for 'father/protector' would belong here as well, thus, **pəh*$_2$- + *tr* (agentive suffix) = 'protector'. The accent is on the suffix, resulting in zero-grade **ph*$_2$-*tŕ*> Sanskrit *pi-ta*(*r*) 'father', Latin *pa-ter* , Greek πατήρ[378]. Also here

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Note that the Hittite word for 'father' does not derive from **po-*/*pa-*. 'Father' in Hittite is written with Akkadian syllabogram *A-BU* =Hittite *ad-da-aš.*

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Burrow notes (1955:120) that this did occur with the *-r/-n* stems in all branches, as part of a general tendency toward a decline in the whole category 'neuter', perhaps in conjunction with the growth of grammatical gender. This trend is seen everywhere but Hittite, which, of course, has no 'gender' (masculine~feminine~neuter), opposing rather the archaic animate/inanimate.

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For *-i-* union vowel, see Burrow 1955:186ff, Sihler 1995:124ff.

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The variant spellings (Sanskrit *pi-tar*, Greek and Latin πα-τήρ, *pa-ter*) are explained by the stem-final laryngeal of the pre-form **pəh*$_2$-*tár*: Laryngeal h_2 is known to have two dominant (and seemingly contradictory) affects on nearby vowels:

would belong Mycenaean *pa-te* 'he who protects, nourishes'[379] (Ventris and Chadwick 1956:404, Chadwick and Baumbach 1963 :234). Although suffix *-te* usually denotes a man's occupation or trade, the Mycenaean evidence suggests that the 'protective' role belonged to women as well: thus *po-ti-ni-ja* 'mistress, protectress (?), used as an epithet of Athena (*a-ta-na po-ti-ni-ja*), but appearing by itself as a divine name[380]. The pastoral meaning is also evidenced in Mycenaean, thus *po-me* (= Greek ποι-μήν) 'shepherd', *ai-ki-pa-ta* 'goat herd'.

Commenting on the history of some of these truly archaic lexemes, Burrow (1955:133) suggests that many were "disguised agent nouns" (i.e., originally neuter action nouns transferred to the masculine gender). He cites Sanskrit *klóman* (dissimilated from **plóman*) , Greek πλεύμων, both 'lung' (from **pleu-*) meaning 'that which floats', [also

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(a) it 'colours' a nearby *-e* to *a* (as in 1st person singular Greek perfect *-a-* < h_2e)

(b) it shows high front vowel reflexes, such as *i* in Sanskrit *pitā.*

These seemingly contradictory effects are the result of the phonological nature of pharyngeals or "adytals", which produce low vowels by articulatory assimilation. h_2 is the only laryngeal in this class whose phonological 'signature' is "a formant structure with a low and powerful first formant. This gives the impression of a high front vowel. At the same they are made with tongue root retraction and often with tongue root lowering, which results in approximation of the epiglottis over the adytus (opening of the larynx)" (Colarusso 1997:125).

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Mycenaean *-te* = *-tēr* = agentive suffix. The lexeme is seen as well in the (feminine) person name ***pi-ro-pa-ta-ra***.

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Although no evidence of this deity has appeared, she seems to be of some importance, perhaps the protector of Pylos (?) (Ventris and Chadwick 1956:127).

Latin *pulmon*].[381] He adds (1955:134) that "Masculine action nouns of the same type are common in Greek: τέρμων 'boundary' beside τέρμα nt. [nt. = neuter] 'id' (Lat. *termen*), χειμών 'winter' beside χεῖμα nt. [...] Owing to their early obsolescence the neuter *r*-stems have not undergone this transference". Hittite, of course, has not "developed" the male/female gender split, but maintains the more archaic human (active, agentive) vs. non-human (neuter).

An essential feature in these 'new' agentive nouns (almost invariably masculine, from neuter *r/n* stems) is a change in accentual patterns: the accent is on the agentive suffix, rather than radical accent as in the old neuters. These nouns also have *vr̥ddhi* (lengthened grade) in the nominative singular[382]. Often the two types co-exist, e.g. neuter *bráhman* 'growth' (< *br̥h* 'be, grow great') ('that which has grown') vs. masculine *brahmán* 'one who prays' (= 'he who has grown great', or perhaps the causative meaning 'he who magnifies'), neuter *kártar* 'deed' (< *kr̥-* 'do') ('that which is done') vs. masculine *kartár* 'doer, agent' ('he who does'). Burrow comments that although "in Sanskrit the two types exist side by side [...] more often the old system has broken down. This is mainly due to the elimination of the old neuter types, which left important classes of masculine agent nouns standing isolated"

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Greek suffixes -μην/-μων, Latin *-mō* derive masculine agent and action nouns (Buck 1933:320). The"middle" participle suffix *-men(o)* is bi-morphemic, composed of suffixes (adjectival) *-mo* (as in Latin *opti-mu-s* 'best'), and *-no*.

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This lengthened grade, especially appearing in the nominative case, could be interpreted as "reinforcing" or "double marking" sense of agentivity in addition to the suffix.

(1955:138).

Step Three: Early characterization of the simple stem with several archaic suffixal elements:

(3.1) extension *-s-*, seen (as *-š*) in the Hittite root above, and in IE words for 'pasturing' of flocks, seen in peripheral isoglosses (which maintain archaisms). The meaning in Hittite refers more to the activities of 'protecting' humans, rather than animals, as seen in the legal and societal uses. Whether this *-s-* is the same element in both nominal and verbal extensions is difficult to say. Sihler (1995:308) discusses certain 'rare' masculine and feminine *-s-* stems, including Sanskrit *rakṣás* 'demon' and *vedhás* 'ordainer' (from *dhā*), both of which are of "somewhat dim etymology", *uṣās* 'dawn', Greek ἕως 'dawn', Latin *aurōra* (all with *o*-grade, all names of a goddess, perhaps an indication of their archaism?). The age of this type of nominal derivative is evidenced by the fact that there are only seven such items in the RV. The type is rare in Greek (with the exceptions cited above), and truly archaic lexemes so marked in Latin are also rare (although later formations of this type are common). Judging from the age, nature and type of lexeme attested, I suspect that this *-s-* element too was a type of agentive suffix, not connected with the so-called "aorist" verbal *-s-* extension (whose origins are equally old and

nearly as obscure). (See entry *dāi-* 'put' for Burrow's (1955:338) remarks concerning the original meaning and chronological development of this *-s-* marker).

(3.2) extension *-t-*, seen in Sanskrit *div-gaṇa ātmanepada* tantum verb *pát-ya-te* < *pat-* (Dhātupāṭha XX,15), attested as far as I know only in the RV with meanings 'reign, rule, govern, control, partake of', etc. Derivatives from this extension would include Sanskrit *pá/ā-ti-* (masculine only) with two RV meanings: 'husband', or 'lord, master' (Pāṇini discusses this: 1.4.8,9), in Greek πό-σις 'husband'[$\tau > t^s > \sigma$][383], Lithuanian *pa-tìs* 'husband', Latin *po-tis* 'powerful', also *possum* (< *potis sum* 'I am powerful'), participle *potēns* ("relic" of perfect *potuī*), and Oscan *pútíad* 'possit' (Buck 1933:274). Burrow (1955:163) discusses this suffix, rare elsewhere, but "fairly well developed" in Hittite where it derives common gender action nouns and abstracts. See also Gamkrelidze and Ivanov (1995:661).

(3.3) extension *-k-*, in Latin *pasco(r)*, Tocharian B *pāsk* (but see #92 *pāsk-* "stick in')

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The *pos-/pot-* element in Poseidon's name presumably connotes 'power'. It occurs as well in Linear B, where it is found in the names of both male and female deities : *po-se-da-o, po-se-da-o-no* : Ποσειδῶν, *po-se-da-e-ja* "prob.name of a female deity, recipient of a gold cup" (Chadwick and Baumbach 1963:238), po-si-da-i-jo = Ποσειδῖον 'the shrine of Poseidon' (Hooker 1980:161).

Attestation 1st singular present pa-aḫ-ḫa-aš-aḫ-ḫi 'I protect'

(Friedrich 1960:100;Kronasser 1966:15, 519)

LÚ*pa-aḫ-ḫur-ši-in-pát pa-aḫ-ḫa-aš-ḫi*

'Shall **I protect** a bastard?' (KUB XXIII 1 ii 29[384] = Kühne and Otten 1971:10,11= StBoT 16)

1st singular "preterite **present**" pa-aḫ-ḫa-aš-aḫ-ḫa 'I protect'[385]

(Kronasser 1966:519) (Held et al 1980:44,45; Kimball 1999:402))

2nd singular present pa-aḫ-ḫa-aš-ti 'you protect'

(KBo V 3[386] ii 10 (supp.)) (Kronasser 1966:448,519)

2nd singular "preterite **present**" pa-aḫ-ḫa-aš-ta 'you protect'

(KUB I 16[387] in Kimball 1999:402)

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Treaty with Šaušgamuwa of Amurru (CTH 105)

385

Attestations with the ending -*ḫa* (with original present, later preterite, meaning) are not surprising, given the archaism of this vocabulary item (< **pe-h*$_2$*-s*).

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Treaty with Ḫukkana of Ḫayaša (CTH 42)

387

Political Testament of Ḫattušili I (CTH 6)

Note that the above form (pa-aḫ-ḫa-aš-ta) appears in the very early (OH) Political Testament of Ḫattušili I as a **2**nd singular **present**. The identical form is a **3**rd singular **preterite** in the very late Treaty with Šaušgamuwa of Amurru, written during the reign of Tudḫaliya IV, some 400 years after the original attestation.(See Kühne and Otten (1971:60) for a list of these latter types of attestations).

3rd singular "preterite **present**" pa-aḫ-ša '(s)he protects'

(KUB XXXVI 127[388] Vs. 8 in Kimball 1999:402)

See CHD 1994:2. Volume P. Fasc 1.

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Treaty with Šunaššura of Kizzuwatna (CTH 131)

2. 289 (547)

#80. *paprah̬h̬-* 'defile'

Apparently a causative from a nominal (?) root **papra-* 'dirty'. (See references in Sturtevant 1931d:50, or Kronasser 1966:45,290,294,400, 402, 430, 495; also Oettinger (1979:238,254,282)). Attested derivatives include the(verbal) noun *paprātar* 'uncleaness' (Oettinger 1979:282), participle *paprant* 'unclean', *papraye* 'make oneself unclean'.

Attestation 2nd singular present [pa-a]p-ra-ah̬-ti (Kronasser 1966:430)

[pa-a]p-ra-ah̬-ti

'you make unclean' (KUB XXIV[389] 7 ii 10 in CHD:102)

Attestation 3rd singular present pa-ap-ra-ah̬-h̬i

(KUB XXXIII[390] 120 ii 32,33 in CHD:102)

CHD (1994. Volume P Fas. 1):102; Oettinger (1979:238,254,282)

389
Tale of Cow and Fisherman (CTH 363)

390
Song of Kumarbi (CTH 344)

81. *parai-* 'blow (horn, etc.)', 'breathe'

10. Other body actions ('breathe')

Mallory and Adams (1997:72) discuss two stems having to do with this verb, **per-* 'blow (on a fire') (in OCS *para* 'steam, smoke', Greek πρήθω 'blow'[391]), and **preus* (*ibid*) (in ON *frysa* 'pant, snort' and Vedic *prusṇóti* 'sprinkles, showers'). They note that some confusion exists between this last stem variant (referring to encouraging a fire along) and the homophonous root **preus-* 'freeze, burn'.

Although this verb occasionally has the meaning 'blow (a horn)', it is used in other contexts. The related root *pariparai* (which see), however, always has the meaning 'blow (play) a wind instrument' (Van Brock 1974:155).

Attestation 1st singular present pa-ri-iḫ-ḫi

pa-ri-iḫ-ḫi

'**I blow** (on) (as a fire)'

(KBo XI 11[392] ii 6) (Kronasser 1966:542) (CHD 1994:133)

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Also, in aorist πρῆσε 'he spouted (blood)' [from his nostrils] in Iliad 16.350 (LSJ II:1463)

392

Ritual of Uruwanda (CTH 411)

Attestation 3rd singular present pa-ra-a-i

pa-ra-a-i (KUB VIII 1[393] II 17, III 10) (KBo XX 78 I 15, in CHD:133)

'(s)**he blows**' (Kronasser 1966:542; Sturtevant 1931d:51))

The verb is attested with -*š* preterite : *pa-ra-iš* '(s)he blew' (Kronasser 1966:542).

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Lunar eclipse Omens : Hittite (CTH 532.II.01)

#82. *paripara-* 'blow (a musical instrument)'

[Cultural activity]

This verb is a reduplicated version of the previous root *parai* 'blow' (Kronasser 1966:120, 542 with references, 570,572, 586). The meaning specifically refers to 'blowing (into) a musical instrument' (Van Brock 1974:155). The reduplication here seems comparable to the type of intensive verb found in Indic *varī-vṛt* (from *vṛt* 'turn'), *ganī-gam* (from *gam-*'go') or *ghanī-ghan-* (from *han-*'slay') (see Van Brock 1974:123), often, though not exclusively, with union vowel *-ī-*.[394] In Hittite, the comparable reduplicated formations involve verbs which show *-āi-/ -iya-* alternations, where the reduplicated stem often, though not exclusively, seems to have arisen from the *-iya-* stem[395]. Van Brock (1974:123) cites

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This type of formation was common in the Vedic language, but rare in the later language (Burrow 1955:354). Formed from some 90 roots, the intensive stem "is derived from the root by means of a reduplicated syllable, the characteristic feature of which is that it always has a strong form" (Macdonell 1975:390, who provides a full list). A brief glance at the type of verb which is found in this formation will establish its archaic nature, even in Vedic. Though formed in various ways (depending largely on stem vowels or final consonants), a long *ī* vowel is commonly interposed between the reduplicated syllable and the root, as in the examples above.

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"On posera **ḫali-ḫaliya-* syncopé en *ḫali-ḫliya-/ḫali-ḫlā(i)* [...]et le cas devient comparable à celui de *laḫḫi-laḫḫiya-* où la syncope ne s'est pas produite, ou de louv. *ḫui-ḫuiya-* en face d'un simple *ḫuwai-/ḫuiyai*: on a affaire à un redoublement complet comprenant, non seulement la racine verbale, mais une forme réduite du suffixe *-āi-/-iya-*" (Van Brock 1974:123). See the full entry under #18 *ḫaliḫlai-* 'genuflect' for further comment. The Luwian evidence is enlightening here, as it is in regard to many verbs which show such reduplication in Hittite. Further discussion would take me too far afield, but see Van Brock

Hittite verb *ḫali-ḫla* 'genuflect, make obeisance' (which see) (presumably) from simple verb *ḫaliya* 'genuflect, prostrate oneself' as another example of this type of process at work.

Attestation 3rd singular present pa-ri-pa-ra-(a-)-i (KUB XXXV 163[396] III 18, cited in Kronasser 1966:542))

(1974) who puts forward several relevant points of comparison for discussion. Palaic is also relevant to issues involving the Hittite ending *ai*-. Melchert (1994:222ff) notes that the status of the sequence *a-i*, so relevant here, is "problematic" and ambiguous. It is impossible in many cases to tell whether the *-ai* ending indicates a dative singular of a noun or the third person present singular of a *ḫi* verb. Melchert assumes that the *ai* involves a contraction of /a:y/, a reflex of the long diphthong */o:y/ "as in Hittite nouns in *-aiš* " (see similar morphology of the 'long diphthong' *-ḫi* verbs, contractions of *o*-grade forms (with stem-final laryngeal?) followed by extensions in /y/. Involved in this discussion would be issues of animacy (lexemes involved are all animate, verbs all *-ḫi* verbs) and the role of the suspiciously persistent *-i-* union vowel (typical of both Hittite and Vedic forms of this type).

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Palaic (CTH 754)

#83. *parai-* 'appear', 'emerge (locusts)'

16. Spontaneous events (c) associated with (i) animate beings

The CHD (1994:133) cites this OH verb only in the third singular. Despite homonymy with #81 *parai-* 'blow', this verb does not mean 'blow'. It is an intransitive motion verb, meaning 'appear' or 'emerge' (as a plague of locusts). It is a direct parallel to Palaic *parāit/paraīt* (attested in the preterite) which also does not mean 'blew' (as wrongly Carruba 1970:67), but rather 'appeared' (Oettinger, apud Melchert 1994:222). Melchert considers the verb a denominative from *p(a)rā* 'forth' < **prŏ*. The third person singular of the Hittite verb, according to Melchert, reflects:

> **prŏ-y-ei* with contraction to /a:y/, which spreads secondarily to other parts of the paradigm [...] Palaic /a:y/ in *parāit* would indirectly continue a similar contraction" (1994:222).

Attestation 3rd singular present pa-ra-a-i (Kronasser 1966:542)

KUR-*e anda mašaš* ***parāi*** $BURU_{14}$.HI.A *karāpi*

'In the country, the locust will **appear** and devour the grain' ((KUB VIII 1[397] ii 17, iii 10)

See also Hoffner (1974:25,87ff). For its use in a lunar omen, see KUB VIII 1 iii 9-10[398].

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Lunar eclipse Omens : Hittite (CTH 532.II.01)

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Lunar eclipse: Hittite (CTH 532.II.01)

#84. *parḫ(ā)-* 'gallop', 'chase', 'drive'

11. Translational motion

Sturtevant (1931d:51, with references) notes that this verb has both transitive and intransitive senses. It appears often in Hippological texts, referring to 'galloping' horses. In such contexts, it regularly appears in combination with *penna-* 'drive'/ '(make) trot'. See, for instance Kammenhuber 1961:80, who cites numerous uses of this verb in construction with the Sumerogram IKU 'field', or 'square' (a measure of distance). A causative in *-anna-*from the same root, *parḫannai* 'let/make gallop', is also attested (Kronasser 1966:559), (and cited at end of this entry).

Attestation 3rd singular present parḫai

(Kammenhuber 1961:342; Kronasser 1966:148,149,150,448)

As Kammenhuber (1961:342) indicates, there are several graphic variants of third singular present *-ḫi* forms from simplex *parḫ-* 'gallop'. These include: *pár-aḫ-i* (numerous), *pár-aḫ-ḫa-i* (Tafel II, III 37; IV 13; 14), *pár-ḫa-a-i* (numerous), *pár-aḫ-ḫa-a-i* (Tafel II.III 37; IV 13; 14). The following is typical:

ma-aḫ-ḫa-a[*n-m*]*a lu-uk-kat-ta nu u̯a-a-tar e*[*-ku-u̯a-an-zi*]

2. 297 (555)

na-aš tu-[*u-r*]*i-i̯a-an-zi na-aš* 2 DANNA [*pí-en-na-i*]

pár-ḫa-a-i *-ma A.NA* 7 IKU ½ DANNA-*ma* [*pa-ra-a pí-en-na-i*]

[EGIR-]*pa-kán A.NA* 10 IKU$^{HI.A}$ *an-da* ***pár-***[***ḫa-i***]

'Sobal[d] es tagt, s[aufen sie] Wasser.

Dan sp[a]nnt man sie an. [Er läßt] sie 2 Meile [traben],

galoppieren aber **läßt** er (über) 7 Feld. ½ Meile [läßt er weitertraben];

[zurü]ck **lä**[**ßt** er] in 10 Feldern **galoppie**[**ren**]'

(KUB I 11[399] = Der,, Kikkuli-Text" Tafel III, III 50, in Kammenhuber 1961:118, 119)

Despite Kammenhuber's fine translation, this passage is very difficult to render into clear English. Part of the difficulty is that this is a certain "type" of text: it is a military training manual-- a fact which, in itself, would go a long way to explaining the choppy style. Additionally, the text was composed by a certain Kikkuli, who spoke the Indo-Aryan language Mitanni. Being a foreigner, Kikkuli was not a native speaker of Hittite.

Further, to have a full understanding of the personelle to whom the various enclitic pronouns refer, it is also necessary to know at least a few basic facts about Hittite horse training practises. In charge of the training was the chief groom (it is he to whom the "er" refers–the subject of (restored -*ḫi* verb) *pí-en-na-i*, and of the 3rd singular forms of the verb

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399

Kikkuli (CTH 284)

discussed here, *pár-ḫa-a-i*. The chief groom was the "brains" of the operation. Under his charge was a band of lesser grooms who did the less-skilled, more menial work. With this in mind, the passage might be rendered as follows:

> 'At first light, they [the horses] drink water. Then they [= the sub-grooms] harness them [the horses] up. He [the chief groom] trots them (= makes them start moving at the introductory pace] for two miles, (then) makes [them] gallop for seven lengths [or squares = designated sections of the track]. He [the chief groom] makes [them] run a half-mile more. [Then he makes] them trot for ten lengths [ba]ck'

One final note on the language of this interesting selection. The verb *pí-en-na-i* can be understood as a causative 'he makes them go hither' (in this case, at a certain introductory speed: a trot). *pár-ḫa-a-i* would possibly be the next 'speed', a gallop (see Tischler, *Glossar*, 451-455). *pár-ḫa-a-i* is also attested with the causative infix *-an-na-*.

Attestation 3rd singular present (causative) pár-ḫa-an-na-i (Kronasser 1966:559)

tu-u-ri-i̯a-u̯a-aš-ma tu-u-ri-i̯a-u̯a-aš KASKAL-*ši*[400] KASKAL-*ši* 8 IKU ***pár-ḫa-an-na-i***

400

Sumerogram KASKAL means 'path', 'method' or 'time'. In this passage, the latter seems the best rendering, given the "distributive" sense of the phrase. The meaning is thus 'every

'Gespann[???] für Gespann[???] aber **läßt er** jedes Mal 8 Feld **galoppieren'**

(KBo III 5 [401]= Der „Kikkuli-Text" Tafel II, II, 52, in Kammenhuber 1961:90).

There is a related verbal noun *parḫuwar* 'galloping' (Kronasser 1966:148ff). The participle is *parḫant-*.

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time' or 'all the time' 'again and again' or even 'repeatedly'. The Hittite word is *palša-* (Kammenhuber 1961:341, 342, 358).

401

Kikkuli (CTH 284)

#85. *parš(iya)*- 'break'

[Ritual context]

This verb, attested in both the *-ḫi* and *-mi* conjugations, has numerous derivational varieties. What might be called the "simple" root *parš*- 'cut apart', 'divide into parts, 'split' appears both in Anatolian ritual contexts, and in a larger IE ritual context. As I have mentioned previously, the enumeration of various (often twelve[402]) body parts is an important feature of healing and divination rituals, both in Luwian and Hittite. Gamkrelidze and Ivanov (1995:712) cite evidence connecting these enumerated 'parts' to Hittite *parš*- (KUB XXXV 43 Rs. III 24 IV-*ti pa-a-ar-at-ti* 'four parts (of a body')), including Luwian cognate *parta*- 'part (of body') (adding that "An analogous image of twelve basic body parts is attested in Celtic tradition in Old Irish medical texts, where the 'twelve gates of the soul (or life)' are the twelve basic body parts in which disease can be fatal" (Gamkrelidze and Ivanov 1995:712, nt.22)). They indicate that the root may also be seen in Latin *pars, partis* 'part', as well as Sanskrit *pūrtí*- 'rich [sacrificial?]offering'[403].

Kronasser (1966:503) also cites its regular use in cultic contexts involving breaking

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402

The twelve body parts, in the Hittite view, made up the integral human body (Gamkrelidze and Ivanov 1995:725, nt. 54).

403

Monier-Williams (1998:642) has *pūrtá* 'a meritorious work, an act of pious liberality (such as feeding a Brāhman, digging a well)'.

of bread (with verb form *parš(iya)*)[404]. The importance of the activity described (breaking of bread and libating with wine, both *-ḫi* verbs) cannot be underestimated. This bread and drink ritual was at the very heart of Hittite religious life (cf. also 'drinking (to) the god' references in HED 1-2:267), an archaic parallel to the [very modern] Communion of the Catholic Mass[405]. When those who performed this ritual were being decimated by illness, the very existence of the community is imperiled. Muršili II begs the weather-god (in the Second Plague Prayer[406]) not to let "the few who are left to offer thick bread and wine [...] continue to die" (cited in Beyerlin 1978:171,173).

Usages describing this ritual act are heavily attested in Old Hittite ritual texts (see Neu 1983:140 for a long list). The third singular attestations below are such usages, all with the "preterite present" ending *-a*. The same "preterite present" type is found in the following first person singular citation, from Neu (1983:138) (*Glossar zu den althethitischen Ritualtexten*) (what he terms the "medium" of the root verb (Wurzel-verbum)[407]). The citation is from The Ritual for the Royal Couple (Otten and Souček 1969:30,31) (perhaps an

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404

Which looks to me like a straightforward causative: *parš-* 'part' + *-iya-* 'make' = 'break'.

405

Itself the echo of the communion sacrifice (*zeḇah šᵉlāmîm*) of the Old Testament. The ritual is thought to be part of a pre-Semitic heritage (Rost 1958; de Vaux 1964). See also Erwin Goodenough, *Jewish Symbols of the Graeco-Roman Period*, Volume 4: Blood and Wine.

406

Preserved in three copies KUB XIV 8, KUB XIV 11, KUB XIV 10 + XXVI 86.

407

He lists three citations *of pár-aš-ḫa* (one ambiguous with missing text), and one with *pár-aš-ḫa-ri*.

archaism?)

Attestation 1st singular "preterite present" pár-aš-ḫa

1 UDU ḫ [(*u-e-ek*)-*mi* NINDA *ḫar-ši-i*]*n* ***pár-aš-ḫa*** GEŠTIN-*an iš-pa-an-ta-aḫ-ḫi*

'One sheep I slaughter, **I break** thick bread, I drink/ libate (with) wine'

(KBo XVII 3[408] Rs. III 14)

The following interesting spelling alternates of the 3rd person singular form of the "root" verb *parš-* are attested in the Autumn Festival for Ištar of Šamuḫa:

Attestation 3rd singular present pa-ar-ši

pár-ši-i (KBo XI 28[409] iii 4 in Kronasser 1966:503)

The following are attestations of the "extended" verb *párš-iya-*, which I suspect is a later (derived) causative version of the simple verb *párš-*

Attestation 1st singular pár-ši-ya-aḫ-ḫi (Kronasser 1966:503)

408

Ritual for the Royal Couple (CTH 416)

409

Autumn Festival for Ištar of Šamuḫa (CTH 711)

Attestation: 3rd singular "preterite present" pár-ši-ya

1 NINDA.KUR$_4$.RA KU$_7$-*ma* ***pár-ši-ya*** *na-an A-NA* DINGIR.MAḪ

^{d}*Gul-še-eš píran da-a-i*

'**He breaks** one sweet loaf and places it before the Mother-goddess(es)

(and) the Fate-deities' (KBo IX 140[410] iii 14-15, cited in Beckman 1983:242).

Here is another attestation (reproduced as it appears in Beckman and with his conventions) also from the cult of the Mother goddesses, who, for obvious reasons, are regularly invoked in Birth Rituals. Notice that all the verbs are *-ḫi* verbs.

3', [*n*]*u* SAL-*za ku-iš ar-ma-u-wa-an-za* 3$^{!?}$ [NINDA.SIG^{MEŠ}]

4'. *A-NA* DINGIR.MAḪ$^{Ḫ I.A}$ ***pár-ši-ya*** *še-e-ra-aš.šą-a*[*n*]

5'. ^{UZU}NÍG.GIG ^{UZU}ŠÀ *ku-ra-an da-a-i* [( )]

6'. [*š*]*e-e-ra-aš-ša-a*[*n*] NINDA.Ì.E.DÉ.A *me-ma-al* [( )]

7'. [*i*]*š-ḫu-u-wa-i nu PA-NI* DINGIR.MAḪ$^{Ḫ I.A}$ *da-a-i* [( )]

8'. 3 NINDA.SIG^{MEŠ}-ma A-NA ^{d}*Gul-aš-ša-aš* ***pár-ši-y***[***a***]

9'. *še-e-ra-aš-ša-an* ^{UZU}NÍG.G[IG ^{UZU}ŠÀ *ku-ra-an*]

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410 ANTAḪŠUM 29th day (CTH 616)

10'. *da-a-i še-e-ra-aš.š[a-an* NINDA.Ì.E.DÉ.A *me-ma-al*]

11'. *iš-ḫu-u-w[a-i nu PA-NI* DINGIR.MAḪ$^{ḪI.A}$ *da-a-i*]

And a woman who is pregnant **breaks** three[?] [thin loaves] for the Mother-goddesses. Thereupon she places a liver (and) a heart, cooked[411]. And on top she scatters mutton-fat cake (and) meal. And she places (it all) before the Mother-goddesses. But three thin loaves she **breaks** for the Fate-deities. Thereupon she places a li[ver (and) a heart, cooked]. And on top she scat[ters mutton-fat cake (and meal. And she places (it all) before the Fate-deities.] (KBo XXX 4 iii 3-11, cited in Beckman 1983:243)

The following attestation (from Puhvel HED 3:439) also involves the description of a ritual. (The *ḫuwaši-* in the citation is a 'stone or wood pillar, occasionally with metal (silver, iron), serving as an outdoors or sheltered cult object' (Puhvel HED3:438)).

nu ^{NA4}*ḫuwašiya piran* NINDA.KUR$_4$.RA.HI.A ***páršiya*** *šipanti-ya*

'before the *ḫ.* **he breaks** bread-loaves and sacrifices'

(KUB X 17[412] i 8,9, in HED 3:439)

411

So Beckman's translation. *ku-ra-an* < **k*^{w}*er-* technically means 'cut'

412

Spring Festival at Tippuwa (CTH 594)

Kronasser (1966:503) suggests that **bher-* 'split' is the source of this root (already Sturtevant 1933:131), seen also in Latin *ferīre* 'strike'. If this is so, then numerous cognates present themselves, including Greek φάρσαι 'split' (from extended [aorist] stem **bher-s*?) (Frisk 1973:995); see Mallory and Adams (1997:549) for several others. However, such an etymology might call into question the links with both Latin *pars* 'part' (and related *portiō* 'portion') and Sanskrit *pūrtí* 'granting, reward', *pūrtá* 'gift, granting, reward', as neither Latin nor Sanskrit *#p-* can come from **bh-*. These words, according to Mallory and Adams (1997:441), are from a root beginning with **p*, ?**pr̥(h₃)tis-* 'what is distributed' < (**per(h₃)-* 'sell, 'distribute', with zero grade, and suffix *-t-*, as in Sanskrit *kr̥ta* 'done'). A root that began with **p*, however, would not explain the Italic *f* (which should have *p*, not *f* from **p*), or the Greek φ, which cannot have come from a simple **p*. A very simple solution presents itself: if all these words are related, and I believe they are, the root source is **pʰer(h₃)-*. As we have seen, irregular correspondence is often the rule, rather than the exception, in some of these truly archaic lexemes. The doubly-articulated phone **pʰ* (or **ph*) would explain all these words: the Hittite, Latin and Sanskrit with the loss of the aspiration, the Greek with the phoneme maintained intact, the Latin *f* (a voiceless labio-dental fricative) from **ph* (a voiceless labial stop, with the influence of the fricating laryngeal). The Latin takes the "middle route" between the various alternatives, which for Latin is not unusual. This again provides evidence for the voiceless series of multiply articulated IE stops.

For additional evidence in this regard, cf the same process at work in Mycenaean *"pa-we-a₂* 'a piece of cloth' (=φάρεα < **pʰarweha*) which actually attests to /pʰarweha/"

(Sihler 1995:172). See also Sihler (1995:219) who cites "early Att[ic] epigraphic evidence for /k^{h}s/ and /p^{h}s/ (ΧΣ, ΦΣ) as in ΕΔΟΧΣΕ for ἔδοξϵ" as providing the "correct" explanation of several puzzling correspondences. This explanation would go a long way toward explaining several problems with Latin phonology, such as the interchange of *f* and *h* (attested in dialects), see Sihler (1995:141), as well as such words as Latin *pulcher*. See also Buck (1933:118ff) for a list of these.

#86. *paršiyanna-* 'break'

[Ritual context]

This verb is an iterative/causative derivative form (with *-n-* suffix) derived from the previous verb. *pár̄šiyanna-* 'break' is attested in both 1st and 3rd person singular:

Attestation:	1st singular present	pár-ši-ya-an-na-aḫ-ḫi (Kronasser 1966:559)
Attestation:	3rd singular present	pár-ši-ya-an-na-(a)-i (Kronasser 1966:559; Neu 1983:140)

Melchert (1994:77) calls this verb, which appears in both Hittite and Luwian, "one sure example" of the assimilation of a laryngeal to /s/. In this case, the assimilation involves */h_3/*, thus, **peh$_3$s-* > *paśś*. Kimball (1999:403) says that *paśś-* originated as an *-s-* aorist (**peh$_3$-s*) as opposed to the root aorist (**é-peh$_3$-t*) which appears in Sanskrit *ápāt*.

The root of this verb, or a reduplicated version thereof[413], appears in Latin *bibō* 'drink', Sanskrit *pāti* 'drink' (*pātár* 'the drinker'), *píbati* 'drink' Greek πέπωκα, Old Irish *ibid* 'drinks', Slavic *pi-* 'drinks', Armenian *əmpem* 'drink'. Mallory and Adams (1997:175) claim that, of the two common IE words for 'drink'[414] (which they reconstruct as **h$_1$ḗg^{w}hmi*[415] 'drink' (whence Hittite *ekuzzi* 'drinks') and **peh$_3$ (i)-* (whence Hittite *paši* 'swallows')), the *-mi* verb preserves the older meaning, "and that after Anatolian separated from the remaining PIE dialects, those dialects largely replaced **h$_1$ḗg^{w}h-* by **peh$_3$s*". Of

413

Reduplication is common in verbs describing drinking, for obvious reasons.

414

See also Bader, F. 1992. 'Boire' et 'eau'. In *Perspectives on Indo-European Language, Culture and Religion. (Festschrift Polomé)* (= *Journal of Indo-European Studies Monographs* 9). Virginia.

415

Interestingly, Mallory and Adams reconstruct this as a *-mi* form, i.e., already characterized in IE.

course, it is also possible that the *-ḫi* verb was the older.

Attestation 3rd singular present pa-a-ši (CHD:203)

ANA GI.A.DA.GUR-ya-*ššan purin dāi nu* ***pa-a-ši***

'He puts his lips to the drinking straw and **swallows**'

(Zarpiya's Ritual[416] (ed. Schwartz *JOAS* 58:338ff))

nu EN.-SISKUR 7-*ŠU ḫūppāizzi* [...] *šarapi nu* ***pāši***

'the offerant blends seven times, [...]**he** sips and **swallows**'

(KUB XXVII 29[417] iii 8-9, cited in Puhvel HED 5:17, Kimball 1999:403))

Also Kronasser (1966:119,172,297,386, 396, 555).

416

Zarpiya's Ritual (Luwian) (CHT 757)

417

Allaiturahi Ritual (CTH 780.4)

#88. *pa/idda-* 'dig'

[Ritual use]

This verb is used in descriptions of 'digging' of ritual pits, openings in the earth that were at the very heart of Hittite religious observance. Dwelling in the "land beneath the Earth"[418], were the chthonic deities (including the Sun Goddess of the Earth who figures prominently in the Hittite Ritual for the Dead (Collins 2002:224)), and numerous other 'luminaries' including Alalu, Kumarbi's father (Hoffner 1990:39,40; see also West 1997:278ff who notes that the Hittite version of the (originally Hurrian) Kumarbi Myth was "recorded [...] some five hundred years before Hesiod"; also Gurney 1977:5ff). It is to the *dankuiš danganzipaš* 'dark earth', that the human soul descends in a voyage of transition between this world and the next. Ritual pits were the conduits for both deities and souls to travel between worlds; they were the disposal pits for impurities (often having been transferred to the body of a piglet)[419] to ensure fertility of both soil and society. (See Collins

418

This phrase is argued by Oettinger (1989/1990) to be a loan translation from Hurrian. The same phrase appears in Greek. Although Collins doesn't say what it is, I would assume the parallel phrase to be γαῖα μέλαινα 'dark/black earth', as in Iliad 2.699.

419

There is rich literature on the role of the pig in Indo-European society. Depending on the particular culture, it is variously associated with the underworld, the supernatural, with death and decay, with the sky and sun, with divine guidance, with the cycle of fertility (Mallory and Adams (1997:425ff). Pig(lets), snakes and bees, all common elements in Hittite worship, were symbols of new life and fertility during the "Old European" period which preceded the arrival of the Indo-Europeans into the Anatolian region. Many of the elements of this female-

2002 for a comprehensive and enlightening discussion of the various rituals involving pits in Hittite culture. See also entry *maušš-/mu-* 'fall', which describes some of the aspects of the soul's journey to the land beneath the earth). Puhvel (HED 1:101) explains at some length the extent of this type of religious activity:

> The functions of the Hittite pit resemble those of the Greek βόθρος of chthonian sacrifices (cf. the necromantic scene in Odyssey 11.23-43) and of the Roman subterranean *mundus* which gave access to infernal regions [...] A similar role of sacrificial pit was played by *apu* or *abu* 'hole', *ēnu* 'spring, waterhole', and *naqbū* (IDÌM) 'spring, fountain' in Assyrian rituals. In Ugaritic there is the problematic *'el 'eb* 'deity of the pit' (possibly referring to spirits of the dead and tying in with the "vents" of Ras Shamra tombs) and Hebrew has *'ôb* 'deity of the pit' [...] The common semantic denominator '(daimon of the) pit' might thus fit Hitt[ite]-Hurr[ian] (*a*)*a-pí-*, Assyr[ian] *abu*, Ugar[itic] *'eb*, Hebr[ew] *'ôb*, and Sum[erian] *ab*.[420]

Ambiguity surrounding the first sign used to write this verb has caused significant controversy about what the source of the Hittite root actually is[421]. Sturtevant (1938a:107)

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centred worship persevered and lingered in both the Aegean and Mediterranean regions throughout the Bronze Age and beyond (Gimbutas 1982:13). Similar elements are found in Greek rituals, such as the Demeter Festival "doubtless very ancient, and [...] most intimately connected with the life of women [one of which involves a] peculiar sacrifice in which pigs are sunk in underground pits" (Burkert 1983:161).

420

It is generally assumed that the original lexeme was Sumerian *ab* with "Hurrian mediation for the rest" (Puhvel (HED 1:101, with explanatory references). Puhvel's symbol ' represents the glottal stop א. The relevant Hebrew root is אוֹב 'spirit of divination', 'necromancy/necromancer' (Davidson 1970 [1848]:10-11).

421

In the Akkadian syllabary, even the simplified one adapted for Hittite, a single sign may have different values and denote different syllables. This particular sign has at least five possible values. Sturtevant (1933:44, nt.26) lists *pít, píd, pát, pád* and *be*, where he says the first four are required by "internal evidence". The fifth, *be*, is "a very common value" in Akkadian, and

first suggested IE **bheid-* 'split, cleave' as the source, but later revised his opinion. He argued that the "correct" sign interpretation for this word is not *píd-da* but rather *be-da.* He insists that neither **bhedh* nor **bheid-* could be the source (although I confess, I do not follow his reasoning), as "the full grade of the roots *bheid-* and *bhedh-* would appear the same in Hittite, and no other grade of *beda-* 'dig' has yet come to light [...furthermore...] neither original *d* nor original *dh* can be written double in Hittite". Kimball (1999:51) suggests that etymologies cited in support of a reading with the value *be* don't work (despite some impressive advocates including Sturtevant, Güterbock and Puhvel (1979a: 209-217, reprinted in *Analecta Indoeuropaea* (IBS 35), 1981: 356-364), as against doubters Götze, Pedersen and Friedrich).

Mallory and Adams (1997:159) also note the problem in sign interpretation, but interpret the difficulty as between *pad-da* and *pid-da,* and link the Hittite verb with IE **bhedh-* 'dig, burrow', listing as cognates not only Latin *fodiō* [422], but also Welsh *bedd*

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is required in words whose etymology requires an *e* vowel and "no following consonant". As examples of this type he cites *be-da-a-an-zi* = *pí-e-da-an-zi* = *petanzi* 'they bring' *be-da-a-it* = *pí-da-a-it* = *petait* 'he brought'. Kimball, also noting the "highly polyphonic" nature of this sign and the inevitable ambiguity surrounding its interpretation, that PAD-DA- 'dig' is "ambiguous between PAD-D° = [batt] < **bhodh*$_2$- (as in Lat[in *fodire* "dig" and OCS *bodõ bosti* "stab, pierce") or PED-D° = [bett] < **bhedh*$_2$- (as in Lith[uanian] *bedù, bèsti* "stab, dig"". See also Hoffner (1973a).

422

Sihler describes Latin *fodiō* 'dig' as a "primary verb" with an *y*$^{e/o}$ present (1995:536). He explains the long-vowel perfect Latin *fōdī* as a "creation de novo" on analogy with the pattern of a "goodly number of roots of diverse shape which had a long vowel in the perf[ect] stem and a short vowel in the pres[ent]" (1995:582).

'grave', Gaulish *bedo* 'channel', and several Germanic words relating both to graves and sleeping places (possibly involving derivation from **bhedh-* 'bend' (self), referring to sleeping pads)).

Sihler (1995:121) suggests *o*-grade **bhod-* 'dig' as the source of this root but cautions that certain forms (including verbal root **bhod-* 'dig'), which were "traditionally reconstructed with an **-o-* [...] do not strictly belong to an *o*-series, for in fact they show no ablaut at all". In the case of **bhod-* "we are [...] dealing with an irregular root, namely, one that lacks an *e*-grade in the same sense that **ǵneH$_3$-*'know' lacks a zero grade and **bhū-* 'become' lacks any full grade". He adds (*ibid*) that "Both L[atin] *fodiō* and OCS *bodõ* 'pierce' belong to abundantly-attested types in which an *e*-grade is normally required in the root".[423]

Bomhard and Kerns (1994:214) list Proto-Nostratic **bad-/*bəd-* 'to split, to cleave, to separate, to divide' as underlying both Proto-Indo-European **b$^{[h]}$ed$^{[h]}$- *b$^{[h]}$od$^{[h]}$,* 'to prick, to pierce, to dig' (whence Hittite *píd-da-i/pád-da-i)* and Proto-Afroasiatic **bad-/*bəd* 'to split, to cleave, to separate', as in Akkadian *batāqu(m)* 'to cut through, to cut off' (Caldwell et al 1975:5).

The following examples are typical of citations which describe the digging of ritual

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423

Melchert's (1994:33) remarks on the possibility of the "unique and anomalous" occurrence of a generalized *e*-grade of this *-ḫi* verb (*o*-grade in the singular is the rule in the *-ḫi* conjugation) are enlightening in this regard.

pits[424] (see Kimball 1999:410 for additional examples):

9 *AŠRA* ***pedaḫḫi***

'**I dig** 9 places'

AŠRA ***pedaḫḫi***

'**I dig** spots'

BURÙ ***pedaḫḫi***

'**I dig** a hole/well'

The following is from the Ritual for an Unfruitful Vineyard, where the digging is a preparation for the insertion of sticks which will prevent evil influences, be it from man, tongue, or eye, from harming the Vineyard (see Sturtevant and Bechtel 1935:121).

Attestation	1st singular present	pád-da-aḫ-ḫi	(CHD:235,236)
		be-da-aḫ-ḫi	(Sturtevant and Bechtel 1935:121)

424

Presumably, because of the heavy nature of the work of digging pits, the verb is very often 3rd plural 'they' (see Puhvel HED 1:99 for several such citations).

nu KÁ-*aš* EGIR-*an kēz kēzziya tēkan* ***pád-da-aḫ-ḫi***

'**I dig** the ground on both sides behind the gates...' (KUB XII 44[425] iii 2-5)

The verb appears in the Ritual for the Royal Couple, is a broken text:

] x ***pád-da-aḫ-ḫi***

'**I dig**' (the earth?) (KBo XVII 5[426] II 2 in Otten and Souček 1969:22)

Not only is this verb common in the context of religious observance and ritual, it also appears as describing the preparations for cultivation of the soil and Laws which pertain thereto:

Attestation	3rd singular present	pad-da-i	(Kimball 1999:410)
		pát-da-i	(Kronasser 1966:289)
		pád-da-a-i	(KBo X 37[427] ii 49, in CHD:235)

takku A.ŠÀ-*an* ZAG-*an kuiški paršiya* 1 *aggalan* ***pi-e-da-i***

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425 Anna's Ritual for an Unfruitful Vineyard (CTH 392)

426 Ritual for the Royal Couple (CTH 416)

427 An OH curse (CTH 429.01)

'If anyone violates the boundary of a field and **digs** 1 [additional] furrow'[428]

(KUB XXIX 30[429] iii 9)

Kimball (1999:410) discusses the various suggestions regarding source and cognates connected with this verb, notes problems with virtually all of those above, and repeats an alternative etymology, already in Oettinger (1979:505) that the Hittite verb is from **peth$_2$-* 'spread open'. This, she says, would explain the Hittite geminate [patta-] < perf.? **póth$_2$-e*. The meaning would be found in cognates Greek πατέομαι 'spread open' and Latin *patēre* 'lie open'. However, I believe Kimball to be in error here: πατέομαι doesn't mean 'spread open', but rather 'partake of' (as food).

428

See Puhvel (HED 1:23) for citation and his take on the controversy surrounding the verb phrase *akkālan pedai* 'he digs a furrow'. Whereas Puhvel summarily dismisses the substitution of *pennāi* 'drives' for *pè-da-i* 'digs', Kimball (1999:51) is a bit more generous, noting not only the appearance of *aggalan* [...]*pennāi* in KUB XXXIX 14 II 5-6 (an Old Hittite copy), but also suggesting alternative interpretations of Hittite plowing practises. Melchert (1994:33) states categorically that Puhvel's interpretation "makes no sense either orthographically or linguistically", and repeats Oettinger's suggestion that *akkalan* does not mean 'furrow' but rather 'plow', and that the matter dealt with in the Law is not the 'digging' of a furrow, but the stealing of a plow by either 'carrying' (*pé-(e)-da-i*) or 'driving' (*pé-en-na-i*) it away with a team of animals. See Melchert (*ibid*) for his arguments in this regard, and for his opinion concerning the issue of homophony of *pé-e-da-i* 'digs' with *pé-(e)-da-i* 'carries'.

Regardless of which of these several verbs is the 'correct' one in this legal context, the "voice" issue remains the same: the verb is a *-āi* verb. However, I suggest that the essential sense of *pa/idda-* 'dig' appears in the first person singular usages involving digging ritual pits, not in less 'sacred' contexts of digging agricultural furrows or stealing plows.

429

Laws 101 to 200 (CTH 292)

Given the cognate set cited in Mallory and Adams (1997:159), including Welsh *bedd* 'grave', Gaulish *bedo-* 'channel', Latin *fodiō* 'dig', Tocharian A *pāt-* 'plow', the derivation from **bhedh-* 'dig' seems quite secure (see also Gamkrelidze and Ivanov 1995:133), despite ambiguities surrounding the first syllable. Germanic cognate words referring to beds, sleeping places, etc. (including Old Norse *beðr* 'bolster', Old English *bedd* 'bed', Gothic *badi* 'bed', borrowed Finnish *parja* 'cushion') suggest a relation with homophonous **bhedh* 'bend', with the meaning "a pliable pad on which one slept" in the hollowed-out ('dug') spaces in which early Germanic tribes slept. The latter root **bhedh-* 'bend (one's body) is seen in Sanskrit *bādhate* 'presses' and words referring to praying (bending in supplication), honour in Tocharian (see Mallory and Adams 1997:62). If there is such a thing as a *media tantum* verb in IE, this would be one.

To cognates, add Lithuanian *bedù, bèsti* 'to dig, prick, insert', obsolete Latvian *best* 'to dig'. Related forms of this include Latvian *bedre* 'hole, pit', *bedīt* 'dig', *apbedīt* 'to bury'.

#89. *penna-* (also *pienna-*) 'drive' (thither), 'accept'

11. Translational motion

This verb, which contains preverb *pe-* 'thither', is the opposite of *unna-* 'drive (hither)' (see Kronasser 1966:158 for other verbs which oppose these prefixal elements). The geminate nasal seen in both verbs is explained as the result of univerbation of the accented prefix and the verb (thus Melchert 1994:154). The root verb *nai-* 'lead' (which see) underlies both members of this pair of opposites.

Melchert (1994:33) notes problems involving the several interpretations of the cuneiform sign *BE* (the first element) which are relevant to this verb (see note 9 under entry *pa/idda-* 'dig' for specifics; Puhvel (1979:209-217) also discusses problems with initial *pít/pát* signs)). Thus Oettinger (1976:14,50), remarking on the substitution of the verb *pé-en-na-i* 'drives (away)' for *pé-e-da-i* 'carries' by the Neo-Hittite copyist of Law 168, interprets the phrase *akkalan pé-en-na-i* to refer to the stealing of a plow (*akkalan*) by 'driving' it away, as with a team of animals). See entry #88 for the alternate interpretation 'digs a furrow' for the phrase.

Attestation 1st singular present pennaḫi (Sturtevant 1931d:53);
pí-en-na-aḫ-ḫi/pí-na-aḫ-ḫi (Kronasser 1966:448, 566)

The following 1st singular attestation is from the Ritual against the plague:

-aš ***pí-en-na-aḫ-ḫi***

'**treibe ich** sie (Schafböcke) weg' ('**I drive** them [rams] away')

(KUB IX 31[430] iii 30)

Attestation 3rd singular present pí-en-na-(a)-i (Kronasser 1966:566)

The Laws contain several 3rd singular attestations. The following appears with preverb *arḫa.* See Friedrich (1971:130) for others.

ták-ku šu-up-pa-la-aš-še-it ku-e-el-qa ši-e-ú-ni-aḫ-ta

ta-at pár-ku-nu-zi na-at ar-ḫa ***pí-en-na-a-i***

'Wenn Tiere jemandes von der Gottheit geschlagen werden

und er sie frei (laufen) lässt und sie forttreibt'

(Table II, § 48[431](22), (23) = Friedrich 1971:74)

The verb appears often in Hippological texts, referring to 'trotting' horses. In such contexts,

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430

Ritual of Ašḫella against a plague in the army (CTH 394)

431

II. two tablet version of the Laws (CTH 292)

it often appears in combination with #84 *parḫ(ā)*- 'chase', 'drive', 'gallop'.

ma-aḫ-ḫa-a[*n-m*]*a lu-uk-kat-ta nu u̯a-a-tar e*[*-ku-u̯a-an-zi*]

na-aš tu-[*u-r*]*i-i̯a-an-zi na-aš* 2 DANNA [***pí-en-na-i***]

pár-ḫa-a-i -ma A.NA 7 IKU ½ DANNA-*ma* [*pa-ra-a* ***pí-en-na-i***]

[EGIR-]*pa-kán A.NA* 10 IKU$^{\text{ḪI.A}}$ *an-da pár-*[*ḫa-i*]

'Sobal[d] es tagt, s[aufen sie] Wasser.

Dan sp[a]nnt man sie an. [Er läßt] sie 2 Meile [**traben**],

galoppieren aber läßt er (uber) 7 Feld. ½ Meile [läßt er weiter**traben**];

[zurü]ck lä[ßt er] in 10 Feldern galoppie[ren]'

(Der „Kikkuli-Text" Tafel III, III 50 = Kammenhuber 1961:118, 119)

The verb is attested with *-š-* preterite: *pí-en-ni-iš*, as well as with "contaminated" 3rd singular preterite endings: *pí-en-ni-iš-ta* (Kronasser 1966:1966:566). See also Kronasser (1956:198); Friedrich (1960:104); Kammenhuber 1961:348).

#90. *peda-* (also *pieda-*[432]) 'take (with one), transport'

11. Translational motion

This verb, whose first element is directional preverb *pe-*[433] 'thither', and whose root morpheme is verb #105 *da-* 'take', is the lexical opposite of *u-/we-da-* 'bring here'. It is attested in all three persons; the first singular has the old spelling in *-ḫé,* as well as numerous alternate orthographic variants for internal vowels:

Attestation	1st person singular	pí-e-da-aḫ-ḫi (Kronasser 1966:530)
		pí-daḫ-ḫi (VBoT 24 IV 18, in Kronasser 1966:530)
		pí-taḫ-ḫé (Ritual for the Royal Couple, Otten 1969:121)

Alternate spellings:	pé-e-taḫ-ḫé	(Neu 1983:149)
	pé-taḫ-ḫé	(Neu 1983:149)
	pé-e-taḫ-ḫí	(Neu 1983:149)

432

Friedrich (1960:102, with references) gives the spelling *pēda-*.

433

Despite the univerbated directional preverb, the verb is often accompanied by preverbs such as *anda, arḫa, katta.* See, for instance, Friedrich (1971:130) or Kammenhuber (1961:136) the last in the context of bringing (or leading) a horse down: *kat-ta pí-e-da-i.* Univerbation is also the subject of an article by Kammenhuber (1993:573-586).

The verb appears often in Old Hittite Ritual texts (see Neu 1983:149ff for an extensive listing), as for instance, the Ritual for the Royal Couple, (see Otten 1969:121 for a full listing of the numerous attestations), in the context of transporting gifts, offerings, food, etc., to and from the couple. The following is one of many such usages:

]-*ša pád-da-a-ni te-e-eḫ-ḫé tu-uš-t*[*a*] *p*[*a*]$^{?}$-*r*[*a*]$^{?}$-*a* ***pí-taḫ-ḫé***

'I put it in the basket and [**I**] **take** it away' (KBo XVII 4[434] Rs.III 42 (StBoT 8:34))

The following is from Birth Rituals, in the context of a cleansing ritual for a newborn:

[*nu-kán ta-ra-ša-a*]*n a-pát-ta* ***pí-da-aḫ-ḫi*** *nu* ^{GIŠ}*kur-ta-al-li*$^{ḪI.A}$ *ki-it-ta*

[And the *taraš*]*a* [435]**I carry** there, and the containers are placed' (KBo XVII 61[436] Obv.16 (StBoT 29:42,43)

Attestation 2nd person singular pí-e-da-at-ti

434

Ritual for the Royal Couple (CTH 477)

435

Beckman (1983:47) comments that this word may indicate a type of animal, but "this is by no means certain".

436

Birth Rituals (CTH 430)

(KUB XXX 34 iv 24[437], cited in Kronasser 1966:530) (CHD: KUB XXXVII 223[438] Rev 4)

Attestation 3rd person singular pí-e-da-(a)-i

(KBo V 2 II 31[439], in Kronasser 1966:304,530)

pé-e-ta-i (Neu 1983:149)

pé-ta-i (Neu 1983:149)

The following 3rd singular citation, from the Laws, is an example of a rare occurrence for a verb of the *-ḫi* conjugation, verbs which regularly take not only animate, but generally human subjects. In the following Law (43), which begins "If a man is driving his ox across a river, and another (man) pushes him (aside), and seizes the ox's tail and crosses the river[...]", the subject is the river:

...*BE-EL* GUD ÍD-*aš* ***pí-e-da-i***

'...and the river **carries** the owner of the ox (away)'

(Laws, Table I § 43.53, in Sturtevant and Bechtel (1935:220); Friedrich (1971:30))

437

Iriya's Ritual for the Purification of a Town (CHT 401.03). See StBoT14.

438

Akkadian and Hittite (CTH 547.II Liver Omens)

439

Ammiḫatna (CHT 471)

The 3rd singular verb appears in an (idiomatic) phrase *uu̯ai pedai* 'do someone harm or injury' in the late treaty document *Die Bronzetafel aus Boğazköy*. Thus

ŠA KUR ^{URU}*Ḫa-AT-TI* ***ú-u̯a-a-i pé-e-da-i*** *zi-ik-ma-aš-ši* SIG_5*-iš-ti*

nu-uš-ši Ú-UL ku-ru-ri-i̯a-aḫ-ti

...he **does harm** to the lands of Ḫatti but you favour him, and do not draw him into a conflict' (Bronzetafel aus Boğazköy[440] = Otten 1988:26,27, Table IV, 9,16,27

peda- is attested in the third singular preterite: pé-e-da-aš (Apology of Ḫattušili III[441])

na-aš I-NA $^{URU\ D}$U*-aš-ša* ***kat-ta pé-e-da-aš*** *nu* $^{URU\ D}$U*-aš-šan e-ep-ta*

'and **he carried** them[442] **down** to [the city of] Dattaššaš;

and he took Dattaššaš (for his residence)' (The Apology of Ḫattušili)

(StBoT 24:14,15; Sturtevant and Bechtel (1935:70,71))

440

Treaty with Ulmitešub of Tarḫuntašša (CHT 106)

441

Apology of Ḫattušili III (CHT 81)

442

The gods of Ḫatti and the Manes. See Sturtevant and Bechtel (1935:70,71) or Otten (1981:14,15) for full context.

#91. *pippa-* 'knock down', 'overturn'

This verb is the semantic opposite of *úeda-* 'lift up' (Kronasser 1966:530). Oettinger (1979:489) rejects an analysis of *pippa* as composed of preverb (*pē-*); Kronasser (1966:571) suggests a reduplicated source.

Attestation 2nd singular present (with gloss/wedges) pí-pa-at-ti (CHD (1997) P Fas.3:269)

Attestation 3rd singular present pi-ip-pa-i (KBo XXV 109 iii 8), in CHD (1997) P Fas.3:269).

The verb appears with preverb *arḫa*, as in the following:

arḫa ***pí-ip-pa-i***

'he overturns' (KUB XVII 27[443] ii 35, in Kronasser 1966:530)

The verb seems more common in the preterite. Both first (*pí-ip-pa-aḫ-ḫu-un*) and third (*pí-ip-pa-aš*) person are attested. See also Sturtevant (1933:54) for derivatives. The participle

443
Ritual for Ḫannaḫanna + Gulšeš (CTH 434)

is *pippant-* 'thrown/drawn over' (as a coat?) (Kronasser 1966:530; Tischler 1983:64).

11. Translational motion

Hittite *piddāi,* from **ptē* 'fly', according to Puhvel (1960:169) "reflects true ablaut". Mallory and Adams (1997:191,192) analyze *piddāi* as in origin an *o*-grade stative (**ptóh$_1$ei*) from **pteh$_1$* 'fall', ultimately from IE **pet*- 'fly'[444]. If the Hittite verb is indeed a stative, the same type of ancient 'stative' (in the sense of continuous action) can be seen in the Sanskrit cognate: *ná paptuḥ* 'they fly'. Note that the translation can be nothing but a present or a stative perfect: 'they don't fall/are not falling[...]they are continuously not falling', i.e. 'They fly'= they exist in a state of continuous airborne-ness). This usage clearly shows the use of a perfect form as a present tense-- its original usage.

The Greek cognate is a "middle" verb πέτομαι 'fly' (Frisk 1973 II:521, 522)[445]. Bomhard and Kerns (1994:240) provide the Proto-Nostratic source **p[h]at[h]*-/**p[h]ɐt[h]*- 'to flutter, to quiver, to tremble, to palpitate, to move rapidly'.

Certain forms of this verb *can* be homographous with the *-mi* verb *piddai*- 'render, pay' (3rd plural present *píd-da-a-an-zi* 'they fly', *píd-da-a-an-zi* 'they render'). Such "congruence was apparently tolerated as long as the entire conjugation type did not coincide"

444

The word for 'wing' *pittar, pittanaš* is a neuter *r/n* stem reflecting **pétH-r̲* : **pétH-n̲-s*

445

Sanskrit *pádyate* 'falls, perishes' comes from a different root **ped*- 'fall' (Buck 10.23).

(Puhvel 1979:216). The congruence in its turn was the result of the scribes' desire to differentiate 3rd singular forms of this verb from third singular forms of the two *pedas* : *pedai-* 'carries off' and *pedai* 'digs', referred to in the entry under #88 *pa/idda-* 'digs'.

Attestation 3rd singular present pít-da-i (Kronasser 1966:503; KBo IV 14[446] iii 48)

The *-š* preterite [pitdaiš] is attested in both 2nd ([*pí*]*t-da-iš*) and 3rd person (*pít-da-a-iš*) (Kronasser 1966: 377,469, 503).

Also attested is 'bare' 2nd singular imperative *pí-e-da* 'hurry!' (Kronasser 1966:478,503)

446

Treaty with an Unknown party (CTH 123)

#93. *šāḫ-* /*šaḫḫ-* 'clog, stuff'[447]

This verb follows the pattern of *-ḫi* verbs *nāḫ-* /*naḫḫ-* 'fear' and *zāḫ-* /*zaḫḫ-* 'contend against'. Kimball (1999:99) argues that the type of alternating single and double spellings within the paradigms and derivationally related words of such verbs is suggestive of an ablauting paradigm[448]. Such alternations (as, e.g. third singular present *na-a-ḫi,* second singular imperative *na-a-ḫi,* participle *na-aḫ-ḫa-an-t°,* third singular *za-a-ḫi,* third plural *za-a-ḫa-an-zi* but third plural preterite *za-aḫ-ḫi-ir*), may indicate "accent and/or vowel length and perhaps or[i]ginal vowel quality as phonological conditioning" (Kimball 1999:96).

She suggests (1999:397ff) two possible sources for the Hittite verb (via Proto-Anatolian precursor **sóh$_2$-ei*): either an IE perfect **(se)-sóh$_2$-e*, or an **h$_2$-* present **sóh$_2$-ei*, (cf. Homeric root aorist ἄμεναι 'satisfy oneself', present ἄεται, from a proto-Greek form *σα-yε/o) (cf. Hittite *ḫašek-* 'satiate oneself' (HED 3:230-231)[449]. The participle *ša-a-aḫ-*

447

The meaning has been variously rendered. Puhvel suggests 'clog (with dirt), plug, stop up; stuff, cram, jam' (see others, including suggestions of Laroche ('corrompre, gâter, barbouiller, salir'), Friedrich ('verunreinigen, besudeln, schieren') Güterbock, Berman, in Puhvel 1979b:300).

448

But see Puhvel's remarks, below. Kimball (1999:279) considers alternations in paradigms of *āk-/akk-* 'die', or *ištāp-/ištapp-* 'shut' to be similar to the one seen here.

449

Certain forms of the Hittite verb *ḫašek-*, namely *ḫašekzi* besides Palaic 3rd plural *ḫašanti.* Reinforcing a suggestion already in Martinet (1955) and central to my arguments in this

ḫa-an (KUB IX 28 i[450] 14, OH+) would give evidence for the latter, being the regular participle of present of the shape **séh$_2$-n̲t-*. If the source is an IE perfect, Kimball indicates that the participle would be secondary, formed on analogy with such verbs as *nāḫ- /nāḫḫ-* 'fear'.

Mallory and Adams (1997:500) give IE root **seh$_2$(i)-* 'satisfy, fill up' as the underlying etymon, with many and diverse cognates, including Armenian *hač* 'contented', Vedic *a-si-n-vá* 'unsatisfied', Tocharian A *si-* 'be satisfied', Tocharian B *soy-* ("with difficult vowel") 'be satisfied', and numerous derivatives such as Latin *satis* 'enough', Lithuanian *sótis* 'satiety', *sotūs* 'satiated', Old Norse *saðr* 'enough', Gothic *saþs* 'satisfied'. For the Greek form of this 'old verb' (ἄ-μεναι < ἀσαι) see Frisk (1973:159) or LSJ (I: 81,299) who give the root as *sā : sə̄*[451], and the source as ἄω (LSJ I:299). They point out that the intransitive meaning 'take one's fill of a thing' is present in the Homeric usage: (Iliad 21.70) ἐμέν̓η χροὸς ἄμεναι 'fain to glut itself with flesh' (said of a spear which missed its mark).

Perhaps the most extensive, detailed and accurate analysis of *šāḫ-* is provided by

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thesis, Puhvel (HED 3:231-232) says that these forms, reminiscent of the variation in Latin between *senectus* vs. *senātus*, raise the "possibility that *-A$_2$* [= **-H$_2$*] might have "hardened" to a guttural in some prehistoric preocclusive positions, thus **H$_1$séA$_2$-ti > *h(a)sekti* vs. *H$_1$sA$_2$-ónti > *h(a)santi*".

450 Ritual Text (CTH 442)

451 Echoing the ablauting pattern of the two stems in the Hittite cognate?

Puhvel in 'Some Hittite Etymologies' (1979b). He calls the stem final -*ḫ* of this -*ḫi* verb "unique", noting that the consistent single [sic: contra Kimball] spelling of the laryngeal between vowels argues for its voiced nature (by Sturtevant's Law). The verb is apparently very old and does not lend itself to easy analysis. The various meanings and meaning shifts of the root may be elucidated by derivatives, such as (neuter) noun *šaḫ-eššar* 'stronghold, fortress', attested in the Labarna benediction, where the semantic development is (from a verbal noun) 'stopping up, jamming' > 'shut (in) area' > 'stronghold':

nu] *Labarnaš* LUGAL ^{URU}*Ḫatti* ***šaḫeššar*** *šummel ēštu*

'May L., the king of Ḫatti be your[452] **fortress**'

(KUB XXXVI 110[453] Rs. 8-9, in Puhvel 1979b:301)

Whereas the Hittite *a*-vocalism points to an *o*-grade IE perfect stem, the *e*-grade is reflected in several derivatives, including the truly archaic verbal noun *šeḫ-ur* [454](with suffix *-ur* as in *ani-ur* 'ritual' (HED 1:70)), "with a semantic development 'clog(ging)' > 'crud' >

452

With ongoing Hittite research, it is becoming clear that *šummel* can also mean 'our', thus reflexive (like **suo*- in Vedic or Slavic).

453

Labarna benediction (CTH 820)

454

The oblique (*-n-*) stem is seen in the [Luwian?] denominative verb *šaḫ(ḫ)-an-iya-* 'befoul' (KUB XXXV 45 ii 21) beside Hittite *šak-n-iya-* 'excrement', or Tischler's delicately Latin 'cacare' (1983:67) (Puhvel 1979b:303).

'body wastes' > 'urine'. For the meaning shift we may compare e.g. Latin > English *f(a)eces*, originally 'dregs, impurities'. [Further], *šeḫur* intimates that 1sg. pres. act. *šaḫmi* may be a cross between **šeḫmi* [...] and **šaḫ-ḫi* (the latter with a collision of *e*- and *a*- coloring laryngeals" (Puhvel 1979b:301).

The Hittite word *šakkar* 'excrement' is also related. This is "an old radical heteroclitic noun which shows either *šakki*- or *zašgar*- as its compositional form, whereas the deverbative abstract noun *šeḫur* appears as either *šeḫu(r)- or šeḫu(n)*-" (Puhvel 1979b:303)[455].

Under this analysis, various cognates referring to excrement present themselves, including Luwian *šaḫḫa*- 'dirt, filth', an animate (!) noun seen also in Hittite *šaḫḫanza* 'impurities' : *kuiš šaḫḫanza iššāi* 'who(ever) commits impurities', Greek σκὼρ 'dung' (cf. spelling variants of Hittite *šakkar* (importantly *zakkar*) which indicate [(t)skar], matching the Greek neatly).

*Unattested - lost ? 1st singular present *šaḫ-ḫi

This form would be an archaism (with ending attached directly to root), parallel to attested *šak-ḫi* 'I know'. If I am correct about the phonetic nature of *ḫ* (witness the frequent

455

Note the alternation between *-ḫ–* and *-k-* in these lexemes, comparable to the alternation (cited in Puhvel *ibid*) of the voiceless pharyngeal fricative *-ḫḫ–* in Luwian *na-ḫḫ-uwa-* 'consider important, take to heart' and voiceless velar stop *-kk-* Hittite *na-kk-iyaḫḫ-* 'make heavy' (Tischler 1983:55).

alternation in spelling), these two forms would have been virtual homonyms, which might explain the movement (no pun intended) of this form to the *-mi* conjugation. The *o*-grade of the attested 1st singular *šaḫmi* (where *e*-grade **šeḫmi* would be expected (cf. *šeḫur*)) does indeed suggest analogical influence of an *o*-grade **šaḫ-ḫi* (as Puhvel, above).

Attestation 3rd singular present ša-a-ḫi (Kronasser 1966:515, 549 , tentatively, and with a question mark next to his entry of this verb. The verb is heavily attested with *-ri* forms).

SÍG *k*]*išrin anda* ***šāḫi***

'(**he**) **crams** in(to a potstand) a skein of wool'

(KUB XXXIX 88[456] i 10, in Puhvel 1979b:301)

456

#94. *šāi-* 'press', 'shoot'; 'sow', 'throw'

[In phrasal *karta šāi-* 'remember' (lit: 'press to heart')]

Friedrich (1960:106) includes this verb in a list of verbs which have *-ḫi* and (related/derivative) *-mi* forms[457]. Kronasser (1966:160) suggests that preverb *ša-* is the first element. Mallory and Adams (1997:534) list *šāi* from *seh_1- 'sow' (perhaps related to Sanskrit *sīra-* 'seed'). They suggest the (identical) roots meaning 'sow' and 'throw' are "ultimately the same". Gamkrelidze and Ivanov (1995:594ff) give the meaning as 'sow; press into the ground'. The Sanskrit word *sītā* 'plow', 'furrow'[458] is one of the numerous derivatives in *$-t^h$- from the same root, thus cognate with Hittite *šatta-* 'implement for working fields', whereas *sīra-* 'seed' comes from the same basic root extended by suffix *-ra-*. Cognates include Latin *serō* 'sow', *sēmen*, Gothic *saian* 'sow' Old English *sāwan* (> Modern English 'sow'). Given the dialectical distribution of derivatives, Gamkrelidze and Ivanov (1995:595) suggest that the root can be "dated back to the period of Indo-European unity".

It is interesting to note that Hittite nominal derivative *šamana* has taken on a clearly

457

The *-mi* verb derivative is *šiya*.

458

See Mayrhofer (III:469,472, and, especially 477) for the connections. See also Monier-Williams 1998:1218) who notes that this word appears in the name of the goddess Sītā 'the furrow', personified, worshipped and invoked in the RV [4.57.6] as presiding over agriculture and the fruits of the earth. Puhvel derives *sītā* and *sīra* from Akkadian as cultural loanwords (*Analecta*:123, also 236-237).

metaphorical meaning 'foundation' (symbolically the 'seed' or 'root' of a house) Gamkrelidze and Ivanov (1995:594).

Beckman (1983:163) suggests that the verb *šāi-* be restored in two similar passages from the Birth Rituals (KBo XVII 65[459] obv.39. and *ibid* Rs.45-46). The context involves the 'script' for the performance of the Festival of the Womb (EZEN *ḫa-*]*a-ši-za*). The speaker says that she[460] does not know the words of the ritual 'by heart', but must wait until either 'they' (as in (a)) bring it to her from Kizzuwatna, or until she personally (as in (b)) fetches it herself thence, where it is inscribed on a "*kurta*" (wooden) tablet.

1. *na-aš* ^{URU}*Ki–iz-zu-wa-at-n*[*a nu-mu-kán*] EZEN KA xU-*it Ú-UL* ***kar-ta***

na-[*an*] **x** *a-pí-e-iz ú-da-an-zi*

'and it is (from) Kizzuwatna. [And **I**] do not **know** the festival orally

by heart, but (rather) they will bring [it] [...] from there'.

(KBo XVII 65 Rs.46, in Beckman 1983:144, 145, commentary 163ff, also Kimball (1999:41))

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When a Woman Conceives (CTH 489)

460

Beckman (1983:164) assumes the speaker is a man (i.e., the scribe himself, who often writes "marginal notes" in the text); Kimball, on the other hand, suggests the more likely probability that the speaker is not the male scribe, but the female ritual practitioner herself, the one actually performing the ritual, who needs to know the words "by heart": "it is hard to believe that a scribe would have had any reason to have memorized a birth ritual. It seems much more likely that it is the ritual practitioner who intended to send for the tablet to aid her memory" (1999:41).

2. [(*n*)*a-aš* ^{GIŠ}*kur-ta-aš i-y*]*a-an-za na-aš* ^{URU}*Ki–iz-zu-wa-at-na nu-mu-kán* EZEN KA

xU-*it* [*Ú-UL* ***kar-ta*** *n*]*a-an a-pí-e-iz up-pa-aḫ-ḫi*

'[it is writ]ten up [as a *kurta*-tablet]. And it is (from) Kizzuwatna. And **I** [do not **know**] the festival orally [**by heart**, b]ut (rather) I will fetch it from there'

(KBo XVII 65 Vs.38, Birth Rituals (Beckman 1983:136,137, commentary as above, also Kimball (1999:41))

Beckman's (1983:163ff) commentary on this line says that *karta* is understood as an "archaic terminative sg. of *ker*, "heart"[461] preserved into the later stages of the language in a frozen expression". The sentence here may be rendered literally as "And the festival is not orally (pressed) to my heart, " and refers to the internalization of information. He indicates (*ibid* nt.395) that the "ellipsed verb here is probably *šai-* as in [KUB] XLVIII 99:3': *a-aš-ša* ^{d}*Pí-ir-wa- kar-ta ša-a*[*-it*?]".[462]

This would be yet another example of a *-ḫi* verb used as the verbal member of a

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"Old Hittite is fairly consistent in using the terminative [*-a*] for movement to a place, but by Late Hittite the locative in *-i* has almost entirely replaced the terminative" (Held et al 1987:26). This usage is a good example of an archaism contained in the Birth Rituals.

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KUB XLVIII 99 is from the fragments naming Pirwa (CTH 337), a god whose iconography appears on cylinder seals from the (pre-Hittite?) Karum II period (c.1940-1840). His close links with the horse "have suggested to some a connection with horse-using Indo-European invaders" (Macqueen 1975:120).

metaphorical expression: *karta šai-* 'remember' (lit.: 'press upon/into (one's) heart')[463]. This in turn lends more credibility to the Hittite parallel for 'believe' found elsewhere in the IE family, made up of *kar-* + (*ḫi* verb) *dāi* 'put', namely *k(a)ratan dai* 'believe'= Latin *crē-dō* 'believe', Sanskrit *śrad-dhā* 'faith'. In this expression, the accusative case is used. See the entry under *dāi* 'place'.

Kimball (1999:433) suggests that singular *-ḫi* forms of this verb (from *o*-grade **soh₁*) "may be as early as OH", citing third singular *ša-a-*[*i* StBoT 25, 65 Rs? 5, second singular preterite *ši-iš-ta* KBo III 34 I 23 (an OH copy), whereas forms in *-ri* (such as *ši-i-e-et-ta-ri* KBo XXV 163 IV 6 " = [siyē/ā-] < **sh₁y-* : IE **seh₁i* ''press, sow seed'".

Attestation 3rd singular present ša-a-i (KUB XXXIX 9[464] Vs. 15, in Kronasser 1966:505, but with a question mark)

ša-a-[*i* (StBoT 25, 65 Rs? 5, as above in Kimball 1999:433)

Also attested is the 2nd singular imperative *ša-a-i* (Kronasser 1966:472,505)

Melchert (1994:234), commenting on this root in Luvian (?): *šā-*=(*69) *sa-* 'let go,

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The lexeme here technically means 'innards'. See HED 4:75-77 or 190-191.

464
Funerary Rituals (CTH 450.III)

release' derives the vowel from PA **ǣ*, thus **sǣ-*. Earlier (1994:130) he says "Hittite like Palaic merges PA */ǣ/* with /ē/, against the western languages".

Greek σείω' shake' often used (e.g. in Homer) of 'brandishing a spear', shows some morphological similarities (reduplication in σείσω, σέσεισμαι (Frisk 1973:689)), and some meaning overlap 'hurl', 'cast away', but belongs rather with Sanskrit *tvéṣati* 'is excited', shines, glitters' (Mayrhofer I:540), with very metaphorical usage in RV 5.8.6d *tveṣám cákṣur* 'the eye that stirs (the thought)'. Both the Greek and Sanskrit (and Avestan *upa-θwayeiti* 'is afraid', 'trembles', with the final *-s*) are ultimately from **tu̯eis-* 'shake' (cf. also Homeric δορυ-σσόος < **-twoyos* 'shake-spear' but λᾱο-σσόος < **-kyowos* 'host-prodding', an epithet of war deities (σεύω, Sanskrit *cyávate*).

#95. *šak(k)-/šek-* 'know'

14. Cognition middle

The extremely widespread and ancient IE word meaning 'to see', **weid-*/(perfect **wóide*) > 'have seen' = 'know', is absent from Hittite. This state of affairs is yet another piece of evidence for the antiquity of Hittite which (along with Latin, as below) early went in an alternate direction for the verb 'to know'. The Hittite verb for 'see', *auš-*, is from a root referring in other languages to knowledge gained through the ears, (**o*(H)*us*) > whence *auš* 'see') rather than the eye[465]. The earlier meaning must have been 'knowledge gained through the senses in general'.

Mallory and Adams describe **weid-*('know', originally 'see') as "the classic example of the PIE perfect, whose basic meaning was to denote the result of an action, which became reinterpreted as a present. In this case 'have seen' could be taken as 'know'" (1997:337). There is quite a bit of evidence that the same type of development, though with a different lexeme, may have taken place in Hittite[466]. If one accepts Gamkrelidze and Ivanov's (amply supported) reconstruction of original etymon **še/ok*$^{ho-}$ (with initial

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For the semantic shift from 'ear' to 'see', cf. Kartvelian (Georgian) *q'ur-i* 'ear' beside *q'ur-eba* 'look' (Gamkrelidze and Ivanov 1995:688, nt. 14). See HED (2:243) for an alternate interpretation.

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Justus points out (1982:295) that *šak-* corresponds closely with **weid-*, both semantically and with reference to ablaut patterns.)

"compact fricative" (1995:102,104, 688)) *šak-* 'know' may very well have had an earlier meaning 'see': witness "dual" *šak-uwa* 'eyes', characterized *šak-uwai* 'see', cognates Sanskrit *ákṣi* 'eye (the "compact fricative" /*š/ is lost in initial position in Sanskrit), Luwian *tawi* 'eyes', Armenian *akn* 'eye', Latin *oculus*, Gothic *saíhwan* [sexwan] 'see'. This last is cognate with Latin *sequor* 'follow with the eyes' (cf. Sanskrit *sacate*, Greek ἕπεται) < **sek*^{w}. See, however, Puhvel *Analecta*, 312-321.

Mallory and Adams (1997:144) believe the source of Hittite *šak-* to be **sek-* a verb meaning 'cut', a root of apparent "great antiquity". The extended metaphorical meaning 'know' from 'cut' may also be seen in Latin *sciō* 'I know'[467] (cf. *secō* 'I cut'), also from this source. Under this scenario, the two daughters, Latin and Hittite, would be tapping into an older semantic link between processes involved in rationing ('cutting') items and cognitive processes in general. Justus (1982:297) agrees that a transitive *e*-grade **sek-* 'cut' is related, but suggests that Hittite *šak(k)-* with the meaning 'know' is the *o*-grade stative perception counterpart to this verb. This clearly reinforces the idea that ablaut grade may have a voice function (see my Chapter Two, especially 2.1.3.6. for this argument and further discussion). She adds (1982:297) that an *o*-grade etymon such as **sok-* has no morphological parallels outside of Hittite (1982:297). Mallory and Adams (1997:105)

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With perfect in *-vī*, thus *scīvī* 'I knew'/'have known'. This type (also *-uī)* is "peculiar to Latin" and is characteristic of three types of morphological groups: 1) derivative stems (denominatives and causatives); 2) set roots and 3) "a small class of roots ending in a long vowel, typically from **VH* and often where one would expect a root aorist" (Sihler 1995:584). Note that almost without exception, the verbs which Sihler lists have their semantic counterparts in verbs of the *-ḫi* conjugation, not the *-mi*.

claim that certain lexemes often related to Hittite *šak-* (thus Frisk 1973:621f, Chantraine 1968:406, among others) and referring to mental processes, such as Latin *sāgīre* 'perceive well or quickly', Gothic *sōkjan* 'seek', Greek ἡγέομαι 'direct, lead', are from a verbal root of the shape *$*seh_2g$-* meaning 'perceive acutely'.

The final cluster which Mallory and Adams suggest is unlikely from a phonological standpoint, given that the "*a*-colouring laryngeal" (i.e. -H_2, the source of Hittite *ḫ*), is clearly voiceless. Collocation with (voiced) *g* would have provoked voice assimilation. If, however, the final consonant had been the type of "transition" phoneme argued for here, *$*k^h$* (aspirated = laryngealized velar), as the starting point for divergence for the various cognates would be not the final consonant, but, as suggested by Justus, the change in vowel grade: the "active" *e*-grade from *$*sek^h-/h^x$* 'cut' the "middle" (perception verb) *o*-grade from *$*sok^h-/h^x$*- 'perceive acutely'.

The nature of the root-final consonant is discussed in Kimball (1999:115) who claims that the spelling CA-AC often is used to indicate (among other things) "postconsonantal geminates" or "postconsonantal voiceless stops"': thus first person singular *"ša-a-ag-ga-aḫ-ḫi* (MH) beside *ša-a-ak-ḫi* (MH) =[sākkhi] beside 3sg. pres. *ša-a-ak-ki* (MH etc.)= [sākki]", which later forms show "the ending *-i* rather than the thematic *-ai*." Melchert (1994:156) claims that sequence seen here, stop+/H/ "occurs only in secondary sequences (reduplicated *titḫa-* 'thunder' and athematic first singulars like *šag(ga)ḫḫi* /sakHi/, as per Sturtevant 1933:257, contra Pedersen, 1938:111) and in loanwords"–the rule is that a laryngeal following a stop is regularly lost, already in PA.

(However, the appearance of this sequence here can have other explanations, as offered above).

Melchert (1994:81) as well points out anomalies in the ablaut patterns of this verb. Whereas the typical (?) pattern of *-ḫi* verb third persons involves an alternation of the type

3rd singular	3rd plural
-āC_1i	-aC_1C_1anzi

extended analogically to such verbs as *wāki/wakkanzi* 'bite', *ištāpi/ištappanzi* 'shut up', *ḫāši/ ḫaššanzi* 'give birth', *zāḫi/ zaḫḫanzi* 'strike', this type of alternation never occurs in verbs such as *šak*. Such restrictions, according to Melchert "have never been noticed or explained". His explanation is as follows: the alternation occurs only in verbs "with fixed root accent (< **ó/*é*), where by regular phonological developments the qualitative ablaut has been eliminated" (1994:81). It never occurs in verbs, like *šākki/šekkanzi* that preserve *ā/e* type of ablaut (< **ó/*é*) (cf. Gothic ***sa**hw* 'he saw', ***seh**wun* 'they saw'). On this last point, Justus points out (1982:295) that *šak-* corresponds closely with the other IE verb of cognition **weid-/*wóide* both semantically and with reference to ablaut patterns.

Regardless of anomalies in morphology, *šak* clearly has "middle" semantics[468], as well as a clear relation to the IE perfect at an archaic stage: see, for instance, Jasanoff

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Kronasser (1966:382) compares this verb semantically with Greek middle ἐπίσταμαι.

(1978:15) who discusses *šakḫi* 'I know' as one of the "scattered forms [which] continue the perfect in its primitive function". Along with such lexemes as Latin *meminī* 'I remember' or OCS *vědě* 'I know', *šakḫi* and verbs like it represent "inherited perfects in shape, secondarily reinforced in their original value by the addition of the *hic et nunc* particle **i*"[469].

Attestations: 1st singular present *ša-ak-ḫi* also *ša-ak-qa-aḫ-ḫi*[470]

Kronasser (1966:517) cites numerous 1st singulars. Often the context involves 'not

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469

Outside of Greek and Indo-Iranian, Jasanoff argues (1978:14), the stative perfect has left "substantial traces in Germanic, where preterite presents such as Go[thic] *wait* 'I know' (= G[ree]k οἶδα, Vedic *véda*), *man* 'I intend) (=G[ree]k μέμονα, Lat[in] *meminī*), *ga-dars* 'I dare' (= Ved[ic] *dadhárṣa*) constitute an archaic category". See also Sihler's remarks about the archaic nature of the Gmc. 'preterite present' verbs (1995:569)

A full singular present paradigm is attested showing the archaic feature of the ending directly attached to the root:

1 *šāk-ḫi*
2 *šak-ti*
3 *šak-i*

470

Sturtevant (1933:62) cites *ša-a-ag-ga-aḫ-ḫi* 'I know' as an example of an inherited *short* vowel written double.

knowing' (KUB XXIII 45[471] 13, XXXV 145[472] Vs.5, KBo X 12[473] ii 35, etc., as in the citations below, both from Justus (1982).

ammuk-ma ***UL*** *kuitki* ***šaggaḫḫi***

'**I do not know** anything (about it)'

nu peda-mit ***UL*** ***šaggaḫḫi***

'**I do not know** my place

Justus (1982) discusses several voice-related developments associated with *šak*: She notes that the particle *-za*, which she describes as a transitivity enhancer, is added to *šak*, mostly in the latter language, to form the phrase *-za šak*, meaning 'acknowledge'. This type of process which involves derivation of a verb meaning 'acknowledge' from a root meaning 'know' is also seen in French *connaître* 'know' > *re-connaître* 'acknowledge' (also 'be grateful'). Variational patterns of this type-- "formally divergent but grammatically cognate bases of inflection and derivation" (Justus 1982:295ff) -- may have

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471
Fragments of letters in Hittite (CTH 209.15)

472
Varia (CTH 210)

473
Treaty with Aziru of Amurru: II. Hittite version (CTH 49)

been a feature of IE)[474].

The following 2nd singular attestation gives us what Puhvel describes as an "intimate glimpse of Hittite family life" (2002:302). In an episode from the Hurrian-based tale of a certain Appu, the hero's wife is complaining about Appu's sexual and reproductive prowess (or lack thereof). When she questions whether he has *ever* been successful, he angrily retorts that "You are a woman like all women. You know nothing!"

Attestation 2nd singular present *šak-ti*

[*nu-*]*wa Ú-UL ku-it-ki* ***ša-ak-ti*** [475]

'You **know** nothing!' (KUB XXIV 8[476] i 37 = StBoT 14 = Siegelová 1971:6)

Ú-UL ***ša-ak-ti***

474

The development may have preceded along these line, earliest to latest:

1a *uk* [...] *šakḫi* (nominative subject) 'I know' (transitive)
1b *-za šak* (*-za* as transitivity enhancer) 'acknowledge/recognize'
1c *ammuk* [...] *šaggaḫḫi* (oblique subject, only late: Kammenhuber)

475

Happily, a trip to the sun-god in his capacity as sex therapist soon resulted in renewed virility.

476

Appu Tale (CTH 360)

'You don't know' (KUB XXXVI 32 9)[477]

There are numerous other 2nd singular attestations, with spelling ***ša-ak-ti*** 'you know' include KUB XXVI 1[478] iii 27, KBo XI 1[479] Vs.23, in Kronasser (1966:517)

Attestation 3rd singular present *šak-ak-ki*

natta ***šak-ak-ki***

'(s)**he** does not **know**' (Compare Akkadian *la-a idu-u*) (KBo I 30[480] Vs.6,7)

Ú-UL ***ša-a-ak-ki***

'(**s**)**he** does not **know**' (VBoT 58[481] i 20)

alwanzatar ***ša-a-ak-ki***

477
Ea (CTH 351)

478
Instructions of Tudḫaliya IV to Princes and Lords (CTH 255), specifically to LU_2.SAG

479
Prayer to Tešḫub of Kummanni (CTH 382)

480
305.II LU (CTH 305.II)

481
Disappearance of Sun (CTH 323)

'(s)**he understands** the curse' (Kronasser 1966:517)

I have suggested elsewhere that the final *-a* vowel, seen in several *-ḫi* verbs, is in fact a dummy vowel- an artifact of orthography. Forms of *šak-* give evidence that this is so. Sihler (1995:570, nt.3) suggests that Hittite second singular preterite *ša-ak-ta* 'you knew' in fact represents phonological /sakt/ or perhaps /sakst/, based on the present paradigm *ša-ak-ḫi, ša-ak-ti, ša-ak-ki.* Referring to the sometimes "puzzling" 2nd and 3rd person endings of the preterite, he points out that in "vowel stems the ending is often written *-aš-ta* [...] often *-aš*, but never x*-at*. One interpretation is that the actual ending was *-st*, impossible to write as such and particularly inconvenient in the case of consonant stems like *ar-* and *šak-*. If that is correct, a-ar-aš and a-ar-ta [sic: I think this should be a-ar-**aš**-ta] both are orthographic compromises for /arst/". He adds that such an ending, while welcome in the 2nd singular (cf Greek -(σ)θα), is "an enigma" in the 3rd. Again, the occasional identity of 2nd and 3rd endings is an archaic element in Hittite, reflecting the "original unity of these two categories"in the parent language (Shields 1992:38). Friedrich (1960:98ff) provides a full paradigm of this important verb.

#96. *šalik-* 'approach' (often in a sexual sense)

3. Reciprocal domain (c) Naturally reciprocal events

Two possible analyses have been proposed for this verb. Kimball (1999:431) assumes that IE **sleig-*'be slimy, be smooth, stick, adhere'[482] ((?) seen also in Old Irish *sligid* 'strikes') is the source, with the initial **sl*[483] : "spelled *sa-l* in *sālīg-* "approach, come into contact with, accost, molest" (3 sg. pres. mid. *sa-li-i-ga* StBoT 25, 42 II 17 = *sa-li-ga* StBoT 25, 43 I 150)".[484] Melchert (1994:330) takes a similar approach, tentatively suggesting a ("virtual") Proto-Anatolian etymon **slibyé* 'slips, glides' which "perhaps" underlies both Hittite *š(a)lig-* 'violate, accost' and Lydian *sλibi* 'penetrates, violates' (where λ = a palatal or palatalized lateral).[485] However, aggressive meanings including 'accost' or 'violate' are not central to the Hittite verb, and the link between **sleig-* 'be slimy' and 'accost' seems a bit of a semantic stretch. See, however, Latin *salāx*, *salācis*

482

But see Mallory and Adams (1997:568) who provide root without the final velar: **(s)lei-* be slimy' whence various IE words meaning 'tench' (a type of fish).

483

Kimball uses the symbol *s* for *š* in Hittite.

484

Attestations with final vowel *-a* spelling, as above, are described by many as "medial" or "middle" forms. I prefer "preterite present", for reasons previously explained.

485

Would Tocharian B *ṣalype* 'unguent, fat' belong with this? (See Mallory and Adams 1997:194).

'lecherous', English *salacious*. Perhaps also Greek σαλάκων 'swaggerer' (?).

Sturtevant (1930c:216, with references) provides an entirely different analysis[486]. He considers the verb to contain a prefix *šam-* (the same prefix, he claims, which appears in *šawitišza* 'of the same year'), whether from ***sm̥* or ***som-* (with the loss of the nasal before certain consonants) or perhaps Indo-Hittite **so*. He gives the meaning of *šaliga* as συγγίγνεται[487] and suggests that the Hittite verb "must be cognate with λέκτο, ἐλέξατο 'lie', ἄ-λοχος 'wife' (cf. identical construction in Serbian Church Slavonic *sŭ-logŭ* 'wife' also from **sm̥- logho* 'lying together'), Lat[in] *lectus* 'bed', Goth[ic] *ligan* 'lie'". The analysis would involve not an initial **sl-* cluster, but a preverb plus root **legh-* . This interpretation would motivate the semantic connection between many of the attested meanings in other languages: Latin *lēctus* 'getting together' on the *lectus* 'couch', Greek middle ἐλέξατο 'recline' and ἄλοχος 'wife' (= 'the one with whom one reclines for intercourse'). However, the issue is neither straightforward nor simple. Both Lachmann's Law (for vowel quality *lectus* 'couch' vs. *lēctus* 'gathered') and Bartholomae's Law (for aspiration/voicing of clusters)[488] may be relevant here for a correct decision about the

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486

Kronasser (1966:413, nt. 4) puts forward the same type of analysis: *šalik* < *preverb ša-* + **legh-* 'lie'.

487

συγγίγνομαι with various meanings including 'be born with', 'associate, keep company with', 'have sexual intercourse with' (LSJ II:1660).

488

See Sihler (1995:75ff and 623) for a discussion of Lachmann's restatement of an ancient observation by Roman grammarians which "has latterly been promoted to a phonological principle, whereby the lengthening [of a vowel in roots ending in a voiced stop] is regarded

source lexeme, cognates and the chronology of phonological processes involved. This verb is another of the many ancient lexemes which contain perturbations in "expected" outcomes of such Laws as described by Lachmann and Bartholomae. Many of these items simply do not follow expected patterns[489].

Although also attested as a *-mi* verb, the following *-ḫi* forms are attested.

Attestation 2nd singular present ša-li-ik-ti

ša-li-ik-ti

'**you** (a god) **approach**' (KUB V 6[490] i 41f, in Kronasser 1966:414)

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as resulting from the change of the voiced root-final consonant to a voiceless one". Also involved is Bartholomae's observations about "aspiration adjustment" of obstruent consonant clusters in Indic [whereby "any obstruent consonant cluster with a voiced aspirate as an ingredient becomes VOICED AND ASPIRATED throughout: hence *-gh+t-*, *-gh* + *th-*, and *-k* +*dh-* all become *-gdh-* (*-ghdh-*)" (Sihler 1995:200). Although Sihler (*ibid*) points out that no "unambiguous" traces of this phenomenon may be found in Latin or Greek, certain ancient derivatives of **legh-* 'lie down', show both deaspiration and devoicing of the **gh-* (thus Latin *lectus-* 'couch, bed' (<**legh-to*), Greek λέκτρον 'bed' (<**legh-tro-*)). Sihler notes that the Latin datum is "especially significant because the root itself does not survive in L[atin] apart from this form, so *lectus* cannot be the product of leveling or recombination".

489

Also relevant here is **ḱred-dheH*$_1$- (literally 'place the heart'). Sihler (1995:625) points out that if Latin *crēdō* 'believe' is correctly explained as originating from this phrase, then the expected outcome of *yudh-to- 'ordered' would have been **iūdus*, not *iussus*".

490

Liver Oracles (CTH 570)

zik parianta ***ša-li-ik-ti***

'**you approach** from afar' (KBo II 2[491] II 55ff, in Kronasser 1966:414)

Attestation 3rd singular "preterite present" ša-li-ga[492]

This form appears in the Laws, referring to 'approaching' or 'associating with' in a clearly sexual sense. Thus Held et al (1980:126) and Friedrich (1971:84), citing Law §81 b. Both translate the verb as a present: Friedrich translates *ša-li-ga* as *verkehrt* 'has a relation with', whereas Held et al use the euphemistic 'sleeps with'[493].

50. *tákku* LÚ-*aš*

(51) ŠAL *a-ra-u-u̯n-an-ni-in ḫar-zi ta* DUMU-SAL-*ši-i̯a* ***ša-li-ga***

(52) *ḫu-u-ur-ki-il*

'If a man has a free woman and also **sleeps with/has a relation with** her daughter, it is an outrageous sin'. (KUB XIII 4 III 80, in Kronasser 1966:415)

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491 Oracles concerning the purification of kingship (of Tudḫaliya IV) (CTH 569).

492 Kronasser (1966:415) gives the alternate spellings in *-q-* and *-k-* as in *ša-a-li-**qa***, also *ša-li-**ka-ru***

493 Puhvel (2002:300-301) notes that Hittite *šaliga* 'have intercourse with' is "curiously evocative" of Swedish *samlag* [also Czech *soulož,* Bubenik, p.c.].

Attestation 3rd singular present ša-li-ga-i

3rd singular attestation ***ša-li-ga-i*** appears with the hic-et-nunc 'tense' particle *-i*. Here the meaning is more in line with the meaning 'approach' or 'become more familiar with', though not in a sexual sense. (The original older meaning would adhere in the third singular present forms spelled without *-i*, which would of course be earlier. Attested forms in *-i* are evidence that both this form and the 'euphemistic' meaning are later, as for instance KBo II 2, a second singular form attested late.) The citation is from Kronasser (1966:415) who provides the translation and context as 'approach' (nähert sich)" (der reinen Person des Königs, die er verunreinigt, wenn er selbst unrein ist".

The chronology would be:

a. The oldest meaning 'has sexual relations with' (with present meaning), spelling (without *-i*), attestation (in the Laws) in *ša-li-ga*

b. Later extended meaning 'associates with', spelling with temporal particle *-i*, late attestation in 2nd singular present *ša-li-ik-ti,* also *ša-li-ga-i*

The verb is also attested with the *-š* preterite: *ša-li-k/ga-aš* (Kronasser 1966:415)

#97. *šanna-* 'keep secret, conceal'

14. Cognition middle

Kimball (1999:334) indicates that the geminate nasal *-nn-* in this verb arises from an inherited nasal plus a laryngeal (as in several other *-ḫi* verbs, including *ḫanna-* 'litigate', *šunna-* 'fill', *zenna-* 'finish',). Thus "[sanna] < *s_{η}-n-h_2-". CHD :415). Both Sturtevant (1933:214) and Kronasser (1966:160) suggests that this verb may contain preverb *ša-* as the first element, with the second element *nai-* 'lead' (cf. Latin *seducere* 'lead astray').

Less straightforward, though far more likely and intriguing, is a derivation from **sani-* what Puhvel (*Epilecta,* 297) calls

> the ill-attested and controversial numeral 'the one, the same, single' which has been discussed since the 1930's (Albrecht Goetze, *Language* 11:185-190 [1935], *Archiv Orientální* 17.1.288-297 [1949]; Adelaide Hahn, *Language* 18.83-116 [1942]), and to which the akkadogram *ŠANI* (*šanū* 'second') adds philological ambiguity (cf. Heiner Eichner, in *Indo-European Numerals* 45-46 [ed. J Gvozdanović, 1992]). Here the etymological lure of IE **sem-* 'one' is hard to resist, but it is best to keep

**sen-* and **sem-* apart[494].

Besides the verb *šanna-* 'withhold, secrete', other Hittite derivatives would include *šannapi* 'isolated'. All derivatives of **sen-* denote apartness, i.e., oneness as a result of separation, not the 'togetherness' oneness of **sem-*.

Attestation 1st singular present ša-an-na-aḫ-ḫi

(cited in Sturtevant 1931d:57 without reference)

ša-an-na-aḫ-ḫi

'I conceal'

Attestation 2nd singular present ša-an-na-at-ti

n-at-mu-kán ma-an ***ša-an-na-at-ti*** *n-at-mu Ú-UL mematti*

'if **you keep it secret** from me and do not tell me' (KBO V 3 I 28, in Kronasser 1966:566; Puhvel 2002:297)

Attestation 3rd singular present ša-an-na-a-i (Kronasser 1966:304,566).

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The original suggestion concerning IE **sen(i)-*, reflected in, among others, Sanskrit *sanutár* 'afar', Greek ἄτερ 'without', German *sonder-* (cf. English *asunder*), Latin *sine*, Tocharian A *sne* 'without', is from Lohmann (1933:325-326).

Kronasser 1966:83,159, 160, 531, 566ff, 574.

#98. *šarap-/šarep-* 'sip'

2. Reflexive (and related middle) situations (c) Indirect middle: verbs of ingestion

Reflecting one of the several IE verbs referring to eating and drinking, the Hittite verb is related to Latin *sorbeō* 'suck up, guzzle'[495] (and is evocative of Arabic *šarib-a* 'drink', nominal *šarāb-* , whence English *sherbet*). The sense in most dialects (though not necessarily in Hittite) seems to describe a rather noisily enthusiastic ingestion (so Mallory and Adams (1997:175) who list Middle High German *sürpfeln* 'slurp', Old Church Slavonic *srŭbati* 'drink noisily' Greek ῥοφέω 'gulp down' in this meaning. Other cognates include Armenian *arbi* 'drank', Tocharian B *särp-* 'beat (of the heart)'. For other cognates (including Pashto!) see Frisk (1973:663)

The root is cited by Mallory and Adams (*ibid*) is **srebh-*, though the archaic present would have *o*-grade, thus **sróbhei-*. Melchert (1994:30, with references) suggests that the IE root itself had *o*-grade **srob*(^{h})-.

Although Melchert (1994:154) says that the "history of consonant clusters in Hittite has yet to be written", he offers this verb as one example of a preserved initial (fricative + liquid) cluster */*sr-*/. As in the parallel verb describing noisy eating, *ga-ra-a-pí/gi-ri-pa-an-zi* 'devour', alternate spellings of the first vowel suggest that the first vowel is "empty" and that

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The Latin form contains the causative/iterative/frequentative suffix **-*y$^{e/o}$*-, here with iterative force: rare in Latin. Another archaic Latin lexeme with this suffix and iterative sense is *mulgeō* 'milk'(see Sihler 1995:503ff for this common IE extension).

the word begins /*kr-*/ (Melchert 1994:108), despite some evidence to the contrary (e.g. spellings with scriptio plena of both verbs: *ga-a-ra-pí* 'devours', *sa-a-ra-pi* 'sips'). By way of explanation, Melchert suggests that "at least some speakers pronounced this word with an anaptyctic vowel (which was then stressed, as in the case of other anaptyctic vowels in this position, and thus even lengthened" (Melchert 1994:30).

The verb appears in combination with the verb *paš-* 'swallow'. Thus:

Attestation 3rd singular present ša-a-ra-pi

nu EN.-SISKUR 7-*ŠU ḫūppāizzi* [...] ***šarapi*** *nu pāši*

'the offerant blends seven times, [...]**he sips** and swallows'

(KUB XXVII 29[496] III 8-9, in Kronasser 1966:520, HED 5:17, Kimball 1999:403))

[^{DUG}*K*]*U-KU-UB arḫa* ***ša-a-ra-pi***

'**sips** from the pot' (Kronasser 1966:520)

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Allaiturahi Ritual (CTH 780.4)

#99. *šarra-* 'separate', 'break (a treaty)'

[Treaty and Covenant Terminology]

This verb is used in the context of 'breaking' an oath. As such, it is part of the "Treaty and Covenant" vocabulary common to the cultures of the Ancient Near East (Weinfeld 1970, 1973; Beyerlin 1978; McCarthy 1978). Ancient diplomacy had at its command "an accurate vocabulary to describe the relationships and the process which created them" (McCarthy 1978:36)[497]. All acknowledged the centrality and sacredness of the 'oath' or 'bond' (*išḫiul* < *išḫai*). Since this point concerning the shared and central nature of such interactions is essential to my arguments, I quote at length from McCarthy (1978:32), who acknowledges that Hittite documents represent some of the most extensive and certainly the earliest Treaty and Covenant material we have, while clearly giving evidence of a prior and substantial tradition. These texts, he says:

> indicate that certain definite ideas about the control of international relations existed. The gods governed such relations, directing them by their word or that of their viceregent, the overlord. One assured the effectiveness of this

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Other vocabulary items in this group include, or are derived from, *-ḫi* verbs such as *išḫai-* 'obligate with' (whence *išḫiul-* 'treaty', 'bond'), *išpand-* 'libate' (liquid in ritual), *ḫalzai-* 'declare', *paḫš-* 'protect', or 'keep' (Weinfeld 1973:193), *parš(iya)-* 'break' (bread in ritual), *da-* 'take', *dāi-* 'accept' (these two last often in phrases), and many others in more limited contexts.

governance by specifying the obligations involved in relationship and imposing them under oath. A properly ordered relationship was a brotherhood. These are the ideas and usages basic to all ancient Near Eastern treaties.

Further, even in the third millennium the means for expressing these things had been formulated. Ritual is basic. A treaty is a record of a solemn oath ceremony. Certain elements will be found to recur in these records: the gods are invoked, stipulations are laid down and confirmed by an oath which calls down curses on an eventual violator.

Weinfeld (1973:190) as well argues for the commonality of treaty terminology in the Middle East of the 15th- 13th centuries B.C.E., specifically in two semantic fields: (1) oath and commitment and (2) grace and friendship. Parallel terminology is found in Akkadian, in Hebrew, in Aramaic, in Hittite, Greek and thence to Latin. The standard verb used in the sense of 'breaking (a truce)'/'ruining a covenant' in Homer is the middle verb (ὅρκια) δηλήσασθαι (Iliad 3:107; 4:67) (LSJ I:384).

Kings, princes and lesser mortals are bound by oaths. Violating such an agreement can have disasterous consequences: Muršili II[498] fears that a broken oath may be the source of the devasating plague which is decimating his people; a broken oath may be the reason

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Second Plague Prayer (CTH 378.02)

that the god has vanished (a common motif), causing sterility of man and beast. Treaties, being more or less elaborate oaths, ensure "peace and good relations" (a phrase which McCarthy (1978:35ff) describes as "normal treaty terminology for describing the state which the making of the treaty aims to achieve").

The parity treaty between Ḫattušili III and Ramses II, preserved in two versions (in hieroglyphic Egyptian carved on temple walls at Karnak, and the original in Akkadian, in the archives at Ḫattuša) is perhaps the most famous, but all parity treaties follow essentially the same formula: obligations are simply stated and apply equally to both parties[499]: whoever fails to comply "breaks the oath".

> The fact that most of the idioms sprang up in the middle of the second millenium, the time when international relations on a global scale started to crystalize (contacts between Assyria and Egypt and between Egypt and the Hittite empire) teaches us that the origin of the treaty terminology is to be sought in the East, at the El Amarna period (Weinfeld 1973:198).

Attestation 2nd singular present šar-ra-at-ti

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This equality of obligation is parallelled by the equality in recognition of dignity (titles) and status of the involved parties, reinforcing the "parity" relationship inherent in such treaties (McCarthy 1978:49).

kašma NÍŠ DINGIR.(LIM) ***šarratti***

'then **you violate** (lit.: 'break') the oath'

(Aziru[500], cited in McCarthy 1978:60; Kronasser 1966:531)

Attestation 3rd singular present šar-ra-(a)-i (Kronasser 1966:531)

nu-ššan MAMIDU ***šarrai***

'**breaks** an oath' (KBo V 9[501] II 37, cited in HED 5:89)

Discussing the particle *-za*'s occasional use with this verb, Boley (1993:143) says that "Apparently, *šarra-* in the meaning 'divide, split up' had not yet acquired *-za* as steady company in OH". Even in Middle Hittite when the verb used in the meaning 'break (an oath)' the particle *-za* is very rarely used:

maḫḫan-ma-at E[GI]R- *pa aranzi našta lingauš* ***šarranzi***

'When however **they** arrive then and **break** the oaths'

(KUB XVII 21[502] + IV 17, cited in Boley 1993:144)

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500 Treaty with Aziru of Amurru: I. Akkadian version (CTH 49)

501 Treaty with Duppi-Tešub of Amurru: Hittite version (CTH 62.II)

502 Arnuwanda I and Ašmunikal re. Nerik (CTH 375.1)

The verb is used regularly in reference to the legal "dividing up" of property (see Boley 1993:143ff for details and discussion).

The root lexeme is, according to Mallory and Adams (1997:354), **ser-* 'line up'. (Oettinger 1979:288-289 reconstructs **serh$_2$-*, **sr̥h$_2$-*). Cognates they cite include Old Irish *sernaid* 'arranges', Latin *serō* 'line up', Lithuanian *séris* 'thread', Greek εἴρω (<**seri̯ō* with loss of initial aspiration) 'line up', Sanskrit *sarat-* 'thread'. The fact that the meaning seems, in most of these cases, to refer to the demarcation (with thread?) of property indicates that this may have been the original, literal meaning, with other meanings later.

Discussing Greek εἴρω, LSJ (I:491) note troubles with etymology, suggesting either Latin *serō* 'thread' or Lithuanian *vérti* 'thread' are possibilities. They note that the "passive" sense appears in Homer (pieces of amber 'strung' (ἐέρμένος) together), with active forms of the verb in the post-Homeric period.

Kimball (1999:414) seems suspicious about the originality of "active" forms of *šarr-* (which would include in her terminology, the *-ḫi* forms) and suggests that they, like the forms in *-iya-*, are "secondary and based on the middle" which she gives as **sr̥h$_3$-o-*, whence, according to her, Greek ῥώομαι 'move violently, dart, rush'. She is clearly in error in this proposal, as Greek ῥώομαι comes from a different root: **sreu-* 'flow' (see Gamkrelidze and Ivanov 1995:196,197; Frisk 1973:668; LSJ II:1578). Certainly, her suggestion is semantically far off the mark. As well, I suggest that she has given the wrong interpretation of the forms she cites (cf. *Epilecta*, 144,199). These forms appear below:

Attestation	2nd singular ("present middle", according to Kimball)		
		šar-ra-at-ta	(KUB XIV 1[503] Vs.42)
		šar-ra-ad-da	(KBo VI 34[504] II 11, 24, III 16)
Attestation	3rd singular	šar-ra-at-[ta	(KUB XXXVI 108[505] Vs. 10)
		šar-ra-at-ta	(KUB XXII 68[506] Rs. 27)
Attestation	1st singular preterite	šar-ra-aḫ-ḫa-at	(KUB XXX 10[507] Vs. 12)
Attestation	3rd singular preterite	šar-ra-at-ta-at	(KUB XIV 1[508] Rs. 20)

These citations provide evidence for what I an calling an archaic "preterite present"

503
Madduwattaš (CTH 147)

504
Soldier's Oath (CTH 427 II)

505
Treaty of Zidanza II with Pilliya of Kizzuwatna (CTH 25)

506
Oracle Fragments (CTH 582)

507
Kantuzzili's Prayer (CTH 373)

508
Historical (Madduwattaš) (CTH 147)

-ḫi conjugation paradigm:

*šar-ra-aḫ-ḫa	'I divide/break'
*šar-ra-at-ta	'You divide/break'
*šar-ra-a	'(S)he divides/breaks'

Bomhard and Kerns (1995:345) put forward a Proto-Nostratic root (**s^{y}ir-/*s^{y}er-* 'to twist, to turn, to tie, to bind'; band, cord any cord-like object: sinew, tendon, nerve, vein') for all the cognates cited above (except the Hittite, importantly).

It is hard to see the link between a verbal root meaning 'string' (together), 'attach' with Hittite *šarra* 'break'. Rules of Hittite phonology (Kimball 1999:413ff; Melchert 1994:79) make it difficult to tell if the second *-r-* is true gemination or the result of assimilation of the final laryngeal consonant of the root (*-h_2* as in Oettinger's **serh$_2$-*, **sr̥h$_2$-*, *-h_3* as in Kimball's **sérh$_3$-*) to the resonant-*r-*. Such theoretical positions assume that there was indeed a root final laryngeal: Mallory and Adams, fully conversant with all aspects of laryngeal theory, do not reconstruct one. Melchert's explanation (1994:79, 165) of the shape of this lexeme is tentative and unclear. He compares the lexical pair *šarra-* 'share' < *šarra-* 'divide' with ($^{A.ŠÀ}$)*kuera-* 'field' and *kuerri* 'cuts' (where the "former is a pre-Hittite deverbative animate noun", and the latter "a nonce-creation beside regular *mi*-verb *kuerzi* 'cuts'").

If the iterated *-rr-* is a true geminate, this may provide a clue: the inevitable result of

repeated 'stringing' is often 'breaking'. The Hittite usage would then have the sense 'stretch too far' = 'break'.

#100. *šešḫa-* 'order, arrange', 'ordain', 'direct'

This verb is most likely a reduplicated version of *$seh_2(i)$- 'bind' (a root seen also in Hittite *-ḫi* verbs *išḫai* 'bind' and *išḫamai* 'sing'. *šešḫa* is an example where medial *sh_2 remained as *-šḫ-*(Kimball (1999:447)[509] . She cites forms:

Attestation 1st singular present še-eš-ḫa-aḫ-ḫi (KUB XV 11[510] iii 11)

(also KUB V 20 III 26, cited in Kronasser 1966:533)

The first person singular appears in the Bronzetafel aus Boğazköy (II 25)

ki-nu-na-za ma-a-an ^{D}UTU^{ŠI} *ŠA* GUD UDU^{ḪIA} *ku-it-ki AŠ-RU* ***še-eš-ḫa-aḫ-ḫi***

'Wenn jetzt aber ich, meine Sonne, irgendeine Stelle für (die Lieferung der) Rinder (und) Schafe bestimme,' (Otten 1988:16,17)

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See Puhvel (HED 2:385-390) for discussion of various links of this verb with such archaic and problematic items as *išḫa-* 'lord', Latin *erus* 'master' (and intriguing suggestions of **es-Ho* as ultimate 'he that is' ('I am who am')). See also Oettinger (1979:498,499).

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Dreams of the Queen (CTH 584)

Attestation 3rd singular present še-eš-ḫa–a-i (KBo V 9[511] iii 6)

Oettinger (1979:498-499) suggests a perfect proto-stem (with *e*-reduplication) **se-$sh_2óh_1$ -e-i*, plural stem *se-sh_2h_1-*. Melchert (1984:153 nt.124) indicates that *šešḫa* = OH **šišḫa* although Puhvel (HED 2:385-90) seems to disagree.

See also Kronasser 1966: 525,533,548, 572. Sturtevant (1931d:59). Although clearly a reduplicated verb (with *i*- reduplication), it is not discussed in Van Brock 1964.

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Historical (Treaty with Duppi-Tešub of Amurru) (CTH 62.II)

#101. *šipant-* 'sacrifice'

[Ritual and Religious Use]

So important is the "widespread and ancient" IE root **spend-* 'make an offering, perform a rite; engage oneself by a ritual act' (seen also in Greek σπένδω/σπένδομαι 'pour a libation, conclude a pact'/'enter into a mutual agreement', Tocharian A and B *spänt-* 'trust' (< *'accept a guarantee')) (Mallory and Adams 1995:351) that it has spawned what appear to be two diverse usages in Hittite: *išpand-* 'libate' (which refers to liquids consumed or used during a ceremony/ritual) and *šipant-* 'sacrifice/consecrate' (which refers most often to the 'solids' offered or consecrated, often animals)[512]. The latter is attested far more often than the former. As might be expected, the verb is heavily used in descriptions of cultic rituals. Although 3rd singular spelling *ši-pa-an-ti* seems more common, the spelling *šipandai* is also attested[513].

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Usages do overlap somewhat, of course, but the expanded, more metaphorical, meaning 'sacrifice' or 'consecrate' (spelled without the initial *i-*) is probably part of a trend seen throughout the IE world where the original meaning of "liquid offering [with the initial *i-* spelling] has disappeared, but its function persists". The notion of an insurance against risk, of a guarantee, is also basic to the sense, which is solely juridical, of the Latin *spondeo* [...] *filiam spondere* is to give one's daughter to wife (*sponsa*) by offering oneself as a guarantor of the union [...] The baffling polysemy of Lat[in] *lībāre* 'to make a libation, to taste, take a portion of [...], wear away, impair' becomes intelligible if from the ancient sense 'to pour a few drops' we posit the meaning 'to deduct a small part' (Benveniste 1973:470).

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Kronasser (1966:35) indicates that the same type of alternation occurs with *waštai-/wašti-* 'sin' and *arrai-/arri-* 'wash' (both-*ḫi* verbs).

Attestation	1st person singular present	ši-ip-pa-an-taḫ-ḫi
		(Kronasser 1966:374, 523,524)
		ši-ip-pa-an[-da-aḫ-ḫi] (Kronasser 1966:524)

The sacrifice referred to in the following attestation is offered against impotence:

ši-ip-pa-an-taḫ-ḫi

'**I shall sacrifice**' (KUB VII 5[514] III 2, in Kronasser 1966:523)

nu ki ŠIŠKUR.ŠIŠKUR **ši-ip-pa-an-da-aḫ-ḫi**

'and **I perform** this Ritual' (KBo V 2[515] 9, iv 65f, in Kronasser1966:523)

The following is in the context of offering a sheep to the Weather-god to control the spread of plague and relieve the suffering of a patient:

-ši ^{d}UTU-*un kiššan* ***ši-ip-pa-an-taḫ-ḫi***

514
Ritual of Paškuwatti (CTH 406)

515
Ammiḫatna (CTH 471)

'I sacrifice [or 'consecrate'[516]] (a sheep) to the god in this way...'

(Kronasser 1966:532)

Attestation 3rd person singular present ši-pa-an-ti (Kronasser 1966:35,522-524)

nu-kan 1 PÍŠ *gapártan* ***šipanti*** [*nu kišš*]*an memai aiš* EME-*aš gagaš šumeš azzikiten*

'**He sacrifices** one mouse and says thus: "Mouth, tongue, tooth: eat!"'

(KBo XV 10[517] iii 49-50, cited in HED 4:58. Here, cf. Latin *mactō victimam* (*deō*)

[3rd singular preterite *šipanti*š occurs in a subordinate clause: 'and the mouse whom he sacrificed' PÍŠ *gapártan-a-kan kuin* [...] *šipanti*š]

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Were such rituals "blood sacrifices"? Likely not: according to Gurney (1977:28), blood plays "very little part in Hittite sacrifice, just as in ancient Mesopotamia". Discussing the central role and important of this type of ritual to Hittite cult worship, Gurney (1977:28) says that "the procedure of sacrifice is described briefly in two stages, denoted by the verbs *šipant-* and *ḫuek-*. The first action [using the *-ḫi* verb] is performed by the priest, the second [using the *-mi* verb] by the indefinite 'they' or by the cook. The verb *šipant-* [...] is used for the pouring of libations. For this reason, when used of an animal, it has been thought to refer to the shedding of the blood and is sometimes translated 'brings as a blood sacrifice'. However, Götze has now shown that there are passages in which the animal remains alive and apparently unharmed after this action [...] I am therefore adopting Götze's translation 'to consecrate' for *šipant-*". Note also the accusative *-un* of 'god' in this citation. Compare Latin *mactō deum* (accusative) *victimam* 'I sacrifice (to) the god a beast'.

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Ziplantawiya (CTH 443)

Mice (*kapart-* (PÍŠ)) were regularly sacrificed in Hittite worship. They were also employed as "scapemice", especially in chthonian rituals, to abate such ills as the plague (HED 4:60). *-ḫi* verbs appear regularly in combination with 'mouse' rituals, the last two are 'scapemouse' rituals:

šipant- 'sacrifice' and *tarna-*'let (go)'

nu-kan 1 ^{PÍŠ} *gapártan* ***šipantiš*** *nu-šša̅n ēšḫar šer* ***tarnaš***

'he **sacrificed** a mouse and **let** blood upon (the loaves)'

nu PÍŠ.TUR *arḫa* ***tarnāi***

'she **sets** the mouse **free**'

da- 'take' and *nai-* 'turn'

namma-at-šmaš-at-kan arḫa ***dāi*** *n-at-kan ANA* PÍŠ.TUR ***nāi***

arḫa-wa-šmaš-kan ***daḫḫun*** *idālu nu-war-at-kan ANA* PÍŠ.TUR ***neḫḫun***

'Then she **takes** it away from them and **turns** it to a mouse (saying):

"I have taken away from you the evil and **have turned** it to a mouse"'....

(HED 4:59)

Similar scapemice rituals (especially for relief from plague) may be seen among both Greeks and Philistines (Puhvel 1981:415,416). For the long history, central role and importance of purification rituals using scapegoats (either human or animal), φαρμακός in Greek, see Burkert (1979:64-72 or 1985:823) who says that such ceremonies were "at the very centre of Greek civilisation" performed in "exceptional situations of anxiety" where driving out a trouble maker is an "elementary group reflex" to such dire circumstances. By performance of such rituals, the group is saved through a transfer of evil to the one expelled.

For a discussion of the various meanings of this important root in IE, which, in Hittite, indicates a "purely religious act" see Benveniste (1973:470-498), Gurney (1977:28-34) or Mallory and Adams (1997:351).

#102. *šišša-* 'impress'

Van Brock (1964:124) considers this the reduplicated version of simple *šai-/šiya-* 'press' (< *ši-šša*). As with the simplex *šai-* 'press' which has the meaning 'remember' (*karta šai-* 'remember' (lit.: 'press upon/into (one's) heart'), so also the reduplicated version, perhaps even more clearly. Thus, from OH Political Testament of Ḫattušili I:

Attestation 2rd singular present ši-iš-at-ti

karta ***ši-iš-at-ti***

'**you impress** [my word] in (your) heart'[518] (KUB I 16[519], in Kronasser 1966:554)

Oettinger (1979:491); Melchert (1994:19).

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This is reminiscent of the Hebrew prayer 'and these (my words) you will impress upon your heart'(Deuteronomy 11:18-20).

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Political Testament of Ḫattušili I (CTH 6)

#103. *šuḫḫa-* 'pour out'/ 'rains'

5. Impersonal [weather verb]

Although generally similar in meaning to the verb *laḫuwai* 'pour', *šuḫḫa* has a specialized meaning as a weather verb (see HED 5:23). Sturtevant (1931a:120) relates both the verb *šuḫḫai* 'empty, sprinkle, scatter' and the noun *šuḫḫa* 'roof' to Greek impersonal weather verb ὕει 'it rains, (the sky) pours'.[520] He claims that the evidence provided by this Hittite verb argues against what was always a "somewhat forced" connection of the Greek word with IE **seu-* 'sap' (also seen in Latin *sūcus* 'sap', Sanskrit *sunoti* 'press out sap'). The Hittite etymon for the latter, under Sturtevant's scenario, would be not *šuḫḫa-* 'pour out' but the next verb, *šunna-* 'fill' (which see). Mallory and Adams (1997:477) agree that "there is no reason to connect "**s(e)uh*$_x$ 'to rain' [the source of Greek ὕει 'it rains' and Hittite *šuḫḫai* 'it rains'] with **seu-* 'to press; juice', as these two roots are "formally and semantically distinguished".

However, the issue is not simple, as both roots are ancient, of complex origin, phonology and interaction. Gamkrelidze and Ivanov (1995:586) consider the development of words for 'rain' to be a specialized use of the root **seu-/*su-* 'press' where the supreme

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He explains that the Greek word is "usually derived from IE **sūi̯o-*, and the suffix *i̯o* accounts for the lengthening upon the loss of *h* from IH [Indo-Hittite] ***suhi̯o*". The noun ὑετός, however, being derived from IH ***suhetós,* underwent no such loss and consequently, no compensatory lengthening.

god is the agent who 'presses' the life-giving fluid from the clouds[521]. Dialect distribution of words for 'rain' show this specialized meaning to be "very ancient, going back to the period of early dialect unity". Such specialized usages of the verb **seu-/*su-* 'press' referring to the divine agents of rain in the ancient Indo-European view appear in "syntagmatic combination with the name of the supreme deity", as in the Homeric phrase ὗε δ'ἄρα Ζεύς 'and Zeus sent rain' (Iliad 12.25; Odyssey 14.457). "Subsequently", according to Gamkrelidze and Ivanov (*ibid*) "this active construction becomes impersonal and [3rd singular] *húei* comes to mean 'it rains' in Greek." One can imagine a similar development in Hittite where rainmaking rituals, preserved in ancient texts, attest to the ritual significance of rain to IE cultures, as well as the role of the deity in producing the life-giving fluid:

> In Hittite rituals, an appeal is made to the thunder god, the supreme deity, to send down rains (KUB XXIX i I 27). KBo III 7 II 21-25 describes a sacrificial ritual asking for rain. In Baltic and Slavic rituals an important role is played by rainmaking rites, preserved to the present day in several Slavic traditions"[522] (Gamkrelidze and Ivanov 1995:587).

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"Rainmaking is [...] thought of as the squeezing out or pressing out of rain by an agent deity: G[ree]k *húei* 'it rains', Alb[anian] *shi* 'rain, O[ld]Pruss[ian] *suje* (written *suge*) 'rain', Toch[arian] A *swā-*, *su-*, B *swā-*, *swās-* 'pour (of rain)', A *swase*, B *swese* 'rain' (Gamkrelidze and Ivanov 1995:586). In the burlesque of Aristophanes, Zeus urinates into a sieve.

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Such as the Balkan rain magic (see Puhvel, *Comparative Mythology*, 235)

Because of the importance of this divinely sent nourishment for agriculture, the word was subject to taboo, which accounts for what Gamkrelidze and Ivanov (*ibid*) describe as a low number of attested Indo-European languages which preserve **seu-/*su-* in the sense of 'rain' (with only Greek, Albanian, Old Prussian and Tocharian doing so, according to these authors). Other languages use alternate lexemes for 'rain', such as Hittite *ḫeuš* (see HED 3:301ff) "a noun which functions as either subject or object" (1995:586) [i.e., the voice is unclear] as in *ḫe-i-ú-un ú-e-ik-ta* ' (he) asked for rain'[523]. Gamkrelidze and Ivanov (1995:586) suggest that the Hittite word is "evidently a loan from Egyptian which replaced the original Indo-European word for rain: cf. Egypt[ian] *ḥwj*, Cop[tic] *hōw* 'it rains'". This suggestion seems to be an exhumation of an old suggestion from Cuny (1942-1943:101) who matched Hittite *heyus* [sic] and Old Egyptian *ḥwj* 'rain'; given the dearth of rain in Egypt, a loanword seems unlikely. See Bomhard and Kerns (1994:530ff) for counter evidence.[524]

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Note that this phrase is ambiguous: it may be an active 3rd singular 'he asked for/called for' rain (with 'rain' as object) or adjectival/aspectual 'the rain (which is) called for' (with 'rain' as subject). This would be 'passive' in the same sense that Vedic *-ta* participles are often interpreted as 'passive', though the true meaning is more accurately described as aspectual rather than voice (see arguments in Klaiman 1978). See, for instance, such (present) renderings as 'rain pours' for *ḫewuš ḫinikta* (HED 3:301). It is also possible that the Hittite noun *ḫeuš* 'rain' is related to both the Greek verb ὕει 'it rains, (the sky) pours' and Hittite *šuḫḫai* 'it rains'(so HED 3:303: **hew(a)-* < IE **E_2ew-H_2* beside **s-E_2ew-H_2* (with *s*-mobile); thus *hēwus* < *E_2ew-H_2-u-s* [...] G[ree]k ὕει 'to rain' may represent either **sE_2uH_2-ye-* or **E_2uH_2-ye* (spiritus asper being automatic on initial upsila)". See Puhvel (HED 3:301-304, with references) for an in-depth discussion of this difficult etymology. See also Frisk (1973:978-979), discussing ὕω > ὕει.Melchert considers these two to be from different sources (re *ḫēu-* 'rain' see Melchert (1994:102, 132), for *šuḫḫa-* 'pour' see 1994:58, 169,170.

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Mallory and Adams (1997) list only Hittite *hēu* 'rain'; they do not list root *šuḫḫa-*

Although Mallory and Adams (1997:477) insist that the two Hittite words for 'rain' nominal *hēu-* 'rain' and verbal *šuḫḫai* 'it rains' are not related, Puhvel (HED 3:303) clearly implies that they are. He gives the basic stem for the noun as **hew(a)-* as underlying the Tocharian, Old Prussian and Albanian cognates (*su-, swā-s swase, swese, suge, shi* all 'rain'). Logic demands that if all these are related to Greek ὗει, and Greek ὗει and Hittite *šuḫḫai* are cognate, then Hittite *šuḫḫai* 'it rains' and *hēu* 'rain' are also cognate. (See as well the discussion which follows).

To further complicate matters, *-ḫi* verbs *šuḫḫa-* 'pour' and *išḫu(wa)-* 'sprinkle' are possibly related by a process of laryngeal metathesis which operated into the Proto-Anatolian period, (thus $*/h_2u/ > */uh_2/$, Melchert 1994:170), that is, "Unless one wishes to project such pairs [...] back to PIE"[525] Kimball (1999:383) assumes with Melchert that the laryngeal metathesis rule was productive into PA and provides the following analyses of the two stems (as well as the nominal root 'roof'): *šuḫḫa-* 'pour out' (*šu-uḫ-ḫa-*, OH etc.) [...] < $*suh_2$-*o* < $*sh_2u$-, weak stem of a base verb *seh_2w-: *sh_2u-, cf. also root noun $*seuh_2$-, $*suh_2$-*o* in *šuḫḫa-* 'roof' (abl[ative] *šūḫza* < $*séuh_2$-*ti* beside *išḫuwa-* 'scatter, sprinkle' <

'pours'/'rains' at all, in any meaning.

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Thus Melchert (1994:58). Nevertheless, Melchert is very tentative in his discussions of such a possible relationship. He suggests that various processes, such as metathesis, dissimilation, and ablaut (of root presents) could produce a "very irregular paradigm" splitting an original etymon into *šuḫḫa-* 'pour' and *išḫu(wa)-* 'sprinkle' "with secondary differentiation of the meaning". One of these "secondary differentiations" could well have been meanings referring to 'rain'. Regardless of the explanation, the time frame for such a split is certainly pre any recoverable source. See HED 2:409, *Epilecta,* 196 for another perspective.

"unmetathesized *h_2*í-sh$_2$w-* with reduplication".

I am of the opinion that there are sufficient phonological, morphological, semantic and chronological difficulties surrounding the verb *šuḫḫa-* to preclude any definitive decision concerning the "correct" analysis. One of the several issues which should be addressed, but is beyond the scope of this work, is the interaction of the laryngeal and *s*-mobile in both the cognates and in Hittite itself. According to Hoenigswald (1952:182-5), laryngeals were lost within IE after an initial **s*, explaining "irregular" alternations among apparent cognates (*sV ~ *HV) (which would explain the initial alternations in the two words referring to 'rain' (*šuḫḫa-* and *ḫeuš*), if this process also operated within Hittite). However, as Kimball (1999:381) points out, "initial **sh$_2$* became Hittite *išḫ* = [sh] (e.g. *išḫaḫru-* 'tear(s)' < PA **sh$_2$ahru-* assimilated from **sh$_2$akru-* with *s* mobile beside **h$_2$ekru-* in Ved[ic] *aśru* 'tear', Av[estan] id[em] and Toch[arian] A *ākär* id[em]". However, if the initial laryngeal element were not h_2 but rather h_3, at least one piece of Hittite evidence (ironically, with the same basic meaning as *šuḫḫa-*) shows the laryngeal preserved in words where non-Anatolian cognates have initial **s* (from **sh$_3$*): cf. Hittite *ḫink-* 'pour', Sanskrit *siñcati* 'pours', Greek ἰκμάς 'moisture' which "point to variant forms of nasal presents": **s[h$_3$]i-ne-k-* : **s[h$_3$]i-n-k-* > Sanskrit *siñc-* beside **h$_3$i-n-k-* in Hittite *ḫinik-* and **h$_3$ik-* in Greek ἰκμάς (Kimball 1999:382). As if this were not complex enough, as I have elsewhere indicated, a rough breathing in Greek sometimes points to an original laryngeal in IE.

Cognates for the Hittite lexeme include several Tocharian words for 'rain' including *su-*, *swās-* [from **suh$_x$*(s)- 'it rains'. Note both the compensatorially lengthened vowel (as in

Greek) and the sigma extension, also seen in the Hittite preterite, below]; Tocharian A *swase* 'rain', Tocharian B *swese* 'rain', Old Prussian *suge* (= *suje*) 'rain', Albanian *shi*[526] (Mallory and Adams 1997:477; Gamkrelidze and Ivanov 1995:586; Puhvel HED 3:303; Frisk 1973:979).

Hittite uses of this verb seem to involve not the impersonal 'rains' but rather human subjects performing various (ritual) acts of dispersal. The first citation is from Muwatalli's Prayer to All Gods through the Storm God of Lightning (CTH 381).

Attestation 3rd singular present šuḫḫai

memal ANA NINDA.KUR$_4$.RA.ḪI.A *šer* ***šuḫḫai*** LÀL YÀ.DUG.GA *laḫuwai*

'He **scatters** groats over the breadloaves (and) pours honey (and) good oil'

(KUB VI 45 IV 54)

The following citation again involves a human subject pouring various metals during the performance of a ritual:

namma KÙ.BABBAR GUŠKIN [...] NAGGA URUDU ZABAR [...] tepu ***suḫḫai***

'further, **he pours** a little silver, gold [...] tin, copper, bronze'

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The Albanian also showing an "irregular" reflex: Mallory and Adams (1997:477) note that from *suh_x- *gji* would be expected.

(KUB XXVII 67 II 59-62[527], in HED 5:118)

Attested with the "preterite" 3rd singular *šuḫḫaš* (again referring not to rain, but to grain pouring).

The meaning 'hiccups' for the derivative *šu-ḫu-ul-zi-na-a-i* (3rd singular present) (as in KUB VIII 36 III 5)[528]. See Tischler (2001:154). This form is discussed in Burde (1974), *Hethitische medizinische Texte* (= StBoT 19).

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Ritual of Ambazzi for Tarpatašši (CTH 391.1)

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? Catalog: man/INIM, without DUB (CTH 279)

#104. *šunna-* 'fill'

Kronasser (1956:198; also 1966:563) lists this *-ḫi* verb along with others (including *tarna-* 'release', *penna-* 'drive', *nanna-*'ride in', *zenna-* 'finish') as having the shape 'root + (causative/factitive) suffix *-*nā*-/-nə-'; Friedrich (1960:106) includes it in his section describing "mixed" *-ḫi /-mi* verbs (including such pairs as *dala-, daliya-* 'leave', *išḫāi-, išḫiya-* 'bind', *šāi-, šiya-* 'press', *parš-, paršiya-* 'break'). Both 1st and 3rd person singular forms are attested (also Kronasser 1966:304,563).

The first person singular (with both 'old' and newer spellings) is attested in very early documents, the first citation from Zalpa text, the second from the Ritual for the Royal Couple:

Attestation 1st person singular šu-un-na-aḫ-ḫi

GIŠ*intaluzzit* ***sunnaḫḫi***

'I fill with a shovel' (KBo III 38[529] Rs. 16-17, in Kronasser 1966:563, HED 2:374)

A restoration with the earlier spelling *šu-un*[*-na-aḫ-ḫé* is given in the Ritual for the Royal

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Fragments Naming the City of Zalpa (CTH 3)

Couple:

] x GEŠTIN-*ta* ***šu-un***[***-na-aḫ-ḫé***

'and **I fi[ll** [...] with wine' (KBo XVII 1[530] Rs.3 49 = STBoT 8:34)

The following 3rd singular attestation from the Laws seems to involve some type of compensation for an improper activity vis-a-vis the grain stores. The preamble is 'If a slave breaks into a granary and finds grain of the granary, then':

Attestation 3rd person singular šu-un-n-(a-)i (Kronasser 1966: 563)

....[ARÀḪ]-*an ḫal-ki-it* ***šu-un-na-i***

'He **fills** back the granary with grain' (Laws, Table I § 96 (49), in Friedrich 1971:46)

The verb is restored by Beckman in a description of a Birth Ritual, where the majority of the other third singular verbs are also *-ḫi* verbs: *ḫu-u-w*[*a-a-i* 'she throws', *da-a-i* 'she takes', *la-ḫu-u-wa-i* 'she pours', *me-m*[*a-i*] 'she speaks'.

Attestation: 3rd singular šu-un-n-(a-)i

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Ritual for the Royal Couple (CTH 416)

na-aš-ta ^{DUG} *ḫu-u-up-pár* ***šu-u[n-na-i***$^{?}$

'and the bowl she **fi[lls**...] (KUB XXXIII 67[531] 7', cited in Beckman 1983:72)

The root of this verb is **seuh*$_3$- 'set in motion' (Mallory and Adams 1997:507). Cognates in Sanskrit include *suváti* 'sets in motion', 'vivifies', 'urges' (in the RV) (Mayrhofer III:488ff), (perfect *suṣuvé*), also the name of the Vedic god Savitár (< **seuh*$_3$ + *tōr* 'the Impeller')[532], in Hittite *šuwāi*- 'push, urge', *šāwatar*- 'horn' (='the pusher'), Tocharian B *ṣewi* 'pretext, excuse', and with the -*n*- extension in this root, *šunna*- 'fill', Palaic *sūnat* 'poured out', Avestan *hunāiti* 'seeks to create' (?).

See also Kronasser (1956:198, 1966:563); Friedrich (1960:106). It is tempting to connect this root with Sanskrit *su-nó-ti* 'presses out', whence *soma,* etc.

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Birth Rituals (CTH 477)

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The suggestion has been made (e.g. Haudry (1987:45-80) that Vedic *Savitár* and Latin Saturn are related, but see Mallory and Adams (1997:289, 290) for convincing counter-arguments.

#105. *da-* 'take'

3. Reciprocal domain (c) Naturally reciprocal events

As I indicated above, most derivatives of deh_3- mean 'give' in other IE languages (cf, Latin *dō*, Sanskrit *dádāti,* Greek δίδωμι, all 'give'). Hittite is the exception to the rule: in Hittite the reflex of $*deh_3$, namely *da-*, means 'take'. This interchange of meaning is understandable as reflecting both the nature of "reciprocity" itself ("[...] taking and giving are reciprocal relationships, labelling either end of a single transaction" (Mallory and Adams 1997:563), and its centrality in IE culture ("..it is perhaps not surprising that a given verb may show up in one stock with the meaning 'take' but in another with the meaning 'give'" (*ibid*). The notion of reciprocity, of 'give and take', was built into the IE moral code[533] and is fully reflected in the lexemes referring to giving and taking:

> This concept of expected reciprocation may be bound up with the frequent appearance of opposed perspectives in the meanings assigned to words for 'give' and 'take', e.g., $*h_4ei$ yields Grk αἴνυμαι 'take' but Toch A *e-* 'give'; $*deh_3$- has Lat *dō* 'give', but Hittite *dā* 'take' (Mallory and Adams 1997:186)

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Failure to reciprocate virtually insured some calamity: bad luck, ill health, pestilence.

Mallory and Adams note (1997:563) that IE words for 'take' fall into two large groups: (1) those that emphasize the physical nature of taking, and (2) those that centre on the social nature of the interchange. Significantly, representatives of both groups associated with this most central IE notion are *-ḫi* verbs: meaning (1) is seen in *k(a)rap-* 'seize', 'devour', meaning (2) in *da-* 'take', and perhaps also *dakk-* 'is the same as'.

Attestation 1st singular da-aḫ-ḫé/ da-a-aḫ-ḫé

(Neu (1980:16) Althethitische Ritualtexte in Umschrift = STBoT 25; StBoT 8:124)

The following are both from The Ritual for the Royal Couple[534]. The tablet is not in good condition, so that all that is readable is the verb itself (line 39'). I cite several lines, so that the reader may get the "flavour" of the OH text:

] x x [ ] x ***da-a-aḫ-ḫé***

] x- *ma-aš-ta* x [*p*]*ád-da-ni te-e-eḫ-ḫ*[*é*

] x *-ša mu-u-ri-i̯a-lu-ša* MÁŠ.GAL-*ša ga-ra-ú-ni*[*-ši*

]*-ša pád-da-a-ni te-e-eḫ-ḫé tu-uš-t*[*a*] p[a]$^{?}$-r[a]$^{?}$*-a pí-taḫ-ḫé*

'.... **I take** [...] I put it in the basket [...] and the raisin buns ...

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Ritual for the Royal Couple (CTH 416). There are numerous others, including several in "old" *-ḫé* spelling (see Otten and Souček 1969:76, 77).

(KBo XVII 4[535] Rs. III 39-42)

Puhvel (HED 1:57) cites the following excerpt from what he calls a "southern type" ritual, where *anāḫi* refers to an 'advance sample, test morsel (of sacrificial offering)'[536]:

Attestation 3rd singular present da-a-i

NINDA *alattarinn-a paršiya n-ašta anāḫi* ***piran arḫa dāi***

'and he breaks an a.-bread and then **takes off** a morsel' (KBo V 1[537] III 17-18)

and further:

nu-kan ANA UDU *ANA* SAG.DU-*ŠU* ZAG-*ni-ya* ^{UZU}*paltani anaḫi* ***dāi***

'**he takes** a trial piece off the sheep's head and right shoulder'

(KUB XXXIX 71[538] III 25-26)

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Ritual for the Royal Couple (CTH 416)

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NINDA *anaḫi* = 'one bread sample'. Puhvel (HED 1:58) suggests that this word may be either Hurrian or Luwian in origin.

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Papanikri (CTH 476)

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Ritual for Ištar Pirinkir: Recitations in "Babylonian" (CTH 718)

and still further (note that the other verbs in this ritual are also *-ḫi* verbs):

namma-kan anāḫita ^{DUG}*āḫrušḫiaz* ***dāi*** *n-at-šan* ^{DUG} *ḫuprušḫiya ḫaššī*

parā dāi nu memai ānuiš anaḫuēš kelu

'then **he takes** morsels from the censer and places them

in the tureen on the hearth and says [Hurrian]' (KUB XII 12[539] 2-5)

This verb appears in the technical/legal phrase for "taking as vassal" IR-*anni da-* (McCarthy 1978:79).

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The Hittite *ḫišuwaš* Festival (CTH 628.Iif). The vocabulary here (e.g. *anāḫita, āḫrušḫiaz, ḫuprušḫiya*) clearly shows Hurrian influence.

#106. *dāi-* 'place'

[*karta dāi-* 'believe' (lit: 'place into the heart')]

Gamkrelidze and Ivanov (1995:779) suggest that this lexeme predates Anatolian, originating in "an older source, possibly a dialect of Common-Indo-European". They cite as evidence the Elamite verb *ta-*'put, place, stand', *tatta-* (perfective of previous), cf. Sanskrit *dádhāti*, Greek τίθημι 'puts', 'stands' from **dʰeH-*). For those who are suspicious of all such "Fernwirkungen", more plausible than Elamite is the Indo-Uralic adduction of Finnish *teh-dä* 'make' (with even the laryngeal in place).The verb shows numerous morphological archaisms, including "mixed" 2/3 endings and 1st singular present spellings with *-é*. It is heavily attested in some of the most archaic documents (e.g. Zalpa text, Ritual for the Royal Couple, with citations below).

As a testament to both its age and semantic importance, the verb is found in phrases which directly parallel formulae attested in other ancient IE daughters, including those which pertain to the ritual or legal establishment, including Sanskrit *dhā-man* 'sacred law, custom', Homeric *aná-thē-ma* 'ritual', *thé-mis* 'law', Sanskrit *nāma-dhā*(*-tar*)'giver of names', Greek *onoma-thé-tēs* 'name giver', Hittite *laman te* 'give a name'[540], Hittite formula *ŠAPAL NĪŠ* DINGIR^{MEŠ} *dai* (= *šiunan linkiya* ?) 'place under the oath of the gods'. Included here would

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Hittite *laman dai-*, Vedic *nāma dhā-*, Greek τίθεσθαι ὄνομα, Latin *indere nōmen*, Tocharian A *ñom tā-* (Puhvel 2002:293-298).

be the Hittite parallel to other Indo-European terms for basic religious concept of 'faith': Latin *crē-dō* 'I believe', Sanskrit *śrad-dhā* 'faith' namely *k(a)ratan dai* 'place into the core, heart' (Gamkrelidze and Ivanov 1995:701), as in DINGIR ^{DIDLI}-*eš ta-ma-i-in ka-ra-a-ta-an da-i-ir* 'the gods renewed their faith' (lit: 'put new (or 'other') insides in them' (KBo XXII 2[541] I 16). Double accusatives, as in this citation (both *ka-ra-a-ta-an* 'heart' and *ta-ma-i-in,* the pronoun denoting 'other', are accusative), are often used in contexts involving making or turning something into something else. With **k̂red-dhé* 'heart-setting', compare **mn̥s-dhé* 'mind setting' in Vedic *medhá* 'wisdom', Avestan *mazda* 'wise'; cf. Vedic *médhira-* 'wise', Russian *múdryj.*

See Gamkrelidze and Ivanov (1995:701, nt.1) for the common semantic links and developments involving 'heart', 'insides', 'disposition' [542] as in entry *šai-*, which has a similar phrasal expression using a *-ḫi* verb *karta šai* 'remember'. For opposing views, see Puhvel (HED 4:77).

dāi is one of several *-ḫi* conjugation verbs containing an *i*-diphthong. Melchert says that the sequence **$VH_{1/3}i$* resulted in synchronic *i*-diphthongs before consonants and word boundaries (1984:73,74); similarly, sequence **$\acute{V}H_{1/3}e$* resulted in /Vi/ with "reduction of unaccented **e* to *i* " (Kimball 1999:230). Thus, IE **$dóh_{1/3}\,e$* > PA **$dóh_{1/3}\,i$* > *dāi-* seems the

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They are also common with *verba dicendi* or verbs of perception "where in modern languages one might be tempted to use a subordinate clause" (Held et al 1987:56).

most likely trajectory, but see the alternative suggestions below.

Wagner (1950:50ff) first proposed the idea that verbs like 'put', 'place', which show inflectional patterns of the type *teḫḫi* (< **daiḫḫe* Jasanoff (1978:63)) 3sg. *dāi-*, 3rd plural *tiyanzi* support the reconstruction of an IE present type in **-ēi-/-ī.* [543]

Sturtevant (1930a:32) says that there "is no doubt that the third sing[ular] *dai* 'he places' comes from an earlier **dēi* [...] where [...] perfect ending *e* contracted with root-final *ē* ***dhē-e* > Hittite **de*)". Whereas "*dai* 'he places' represents IH ***dhēi*, *dai* 'he takes' [comes rather from] ***dōi* ". He notes (1930a:33) that the *ai* of the third person singular present is typical of *-ḫi* conjugation verbs which end in an original long vowel or long *i*-diphthong: ."Since this conjugation is in general to be identified with the IE perfect tense, a striking parallel is presented by the perfects of the long-vowel roots in Sanskrit, which show *au* in the first and third sing[ular] (e.g. *dadau: dā* 'give', *dadhau: dhā-* 'place'[...])". He suggests an alternate source with *au* as "a locative infinitive of an *i*-stem (*dadau*: the Vedic adjective *dadi* 'giving', *dadhau: dadhi-* 'bestowing').[544] Sihler, in turn, as I indicated earlier, links this type with the Latin *vī*-perfects.

Sturtevant (1927c:224) asks plaintively: "what shall we say of the stem-final of *dai* 'he places, *dai* 'place', *nair* 'they turned', etc? The obvious answer is that *ē* became *a* before

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Jasanoff (1978:63) notes that *dāi-* "has a semantically specialized *mi*-conjugation doublet *te-* 'say' which "shows no sign of ever having contained a diphthong".

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I am convinced that there is a link with the so-called aorist passives in *-i*, which as here, are more adverbial(or even adjectival) than verbal "passives".

i; but of course we cannot derive *dai* 'he places' directly from PIE ***dhē-e*. That would have yielded Hittite **te* or **ti* [...] If we are to cite Hittite verbs by their stems, it is difficult to choose between the various stems of the third class of the *hi*-conjugation. Perhaps the best plan is to choose the stem or stems that seem most characteristic of each verb; e.g. *te-* 'place', *pe(š)-* 'give' [...] At any rate we should no longer cite a secondary stem like *dai-* 'place'" (1927c:225).(I cite the root as *dāi,* after Mallory and Adams (1997:472,506), although I should note that Kronasser (1966:538-539) opts for three forms: *dai-/te-/tiya-*).

Attestation 1st singular present te-iḫ-ḫi

The following citation is an instruction from the Ritual of Anniwiyani[545] (Sturtevant and Bechtel 1935:112,113, with their conventions):

(3.21) *na-aš-ta* ^{GIŠ}BANŠUR *I-NA* É.ŠA(G) *an-da* ***te-iḫ-ḫi***

(3.22) *na-aš-ta* ^{TÚG}*ku-ri-eš-šar kat-ta kán-ga-aḫ-ḫi*

'(21) Next **I set** the table within the house.

(22) Next I hang the strip of cloth (across it)'

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Anniwiyani Ritual (CTH 393)

This is also from the Ritual of Anniwiyani (Sturtevant and Bechtel 1935:114.115):

(4.6) [*nu* NINDA KUR_4.R]A.ḪI.A *pár-ši-ya-aḫ-ḫi na-aš-kán* EGIR-*pa*

(4.7) [^{GIŠ}BANŠUR]-*i* ***te-iḫ-ḫi*** *nu* 9 *e-it-ri* ***te-iḫ-ḫi***

(4.8) [*nu-kan*] KAŠ *pí-ra-an kat-ta* 3-*ŠU ši-pa-an-taḫ-ḫi*

'(6) I break the ordinary loaves, and **I put** them back on the table(?).

(7) And **I place** the nine kinds of food. (8) I pour three libations of beer

in front of (the house?) near by'.

Spellings *te-e-eḫ-ḫé* / *te-e-eḫ-ḫi* are attested in the Ritual for the Royal Couple (Otten 1969:38):

[*p*]*ád-da-ni-i* ***te-e-eḫ-ḫi*** [also *te-e-eḫ-ḫé*] *ne* LUGAL-*aš* SAL-LUGAL-*aš ša [ki-i]t-kar-ša-me-et* ***te-e-eḫ-ḫi*** [also *te-e-eḫ-ḫé*]

'Lege ich in einen Korb und **ich stelle** sie zu Häupten des Königs und der Königin'

Attestation 2nd singular da-it-ti 'you place'/ ta-it-ti 'you place'

(Kronasser 1966:536,538,539,544; Bomhard and Kerns 1994:261; Kimball 1999:230[546] (KBo

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Kimball cites the second and third singular of this verb as examples of strong stem forms of *-ḫi* conjugation diphthongal stems which are derived from a Proto-Anatolian sequence *$*óh_1i$ > *dāi- 'put'.*

III 38 Vs 24))

ANA É.EN.NU.UN *le* ***daitti*** ...

'Do not **put** him in prison...!' (KBo III 28[547] II 14, in HED 5:74)

As with several other *-ḫi* verbs (including *mema-* 'say', *pai-* 'give', *da-* 'take', there are "mixed" or "contaminated 2nd /3rd person forms. For instance, Kronasser (1966:378, 539) cites third singular preterite *daiš* '(s)he put', along with third singular preterite *daišta* '(s)he put' which is identical to second singular preterite *daišta* 'you put' (1966:378).

Attestation 3rd singular *da-a-i*

namma-kan anāḫita ^{DUG}*āḫrušḫiaz* ***dāi*** *n-at-šan* ^{DUG} *ḫuprušḫiya ḫaššī*

parā ***dāi*** *nu memai ānuiš anaḫuēš kelu*

'then he takes morsels from the censer and **places** them in the

tureen on the hearth and says [Hurrian]' (KBo V 1[548] III 17,18, in HED 1:57)

547

Fragments of Anecdotes (Palace Chronicles) (CTH 9)

548

Ritual (Papanikri) (CTH 476)

The following citation is from the Ritual of Alli:

nu-kan aniuraš KIN.ḪI.A *anda* ***dāi***

'**she deposits** ritual gear within' (KUB XXIV 9[549] II 19)

The third singular preterite *da-(-a)-iš* '(s)he put' is heavily attested (KBo III XV 10 III 62, KUB XXXVI 100 [550]Rs. 3 (OH), KBo III 53 L.5 (OH+) (Kimball 1999:230). Whether this element is identical to the IE sigmatic aorist marker is a matter of much dispute (see Hewson and Bubenik (1997) for insights concerning the aspectual and tense significance of the aorist). Burrow's (1955:338) remarks are instructive:

> In Hittite there is no *s*-aorist any more than any other kind of aorist, but there are certain preterite forms in the 2 and 3 singular which have final *-š*: 2sg. *da-a-aš* 'you took', *tarna-a-š* 'you put in', *da-iš* 'you placed', *pa-iš* 'you gave'; 3 sg. *da-a-aš* 'he took', *da-a-iš* 'he placed', *ag-ag-aš* 'he died', etc. These forms consist of the verbal stem enlarged by the suffix *-š* and have no personal ending proper, and beside them there are forms to which the personal terminations have been secondarily added: 2 sg. *da-iš-ta* beside *da-iš*, 3 sg. *na-iš-ta* 'lead' beside *na-i-iš*. These forms are compared to the *s*-aorist of the other IE languages, but it seems unlikely that they are simply remains of a fully developed IE *s*-aorist system. In the first place we have reason to believe that the aorist in general has arisen by specialization out of an undifferentiated preterite, and in this respect Hittite should represent an earlier state of affairs. Furthermore there is some agreement between Hittite

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549 Ritual (Alli) (CTH 402)

550 Zukraši of Aleppo (CTH 15)

> and Tocharian on this point, since the latter language has also a certain type of preterite using an *s*-stem in the 3 sg.: A. präkäs, B. preksa 'he asked', and this coincidence does not seem to be fortuitous. Bearing these considerations in mind we may perhaps rather explain the IE *s*-aorist to be a post-Hittite formation based on an extension to the whole paradigm of an *s*-suffix which was originally restricted to the preterite of certain persons (notably the 3 sg.) of one class of verbs.

Held et al (1987:162) indicate that, given the homonymy of the third singular form(s) *da-a-i* 'he puts, sets up, establishes' and *da-a-i* 'he takes', deciding which verb is meant depends on what the corresponding first person singular form is. If the first person is *te-e-iḫ-ḫi*, as above, then the meaning of *da-a-i* is 'puts, sets up, establishes'; if the first singular is *da-aḫ-ḫi* , the meaning is 'takes'. Lacking this knowledge, the context is the sole arbiter of which meaning is intended. See also Kronasser 1966:376ff for a discussion.

Mallory and Adams (1997:472,506) give the source for the Hittite version of this "widespread and old [...]PIE verb for putting and placing" as < **dheh$_1$-i-ei*. Cognates, as might be expected for such a basic vocabulary item, are many: Greek τίθημι 'I set', Sanskrit *dádhāti* 'puts, places, lays', Avestan *daδāiti* 'puts, brings', Tocharian A and B *tā-* ~ *tās* 'put, lay', Tocharian B *tattaṃ*, various Latin derivatives (from suffix *-dere*) as *ab-dere* 'take away', *crē-dere* 'put one's heart', Old Persian *adā*, Old English *dōn*, and various others. Bomhard and Kerns (1994:261) provide Proto-Nostratic root **diy-/*dey-* 'to throw, cast, put, place', seen in PIE **d$^{[h]}$ey-*C-> **d$^{[h]}$ē-* 'to set, put, place'.

dai appears in several important legal and/or social expressions, including *linkiya kattan dai-* meaning 'put [matters] under oath' (HED 5:94). The Greek expression ὅρκον

τίθημι is a striking parallel of the "shared covenant vocabulary" in the Ancient Near East (see, for instance, Weinfeld 1970, 1973, concerning this shared heritage and its influence throughout the region).

Attested as well are numerous phrases involving 'giving' or 'putting forth' one's hand in a ritual gesture

kišširan 3-ŠU ***pa-a-i***

'he **gives** his hand three times' (KUB XX 88 I 7)

QA-TAM ḫar-na-a-ú-i ***parā dāi***

'She (the woman who is about to give birth), **holds out** her hand over the birth-stool'

(KUB IX 22 34-35, also III 3 = Beckman 1983:92-94)

Often the meaning of 'place hand' is 'exert power', used of a king or a divine being:

L]UGAL-*uš tūwaš QATAM* ***dā***[*i*

'The king **places** his hand from afar' (KBo XXX 9[551] III 4, in HED 4:160)

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This text is discussed in a recent (2002) work by Detlev Groddek. *Hethitische Texte in Transkription: KBo 30. Dresdner Beiträge zur Hethitologie, 2.* Dresden: Verlag der TU Dresden. I have not seen this text, and have not included it in my bibliography.

tankuwaya-wa-ta [*utn*]*ē keššat-ta* ***te-iḫ-ḫi***

'the dark lands **I place** thee in thy hand' (KBo III 16[552]Rs. 6-7)

The following citation is from the Ritual of Alli (CTH 402):

nu-kan aniuraš KIN.ḪI.A ***anda dāi***

'**she deposits** ritual gear within' (KUB XXIV 9 II 19)

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Naram-Sin in Anatolia (CTH 311)

#107. *taištāi-* 'load'

Kronasser (1966:551) tentatively analyses this verb as a derivative (with durative/iterative suffix *-šk-*) from *dāi* 'place, put', with the clear meaning 'keep putting' (something somewhere). The phonology would be complicated, though. In most cases, Hittite *-šk-* assimilates either to *-šš-* or *-st-* (Kronasser 1966:551) (but Kimball 1999:443 denies the former), which would provide the stem *tai-št* (< *dāi-* + *-šk-*). Melchert (1994:166) takes it from there, indicating that "a dental stop is lost between */s/ and either */t/ or */ts/, citing **taist-ti-*'burden' > **taist-tsi-* > *taišzi-* (cf. *taištā(i)-* 'load').

Attestation 3rd singular present ta-a-iš-ta[-i

ták-ku) ^{GIŠ}MAR.GÍD.DA$^{ḪI.A}$ *ku-iš-ki* ***ta-a-iš-ta***[(***-i*** *ta*) A.ŠÀ-i)š?-ši?) *tar-na-i*]
ta ta-a-i-e-iz-zi ku-i[(*š-ki*) 3 GÍN KÙ.BABBAR)] *pa-a-i*

'If anyone **loads** carts and leaves them (in the field) and
somebody steals them, [the thief] pays three shekels of silver'.

(Laws, Table II, § 21 (4)-(7), in Friedrich 1971:66)

Oettinger (1979:476) and Kronasser 1966:546) list this as a *-ḫi* verb. Both cite the Middle

Hittite form given below; also the OH (copy) participle *ta-a-iš-ti-i̯a-an* (KBo X 2[553] iii 12).

I believe the two verbs, *-ḫi* verb *ta-a-iš-ta-i* 'puts repeatedly' and *-mi* verb *ta-i-az-zi*[554] (scribal variations *da-i-ya-zi, ta/da-(a-)i-e-iz-zi, ta-(a-)i-ya-zi, ta-ya-az-zi*) 'accept from', 'rob' are related, ultimately from the same root. The dental stop *-t-* won't delete, except when the *-mi* verb second singular ending *ti* is added to the iterative stem *ta-a-i-št-*. Then, in the environment of *s* and *-t*, the *-t-* (assimilated from the *-k-*) deletes, giving *ta-a-i-š-ti,* which affricates to *ta-a-i-š-zi,*

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The Annals = Acts of Ḫattušili I (CTH 4) (= Melchert 1978).

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Examples of *-mi* verb 3rd singular variations from the Laws (in Sturtevant and Bechtel (1935:214,220)) :

1. 19 (1.46) ta-a-i-iz-zi 'steals'
2. 20 (1.50) da-a-i-iz-zi 'steals'
3. 57 (3.26) ta-ya-az-zi 'steals'

#108. *dākk-* 'is the same as'

Mallory and Adams (1997:564) identify the IE verb underlying this Hittite verb as **dek̑-* 'take, accept graciously or properly', one of several IE verbs involving reciprocity. In the case of **dek̑-*, one of the several IE verbs for 'taking', the denotation is "social" taking. They add that this lexeme "was apparently the word for an important concept of social intercourse, whether between person and person or person and god, emphasizing the proper manner by which gifts and pres[en]tations were given and received". Most likely, Tocharian B *tās-* 'resemble' (Tocharian A *tāsk*) are derivatives from the same root that underlies the Hittite verb (via iterative/durative *-sk-*) (see Jasanoff 1978:25,27).

Kimball (1999:130) suggests that this verb is "perhaps" from perfect **dók̑-e* 'resembles' (< *'takes to'). Cognates include Greek δόκει 'it seems', Latin *decet* 'it is fitting' (< **dek̑- eh$_1$*, essentially a stative), Latin (causative) *docēre* 'teach' (< **dok̑-éye-*). Homeric cognate δέκτο 'took' and δέκομαι 'take' (later, Attic form δέχομαι Frisk 1973:360,373) imply a middle present **dek̑-*to(i), "if these can be derived from an original short vowel subjunctive *dek̑-e/o" (Kimball 1999:130). This is certainly possible, if one assumes the meaning, as in Latin *doceō* as 'teach' = 'let someone accept something'.

Discussing the noun **dek̑es-* 'honour', a derivative from *dek̑-* 'take, accept', Mallory and Adams (1997:271) give the meaning of Greek middle cognate δέκομαι ~ δέχομαι as 'take, accept; receive well or graciously', adding participle δεικνύμενος 'paying homage'.

As well, they add a vast array of cognates, including Armenian *tasanem* (aorist *tesi*) 'see', Sanskrit *daśasyati* 'serves, favours', and various derivatives which mean 'right' (on the favourable side), including Mycenean *de-ki-si-wo* 'right' (Chadwick and Baumbach 1963:183, 261= Greek δεξιός 'on the right side', 'clever', 'skilful'), Latin *dexter* 'right', etc. Sanskrit *dákṣiṇas* would belong here too. This word also provides a clue about the orientation strategies of the Indo-Europeans. This word is related to the direction 'south' as well as the right hand: "in establishing the cardinal directions, they stood facing east with their right hand to the south and their unpropitious left to the north" (Mallory and Adams 1997:485, see also *ibid* 159). Several IE lexemes leave little doubt about the negative qualities of the North: Umbrian has *nertru* 'left hand', Greek νέρτερος 'lower', 'pertaining to the Hades'. The Germanic hell was located in the North: cf. Finnish *Pohjola* 'Northland', *pohja* 'bottom', 'north' (the 'bottom (rather than the top) of the world').

The following attestation is from the Ritual of Zuwi, where, as is common in ritual, the various (usually twelve) body parts are 'matched up'[555]. See Oettinger (1979:426ff) for additional examples and literate concerning this verb, including citations Old Hittite Bo 3263

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On the ritual identity of human and animal parts as it relates to conjury, etc. see Gamkrelidze and Ivanov (1995:717) who note that "early historical Indo-European traditions preserve rituals of animal sacrifice connected with healing rituals for people". Further (718) they say that such stereotyped conjuring formulae such as occur in Hittite involving the listing of or enumerations of the body parts and organs being treated are "extremely archaic and may in part reproduce ancient conjury formulas going back to the Proto-Indo-European era".The listing of body parts and organs in Hittite ritual texts "like those of other Indo-European traditions, may reflect a belief that curing a person involved making him or her whole by successive enumeration of all his or her body parts".

+ I 14 ff, (also KBo XVII 61)

Attestation 3rd singular present da-a-ak-ki/ta-ak-ki (Kronasser 1966:515)

gi-nu-še-ta gi-nu-aš ***da-a-ak-ki*** GÌR^{MEŠ} *ták-kán-zi*

'His knee **matches** the knee, his feet match ...' (KUB XLIII 53[556] I 2,3)

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Ritual of Zuwi (CTH 412.08)

#109. *dala-* 'let be, leave', 'allow'

This verb, of obvious antiquity, has the abstract meaning 'allow' (Kronasser 1966:547). It is most likely composed of a directional preverb *dā-* 'from'/'away'+ root verb *lā(i)-* 'loose' (Oettinger 1979:487, following Eichner[557]). The meaning is thus literally 'release or loose away'= 'let go' > metaphorical 'allow'[558]. Although many of the *-ḫi* verbs show univerbation with directional adpreps (such as *u-* and *pe-*), this is the only example of univerbation with this particular item. The element, however, is of exceptional age and with various links throughout the family: hence, the following slight digression.

It is well known that many of the inflectional elements of PIE were in origin independent adverbial elements of space and time, which became attached to verbal bases, either as (suffixed) post- or as (prefixed) pre-positions[559]. The *hic et nunc* particle *-i* and the

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Oettinger (1979:487) cites the unusual second singular imperative *da-a-la* (cited below), a form which suggested such an analysis.

558

"[A]dpreps could appear before or after their attendant nouns or verbs. When located before, there was a strong tendency in various IE stocks for the adprep + verb combination to fuse into a single unit" (Mallory and Adams 1977:4; see also Hewson and Bubenik's forthcoming (2004) comprehensive monograph on this topic)

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This, of course, is the central argument of this thesis: that the binary voice marking (*-m* vs. *-ḫ*) represents the post-posed, then cliticized version of (still) independent case-marked pronouns "I" ((e>*u*) *k-*) and "me" (*-m*), in other words, direct vs. oblique.

"augment" *a-/e-* 'yonder' are but two of the better-known examples[560]. As well, many have argued that synthetic nominal case forms arose from this same source: adpreps, post-posed and eventually cliticized to their nominal bases.

The adverbial preverb which appears as the first element in this verb may be seen throughout the IE family, as preverb, a postposition, as well as both a nominal and a verbal inflection. As an "adprep" there is a great deal of dialectical differentiation of positioning, meaning and function involving "localising deictic particle" *do ~ *de ~ *dē[561], doubtless owing to the age of the element[562]. While Hittite preverb *dā* has the same "ablative" meaning as does its Celtic and Latin cognate *dē-* 'away', 'from', in other languages, including Hellenic (Mycenaean[563] and Greek), and Indic (Vedic and Avestan), the adprep has the opposite "allative" meaning 'toward', and is postposed. However, there is much variation which I note

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"A widespread feature of Indo-European is the compounding of verbs with prepositional prefixes [...] All these prefixes were to begin with independent adverbs" (Burrow 1955:285, 286).Also Macdonell (1975:425ff) for Vedic adverbials.

561

Mallory and Adams (1997:37) call this "a far western innovation in form and meaning from **de/do* 'toward'". Gamkrelidze and Ivanov (1995:367) refer to such "Italic-Celtic lexical isoglosses"as "particularly revealing in that they are lexico-grammatical in nature, reflecting both grammatical and semantic innovations in a particular dialect area".

562

See Mallory and Adams (1997:37) and Gamkrelidze and Ivanov (1995:367) for cognates, distribution of these isoglosses. Also Buck 1952:350.

563

"The allative use of the *-de* suffix is widespread in the Linear B texts. Much rarer, though of reasonably certain occurrence, is the adverbial suffix *-te* (<-θεν), indicating place 'from which', e.g. *a-po-te-ro-te* = ἀμφοτέρωθεν" (Hooker 1980:63). *-de* may also have deictic function in Linear B, as in *to-sa-de*.

below, again, owing to the age of the element. The following chart shows the opposition:

'away' (ablative)	**'toward' (allative)**	
Old Irish *dí* ~ *de* 'from'	Greek	-δϵ
Latin *dē-* 'from'	Mycenaean	*-de*
Hittite *dā-* 'from'	Avestan	*-da*[564]
	Sanskrit	*-da*

Examples:

Latin *dē-ses* 'lazy, idle' (<**dē-sed-*)	Sanskrit *ta-dā* 'then'[565]
Old Irish *de-ïd* 'lazy', *de-ëss* 'idleness'	Vedic forms in *-tād*[566]

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"The same pronominal *-d* appears in the *-di* of *yádi* 'if' (:O. Pers. *yadiy*, Av. *yeiδi*)"Burrow 1955:279; also Macdonell 1975:425,426 who equates *-di* and *dā*). Burrow notes elsewhere (1955:269) that it is impossible to tell from the Sanskrit evidence whether the dental was voiced or voiceless, but evidence of other languages (Latin *quod*, as well as internal agglutinative evidence (*idám*), indicates a voiced dental.

565

With the same suffixal formative as Lithuanian *kadà, tadà* (Burrow 1955:20,269), and in Hittite *ape-da* 'there'(Mayrhofer I:472). See HED 1:88ff. If this is so, this is very very old: for the first element, Anatolian *apa* (Proto-Anatolian **aba-*, in Lycian *ebi*, Lydian *bi-*, Palaic enclitic *-apa-*) with **api* comparable to Latin *ibī*, "even as *kuwapi* (*kʷo-bhi* resembles Latin *(-c)ubī*). **abi* had the appearance of a dat.-loc.sg. of an **aba-*; the emergence of the latter as a new pronoun stem led to a full paradigm with pronominal declension" (HED 1:90). The Lydian cognate *bi-* "functions as a stressed personal pronoun (besides enclitic *-a-*), as already in Hittite [..] In Lycian there is no deictic opposition, and *ebe-* has moved into an all-purpose slot 'this'".

566

Both nominal (with Vedic ablative case forms, cited in Macdonell 1975:429), or in verbal imperatives, where "the ending is probably in origin the ablative singular of the pronominal stem **to,* used adverbially and attached to the verb stem in its imperative use [...] **bhere*

Latin *in-de* 'thence'[567]	Avestan *vaēsmən-da* 'into the house'
Delphic Ϝοίκα-δε[568] 'from the house'	Greek 'Αθήναζε 'to Athens'
Delphic Ϝοίκ-ω[569] 'from the house'	Greek οἴκα-δε 'to one's home'
Latin *Romād* 'from Rome'	Mycenaean *wo-i-ko-de* 'to the house'
	a-mo-te-jo-na-de 'to the wheelwrights'[570]

Again, it is generally acknowledged that synthetic case arose from an earlier analytic syntax of noun + post-posed item, often adverbial. These examples provide strong evidence for the original identity of the post-posed adverbial or deictic element and the seminal ablative case. Burrow's (1955:232) remarks here concerning the origin of nominal case endings are instructive:

> A special form for the ablative singular, which elsewhere has the same form

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**tōd *bheretōd*" (Buck 1952:303)

567

The first element of this form *in-* is from earlier *im-* an early accusative singular masculine form of the demonstrative pronominal stem *i-*. The element is seen also in Sanskrit accusative singular masculine *im-am* (compare neuter *id-am*) (Buck 1952:224).

568

Frisk (1973 II:361).

569

With Greek -ω and Latin -*ō* both from original ablative singular *-*ōd* (Buck 1952:181), also in Doric adverbs of 'place whence' e.g. ὅπω 'whence' (Buck 1952:349).

570

See Hooker (1980:113) for a long list of place names in Mycenaean documents with the allative suffix *-de* "because they denote places to which wine has been distributed".

as the gen. sg., [from, of course, the meaning 'from, of'] is found only in the declension of thematic stems: *-āt (-ād)* in *vr̥kāt*, etc., Latin *lupō(d)*. This represents the IE state of affairs [...] It is not possible to tell whether the final consonant was originally *d* or *t*. [...] The vowel was of circumflex quality (Lith. *tõ*, Gr. (dial.) τῶδϵ 'from here') indicating contraction [...], and this is reflected by occasional disyllabic scansion in the Veda."

Sihler (1995:251) remarks that this "distinctive" *o*-stem ablative marker, with its final dental which he assumes is an import from the pronouns, must be of a very ancient date: "as it is axiomatic, or nearly so, that pronouns have more elaborate paradigms than nouns, that would mean, paradoxically, that the distinctive abl. ending in **-t* is a pronominal remnant of an ancient ending, probably identical with Hitt. instrumental *-at* and abl. *-az(a)* (< **ati*).

The verb is attested in all three persons:

Attestation 1st person singular present da-a-la-aḫ-ḫi, ta-la-aḫ-ḫi

nan-kán ašanduli anda ***ta-al-aḫ-ḫi*** (also *da-a-la-aḫ-ḫi*)

'and **I allow** him back into the garrison'

(KUB XIII 20 I 11.24[571] in Kronasser 1956:195; 1966:547; also Oettinger 1979:487)

571

Tudḫaliya II's Instructions for the Military (CTH 259)

Attestation 2nd person singular present da-la-at-ti

da-la-at-ti

'**You allow** (the troops?) to return' (Kronasser 1956:195; 1966:547)

Imperative 2nd person singular da-a-la

da-a-la

'**Leave** (the land) in peace!' (Kronasser 1966:547)

This is from the Hittite version of the Gilgameš epic:

ar-ḫa-wa-mu ***da-a-li***

'**Let** me **go**!' (KUB VIII 53[572] iv 22 = Laroche 1971:129)

(*ar-ḫa*) ***da-a-la***

'**Begone**!' (ABoT 65[573] Vs.12)

572

Gilgameš: Hittite language: First Tablet (CTH 341.III)

573

Letter from Tarḫuntišša to Palla (CTH 199)

Attestation 3rd person singular present ta-la-i/da-a-la-a-i/also ta-a-la-i

This broken text is from the Hurrian Song of Kumarbi. It is difficult to know who is speaking to whom. The citation contains both a 3rd singular attestation and the 2nd singular imperative of *dāla*

]x *im-ma*[574] ***da-a-la-a-i***

]*ar-ḫa-wa-ra-an da-a-li*

'...[he] will actually/ indeed **leave** [...]

Abandon him!' (KUB XXXIII 120[575] III 13)

The following is from a medicinal text, and refers to preparation of a medicinal substance: the bud of a certain plant (UD.NI.ŠA^{SAR}) is removed, rinsed with water, and then prepared for infusion, leaving no 'crushed' or 'dried-up-bits' in it:

nu-uš-ši-kán ḫa-a-da-an ḫar-ra-a-an-na-i̯a an-da Ú-UL ***da-a-la-i***

'and **he** does not **leave** any dried-up or crushed [things] inside'

574

Compare Latin *immo* (also *immō*) 'nay, on the contrary' used to contradict or correct a previous utterance.

575

Song of Kumarbi (CTH 344) Translation from Hoffner (1990:42), text in Laroche (1965:45); also in Kronasser 1956:195; 1966:547). See as well Oettinger (1979:487).

(KUB XLIV 63 II 11-12 = StBoT 19:28)

This verb is also attested as a *mi* verb (*dal(iy)a*) (Kronasser 1966:304,547)[576].

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Compare *-ḫi* *dālāi* 'allow' *-mi* *dāl-a-iz-zi* 'allow' ~
tāištāi 'place repeatedly' *tāi-e-iz-zi* 'steal'

Both show evidence of an original derivation from the causative/iterative *-eye/o-*, and a subsequent recycling of the causative *-iya-*in the mi conjugation, with, in the case of 'steal' a change in meaning.

#110. *tariya-* 'become weary', 'tire' (intransitive)

13. Emotion middle (a) 1-participant

Oettinger (1979:474) lists this as a *-ḫi* verb, despite its attestation only in first person singular preterite *ta-ri-iḫ-ḫu-un* (or *ta-ri-aḫ-ḫu-un* 'I am exhausted'/'have exhausted myself' Kronasser 1966:489) and the 2nd singular "preterite present" form below. It is also attested with *-mi* conjugation forms, and, according to Oettinger, is not to be connected with either *$terh_2$- 'get through' (*durchdringen*) or *$derh_2$- 'work' (*arbeiten*). See Kronasser (1966:549) who dismisses any connection with "medial" verb *tar-ra-aḫ-ḫa-ri* 'I can', *tar-* 'speak', or *tarranu*, with unclear meaning (Kronasser 1966:459).

tar-ra-aḫ-ḫa-ri, with 1st person singular with suffix *-ri* is obviously a later form (not original). It appears to be a factitive from *tarra-* a verb of unknown meaning, which is possibly from *tar-* 'overcome' (Kronasser 1966:459), on the argument that the geminate is meaningful and has iterative force (the effort to 'keep overcoming' would be enough to 'tire' one). The meaning of the original (*-hi* verb) factitive *tar-ra-aḫ-ḫa* would be 'I cause to keep overcoming' which COULD have a meaning 'be able', as a "middle voice" verb: *tar-ra-aḫ-ḫa* 'I have caused (myself) to keep overcoming' = 'I am able' = 'I can'.

Attestation 2nd singular "preterite present" tar-ra-at-ta

Ú-UL ***tar-ra-at-ta***

'Don't **wear yourself out**'

As with many of these preterite presents, the original sense seems to have been not tense (preterite) but aspectual ("retrospective" in Hewson and Bubenik's (1997) terms). An aspectual meaning may be assigned to many such forms, such as the ancient legal pronouncement 'You have become a wolf' (see Weitenberg 1991) : *z]i-ik-wa* UR.BAR.RA *ki-ša-at*. This clearly means that, because of something you did, 'you have become = are now a wolf'> socially exiled from the group. It does not mean 'You became a wolf'. It is NOT a preterite.

#111. *tarna-* 'let go'; 'launch/release (as birds)'

[Ritual use]

This verb is used to describe the release of birds, various animals, and metaphorical evils during certain rituals and ceremonies. It appears with the "old" ending *-e* [577], as in these citation(s), both from the Ritual for the Royal Couple:

Attestation 1st singular present tar-na-aḫ-ḫé/i

t-uš alkištān ***tar-na-aḫ-ḫé***

'**I launch** these [birds] onto a branch'

(KBo XVII 1[578] IV 37= StBoT 8:38, also in HED 1:36)

ta nam-ma ^{MUŠEN}*ḫā-a-ra-na-an ne-e-pí-ša* ***tar-na-aḫ-ḫi***[579]

a-ap-pa-an-an-da-ma-aš-še ke-e me-e-ma-aḫ-ḫi

'then I **launch** the eagle to the sky and in his wake I say this...'

577

More often with the older ending than the new. See Otten and Souček (1969:77).

578

Ritual for the Royal Couple (CTH 416)

579

Kronasser (1966:564) cites alternative *tarnaḫḫé*.

(KBo XVII 1 III 3-4 = StBoT 8:30; also Neu 1980:9= StBoT 25))

All three persons of this verb are attested in the Hittite Birth Rituals. The first person singular is found on one broken piece of a two-tablet Birth Ritual designed to remove evils from the environs of the newborn. The (missing) object of the verb is apparently an animal employed as a scapegoat (Beckman 1983:204)[580].

a]*r-ḫa* ***tar-na-aḫ-ḫi*** [KBo XXIV 17 obv.1]

'[...] **I loos**[**e** ...]'

The intent of the next citation is again to ward off evil from the new born. The addressee is the Sun-Goddess of Earth, who is exhorted to seize various evils and not let them loose again, thus assuring the new-born child "life, fitness and long years".

Attestation 2nd singular present tar-na-ti

ar-ḫa li-]*e* ***tar-na-ti***

'**you** shall [no]t let (them) **loose** (again)!'

(KBo XVII 60 Rev 10', in Beckman 1983:60)]

580

See West (1997:52ff), Burkert (1985:82-84) on the very common use of scapegoats in purification rituals throughout the ancient Near East.

This 'injunctive-type' usage with *li-e* is very similar to another text where the intent is once again to guard against evil. The addressee is, in this case, a tallow dog, whose role is apparently to guard the door and prevent harm from entering.

nu-wa-kán UD.KAM-*az ma-aḫ-ḫa-an*

da-ma-a-in-an-tu-uḫ-ša-an pár-na-aš an-da Ú-UL tar-na-ši

ki-e-ti-ma-wa-kán GI_6*-an-ti kal-la-ar-ut-tar an-da li-e* ***tar-na-at-ti***

'And as by day you do not admit a stranger into the house,

(likewise) tonight may **you** not **admit** an evil matter!'

(KBo IV 2[581] i 24-26, cited in Beckman 1983:171)

The next citation lists the activities of a midwife whose job it is to relieve the difficulties experienced by the woman giving birth. Beckman (1983:78) suggests that it is best described as a "parturition ritual". It could also (to my mind) pass as a medical text (speaking as a woman who has benefited greatly from relief from labour 'difficulties'). Most of the other third singular verbs which appear in this ritual are also *-ḫi* verbs (or restored by Beckman as such): *šu-u*[*n-na-i* 'she fills', *ḫu-u-w*[*a-a-i* 'she throws', *da-a-i* 'she takes', *la-ḫu-u-wa-i* 'she pours', *me-m*[*a-i*] 'she speaks'.

581

Ḫuwarlu's Ritual (CTH 398)

Attestation 3rd singular present tar-na-i

nu ^{GI}A.DA.GUR$^{HI.A}$ ***tar-na-i***

'and drinking straws **she sets**...]' (KUB XXXIII 67[a] Fa I 8' cited in Beckman 1983:72)

There is a clear medical usage involving this verb is the following citation which refers to bloodletting (actually, twice in quick succession. I cite the second), a practice followed in the Old Hittite period.

iš-ḫar ar-ḫa ***tar-na-i***

'he **lets** blood out'

(KUB XLIV 63 II 8'ff., in StBoT 19:28, also in Gamkrelidze and Ivanov 1995:717)

The third person singular form appears in a description of a medical treatment (Burde, *Medizinische Texte* = StBoT:18,24), in the phrase *katta [...] tarnai*, paired with fellow *-ḫi* verb *yaya-* (Burde's transcription *i̯a-i̯a-a-i*) (of uncertain meaning and etymology).

nam-ma i̯a-i̯a-a-i ***kat-ta-i̯a-an-za-kan tar-na-i***

'He ? and **lets** him (viz. the patient) **down** (viz. at the end of a treatment)'

(KUB XLIV 61 Vs. 9, StBoT 19:18, also in Puhvel HED 2:504)

x x[ ]x *kán* ***kat-ta tar-na-i*** *i̯a-i̯a-*[

'he lets him down and ?' (KBo 76 13', in STBoT 19:24)

It is also attested in a legal (?) phrase[582] from the Laws. The following citation (from Sturtevant and Bechtel 1935: 218,219) has two possible meanings (discussed below).

(2.23) *ták-ku* ERUM-*iš A-NA* SAL-*TIM ku-ú-ša-ta be-da-a-iz-*[*z*]*i na-a*[*n-z*]*a*

(2.24) *A-NA* DAM-*ŠU da-a-i na-an-kán pa-ra-a Ú-UL ku-iš-ki* ***tar-na-i***

'If a slave brings the bride-price for a woman, and (tries to) take her

for his wife, no **one surrenders** (?) her'

Sturtevant's commentary (1935:226) indicates that his interpretation 'surrenders' is far from certain, and mentions co-author Bechtel's suggestion 'no one releases her (from the marriage)'. He notes that Götze had considered the phrase to mean 'enslave', but the contextual evidence suggests the opposite meaning 'lets her go'. The meaning 'surrenders' would indicate that the community is protecting the party from being coerced into a union which may be against their will. This is certainly not out of the question.

The root **tr-* that ultimately underlies this Hittite verb is of extreme antiquity. Several scholars have connected the primitive lexical root **tr-* with the number three (in the

582

The same phrase *pa-ra-a [...] tar-na-i* appears in Laws 36 (2.28).

sense of 'going beyond' or 'transcending' the first two numbers), reinforcing its extremely archaic status. Sihler (1995:411) provides tantalizing evidence that **trey-*/**tri-* 'three' is itself a derived form: a combination of **tr-* and "stem forming element **-ey-/-i-*. He suggests Mycenaean *to-pe-zo*[583] Greek τράπεζα 'table' "the only evidence for such a primitive". Although the first morpheme is usually associated with the number four, Sihler (*ibid*) says this traditionally posited source makes no sense, as the earliest tables would have had three legs, not four, as four-legged tables are practical only on completely level floors. Rather, the form reconstructs "straightforwardly to **tr̥-ped-iH*$_2$ with the '3' primitive. It is the kind of term which furthermore may convincingly be posited for a very early period of PIE material culture".

Mallory and Adams (1997:481) give the root source as **TerK-* 'release, allow', which explains the Tocharian A, B *tärk-* (present *tärknā*), and suggests a preform **tarkna-* for Hittite and indicate that "Though attested only in Hittite and Tocharian, the pattern of those attestations assures PIE status". Hittite phonological processes would tend to do away with the root final velar in the course of the derivation involving the nasal suffix: according to Melchert (1994:167), the velar stop deletes in the middle of clusters involving sonorants, thus **tr̥KnáH-* 'release' > **tarKnā-* > *tarna.*

583

A dual form ('two tables') (nominative singular feminine *to-pe-za* is also attested), which appears at Pylos in lists of furniture (Chadwick and Baumbach (1963:250) who indicate that the *or* of the form *torpeza, -zō* 'table(s)' is from the syllabic <**r̥*. See also Hooker (1980:56) who discusses the dual ending of what he calls this "surprising" form), and, critically, Ventris and Chadwick (1956:410) who cite nominative singular feminine *to-pe-za* 'table' [τράπεζα Od. xvii, 333+, Boeot. τρέπεδδα. Probably from **(q^u)tr̥-pedja..*][sic, as above].

Given that the nasal suffix can be a factitive, i.e., can add an argument, turning an adjective, noun, etc into a verb, I suggest that this verb is derived from the archaic adprep *$terh_2$- 'across' >**ter*-, **tr̥*- 'further' with the meaning 'cause to go further' (see also Kimball 1999:239, with full support for such an analysis). Kronasser (1966:564) certainly suggests that this is a possibility: under the heading of causative/factitives in *-na-* he says that *tarna* is an old causative from **ter*- (Altes Kausativum von **ter*- „den Standort wechseln" in ai. *tarati* "setzt über". Sanskrit root *tr̥* (whence *tarati*) is almost certainly related to the adprep. The meanings of *tr̥* are numerous, and range from a literal 'going (or crossing) over', often involving water, to the more metaphorical 'get through (something)' , 'surpass', 'attain an end', 'study to the end' (Monier-Williams 1998:454), Mayrhofer (I:480). Thus, this morpheme would be cognate with some of the oldest elements in IE vocabulary: Vedic *tr̥* (in *tar-a* 'overcoming; 'ferryboat') Latin *trāns* 'across', Avestan *tarō* 'over, to' Gothic *þairh*- 'through', and appearing as the second morpheme in Greek νέκ-ταρ ('death' + overcoming/surpassing'). Mallory and Adams (1997:4) suggest that the Germanic family cognates derive from the root + a velar extension, thus *$terh_2$-k^we ~ $tr̥h_2$-k^we. It is possible thus to explain the Hittite form without invoking the *-K* suffix: the Tocharian forms, as do the Germanic, would show the characterised root in *-K*; Hittite, Indic and Italic forms, the uncharacterised and/or root extended by *-na-*.

Other Sanskrit forms derived from this root are instructive here. From the root *tr̥* 'cross' are formed verbs *tūrv*- 'to overcome', with present stem extension in *-va* (*-v*- extension also in such roots as *jīv*- 'live' (simple root appears in *gáya* 'belongings') Burrow

(1955:289), *trā-* 'rescue' (= 'cause to cross over'?) (with extension aH/H, explaining the long vowel (Burrow 1955:109, 290) and also very suggestive of cognate status with Hittite factitive extension *-aḫ(ḫ)-* with the same meaning), agent noun with *-u-* suffix *tarutár* 'conquerer' (Burrow 1955:189), and the truly archaic *tāri* an old neuter action noun in *-i*, incorporated into the verbal system as so-called "passive" aorists of the third person singular (see Burrow 1955:177 for others). I agree with Burrow's suggestion (see 1955:359 for his reasoning) that the root lexeme originally ended in a laryngeal **terH-* (*táritum* < **tarH-itum*).[584] It was this type of root (i.e., ending in a final laryngeal) that were formerly identified

584

Burrow (1955:104-105) discusses the old and "faulty analysis" of Sanskrit words which led to erroneous reconstructions involving schwa (ə), the so-called and misnamed "disyllabic roots". I quote at length, since this is so important and still controversial, even now:

> If this *ə* had been confined to the comparatively few words in which Sanskrit *i* appeared to correspond to *a* in the other languages, it would never have acquired very great importance in Indo-European theory. It was due to its becoming a basic element in the theories of apophony that it acquired such importance in the traditional theory of Indo-European. In the comparative dictionaries this *ə*, so insecurely founded, appears in the utmost profusion in IE reconstructions, particularly in the case of so-called disyllabic roots. Skt. *i* is also suffixal when it appears after such roots and the H which constituted the final element of the root is elided (*táritum* < **tarH-itum*). The theory of apophony was further complicated by the invention of original long diphthongs, possessing a weak grade *əi* which was held to have developed into *ī* (sometimes into *-ay-*), but there is nothing in the facts to justify the assumption of such long diphthongs or of the weak grades which are supposed to be developed from them. In addition a second 'shwa' , supposed to be a reduced grade of the short vowels was introduced by certain authorities. As a result the theory of apophony, which, as will be seen below, is really of the utmost simplicity, became extraordinarily complicated. With the discovery of Hittite *ḫ*, and the subsequent rise to popularity of the laryngeal theory, the main features of the old theory were transferred to the new. IE H was identified with the old shwa (*ə*), and it was believed that all

as "disyllabic bases". See footnote 8 for Burrow's explanation. Sihler (1995:124) says, in essence, the same thing as argued in Burrow 1955:

> The term *disyllabic root* (sometimes *disyllabic base*) reflects the long-held view that roots like *génə-* 'beget' or **temə-* 'cut' (as then written) had two vowels, unlike the typical PIE root. Although the term is still used, it has been rendered inappropriate by the reanalysis of **ə* as a syllabic consonant –a root like **génH$_1$-* being no more 'disyllabic' than a root like **serp-* 'creep'.

Sihler (*ibid*) provides an analysis of the *set* roots of Sanskrit which differs from Burrow's: "Roots with long vowels are sometimes called *heavy bases* (or *roots*); these

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> its varieties could function in a vocalic as well as a consonantal function like the liquids and nasals. It has even been common to use the sign *ə* to indicate IE H in its consonantal function (*ə$_1$, ə$_2$, ə$_3$*), and the whole presentation of the laryngeal theory has continued to be vitiated by the original error of the invention of 'shwa'. Needless to say the objections that apply to 'shwa' in the old form of the theory apply to it with equal force in the new. There is no satisfactory evidence to show that H in any of its varieties could function as a vowel and it is certainly never represented in Sanskrit by *i*.

Burrow is mistaken on two counts:

1. The laryngeals, though primarily consonantal, did have vocalic allophones, depending on syllabic structure, accent, etc.
2. The second laryngeal -h_2 owing to distinctive formant structure (see Colarusso 1997:125) can produce "apparently contradictory laryngeal effects": *a*-colouring as well as the "impression of a high-front vowel".

include roots like *$dh\bar{e}$-, now interpreted as *$dheH_1$-, and also the *set* or disyllabic roots, because the zero grades of the latter have long vowels in Sanskrit". Thus, the zero grade of *tar-* 'cross' is *$t\bar{r}$-* (cf. Vedic *$t\bar{r}th\acute{a}m$* 'passage', 'ford'[585] (Mayrhofer (I:507) (cf also Vedic *tirás* 'through, across', what Sihler (1995:95) terms the "functional equivalent of L[atin] *$tr\bar{a}ns$*, also from the root *$terh_2$-".

Kronasser (1956:198) discusses the nasal infix in this root, from *$-n\bar{a}$-/$-n\text{ə}$, and cites cognate Tocharian B *tarkatsi, tärkana* 'release', 'let go'. Melchert (1994:81) as well indicates that there are several functions of nasal suffixes, and thus, competing forms with these suffixes are not unusual. Often, the nasal has a causative function; often, apparently as here, it is simply a transitivising device (essentially a factitive).

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Puhvel (p.c.) suggests perhaps rather Lithuanian *tìltas* 'bridge'.

#112. *dašuwaḫ(ḫ)*- 'blind'

[Factitive (denotes purposeful action)]

This is another of the verbs with suffix *-aḫ(ḫ)* which "forms from adjectives verbs of the *-hi* conjugation, meaning 'cause to be what the adjective denotes'" (Sturtevant 1933:241). Both Kronasser (1966:426) and Sturtevant note the morphologically ambiguous character of the 3rd singular form of verbs with suffix *-aḫḫ-*, an ambiguity which may have contributed to the "rise" of *mi*-conjugation forms at the expense of the *-ḫi* forms:

> The pres[ent] 2 s[ingular] and 3 s[ingular of derivatives in *ah* is usually of the *hi-* conjugation, and so is the pret[erite 3 s[ingular] very frequently. The pres[ent] 1 s[ingular] always goes according to the *mi-* conjugation and the pres[ent] and pret[erite] 3 s[ingular] sometimes do the same. Other forms may be interpreted as belonging to either conjugation. Since the drift in Hittite is toward the *mi-* conjugation, we must conclude that the derivative verbs in *ah* were originally perfects [...] The fact that the *hi*-conjugation 1 s[ingular] ******italawahi* was indistinguishable from the 3 s[ingular] probably helped its newer rival to victory (Sturtevant 1933:242).

This verb appears in the 'archaic' legal formula of the Code with fellow *-ḫi* verb *la-a-ki* (which see)

(1.19) *ták-ku* ERUM-*an na-aš-ma* GÌM-*an ku-iš-ki* ***da-šu-wa-aḫ-ḫi***

na-aš-ma [KAxUD-Š]U *la-a-ki* (1.20) *10 ZU KUBABBAR pa-a-i*

2. 424 (682)

'If anyone **blinds** a male or female slave

or knocks out his teeth, he pays ten half-shekels of silver...'

(Sturtevant and Bechtel1935:212-213)

The etymon which underlies *daš* (*u*)*w-aḫ*(*ḫ*), IE **das*- 'lack', is worth a comment. The root is seen (possibly) in Norwegian (dialectal) *tasa* 'unravel' (Mayrhofer 1963:28; Mallory and Adams 1997:343). However, the Sanskrit cognate is not *parasmaipada dásyati* 'suffers want, becomes exhausted' as they suggest, but the *ātmanepada* form *das* - (originally (?) *bhū gaṇa,* subsequently *div- gaṇa*) whose participle in the Vedas is only *ātmanepada* (Monier-Williams 1998 [1899]:473).[586] For more discussion of this verb, see Oettinger (1979:157,316,554).

tuvám tsārī́ **dásamāno** bhágam īṭṭe takvavī́ye [RV 1.134.5 d,e][587]

'To thee the **weary** coward prays for luck, that he may speed away'

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Monier-Williams cites only the *ātmanepada* causative form, but see Macdonell (1975:393) who notes that in the Vedas, only a third of the 150 verbs with "causative" morphology have a causative meaning. *Das-* or *dās-* 'waste away' may have causative meaning in *parasmaipada* forms, *das-aya, dās-aya* 'exhaust' (= 'cause to waste away'), or in the *ātmanepada* may reflects the iterative meaning : 'be in a repeated state of wasting away' (cf *patáyati* 'flies about' > *páta-ti* 'flies').

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This is the same hymn which contains the rare archaisms *duhra, duhrata* 'she/they ,milked'.

The semantic link between 'suffering want' and 'blindness' may be two-fold: either blindness was perceived as 'want' or 'lack' of the ultimate sense, or, blindness inhibits one from obtaining for oneself the necessities of life.

#113. *dušk-* 'rejoice'

13. Emotion middle

dušk- is probably best analysed as from PIE **teus-* 'be happy' extended by iterative/durative extension *-sk-*, already in PIE (**tus-ske/o* as in Mallory and Adams (1997:255). The root lexeme is also seen in Hittite abstract noun *dušgaratar* 'joy'. The obvious cognate is Sanskrit *bhū gaṇa tuś- tośate*[588] 'be satisfied or pleased with', and also (pace Macdonell 1975:394) with a causative-type meaning, 'make happy, appease' (with *ātmanepada*-only participle *tóśamāna*) Monier-Williams (1998:452). This is the sense attested in the RV, where the *bhū gaṇa* verb *tuś* seems to mean 'reward', 'make happy':

satrā́ tuvám puruṣṭutam̐ éko vṛtrā́ṇi tośase

'Ever alone, O highly-praised, thou sendest Vṛtras to their rest/reward'

[RV 8.15.11a,b] [also at RV 8.50.5a,b]

Monier-Williams considers this verb identical to *div gaṇa tuṣyati* which shows many signs of being later: derivationally it is secondary to the *bhū gaṇa* simplex; unlike the latter, it is

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Not to be confused with *bhū gaṇa tuś-* 'drip', 'trickle'. Note the constant violations of the RUKI rule: such violations are often indicative of a lexeme of great antiquity.

not attested in the RV, but appears only in later literature. Only the *bhū gaṇa* verb can be considered to derive directly from the (uncharacterized) PIE **teus-* 'be happy', as above.

It is interesting to note that Kronasser (1966:521) indicates that the meaning of this verb may be both transitive: 'to please (someone)' (*erfreuen*) and intransitive: 'to take pleasure in something' (*sich (er)freuen*). In this regard, consider the following:

1 The transitive/causative sense seems to be original in Sanskrit (as in the RV attestations involving the uncharacterized *bhū gaṇa* verb *tuś-* 'please (someone)', 'make happy'. The *div gaṇa* form shows signs of being later.

2 Although there are no OH original attestations of this verb without the *-za* particle to my knowledge, I suspect that the "intransitive" or reflexive sense (reinforced, as was common, by the particle *-za*) was later, parallelling the (later) incorporation of the Sanskrit verb into the *div gaṇa*. See Boley (1993:27ff) for a discussion of some of the complexities associated with this verb and its use with and without *-za*.)

The verb appears regularly with forms in *-ri* , and attested *-mi* forms.

Attestation 2nd singular present du-uš-kat-ti

nu-za-kán [...] para ***du-uš-kat-ti***

2. 428 (686)

'and **you** (deity) you **will rejoice** (and be merciful)' (Kronasser (1966:449,521)

Attestation 3rd singular present du-uš-ga-i (Kronasser 1966:305, 521)

#114. *duwarna-* 'break'

duwarna- contains the causative/factitive extension suffix *-na-*, as do several other *-ḫi* verbs (see Kronasser 1966:559ff). Mallory and Adams (1997:258) suggest that the Hittite verb is extended from root **dhu̯erh$_x$-* 'harm' (which itself may be an enlargement of **dhu̯er-* 'pierce'), cognate with Sanskrit *dhū́rvati* 'injures, causes to fall', *dhvárati* 'bends, causes to fall, hurts' (See also Mayrhofer II:110,118). If this is indeed the case, "then we have evidence of great antiquity in IE" (Mallory and Adams 1997:424). Bomhard and Kerns (1994:323) link Proto-Nostratic root **d'aw-* 'split, prick, pierce, penetrate', which appears in an extended form (in *-ar-/ ə́r-*, as here), in Indo-European and Kartvelian, with a meaning 'to stab, to pierce, to penetrate', in nouns having the meaning 'any pointed object, such as a spike, prong, etc. (thus Sanskrit *dhúr* 'yoke, pole, shaft of carriage', Greek τύρχη 'a two-pronged fork', Armenian *durk* 'dagger'). Gamkrelidze and Ivanov (1995:115), after Mayrhofer (II:119), note the cognate series Sanskrit *dhvárati* 'harms', Hittite *du-wa-ar-an-* 'break, destroy', Latin *fraus* 'deception', *frūstra* 'mistakenly' and suggest that such items are evidence for a "labialized dental order" of PIE stops, **d^{ho}*, **t^{ho}* (see Gamkrelidze and Ivanov for several other pieces of evidence for such a series, including Sanskrit *tvā́m* 'you', Hittite *te*, Greek *sé*, Sanskrit *tvác-* (fem.) 'hide, pelt', Greek σάκος ~ σάκκος 'shield' (made of leather), Hittite *tuekka-* 'body, being' (cf *tuekkant-* 'corporation' in the Hittite Laws), as well as numerous daughters of PIE **d^{h}wer-/d^{h}ur-* 'door', including Sanskrit *dhvā́raḥ* 'gate, door',

Latin *foras* 'outside' (i.e., 'outdoors'), *forēs* 'leaves of a door/double door', Greek θύρα, etc.)[589].

Attestation	1st singular	du-wa-ar-na-aḫ-ḫi	(KBo XI 19[590] Vs. 10, in Kronasser 1966:565)

Attestation	3rd singular	du-wa-ar-na-i du-wa-ar-na-(a)-i	(KUB XXIV 9[591] II 43, 11 II 22, in Kronasser 1966:565)

Kronasser (ibid) indicates that this verb often occurs with *arḫa-*, and notes that there are related *-mi* forms in *-iya-* (cf. Luwian *lawarriya* (HED 5:67)).

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See Sihler (1995:148) for interesting speculations about these last forms. He suggests the PIE etymon is a dual tantum **dhwor-* with "fossilized dual" forms reanalyzed as singulars in Sanskrit, Greek and Latin.

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Hurrian: Ritual of Šalašu (CTH 788)

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Ritual of Alli (CTH 402)

#115. *unna-* 'drive hither'

The first element in this verb is the directional preverb *u-* 'hither'. The base is the verb *nai-* 'drive', 'lead' (thus Kronasser 1956:198; 1966:122,158,176,547,565,566,567,574; Friedrich 1960:104). (Formed from the opposite directional preverb *pe-* is the verb *penna-* 'drive (thither)'.) The verb is attested in all three persons.

Attestation 1st person singular u-un-na-aḫ-ḫi

u-un-na-aḫ-ḫi

'I send' (KUB XXIII 87[592] 20)

Attestation 2nd person singular u-un-na-at-ti

-uš- + kán para ***u-un-na-at-ti***

'**you drive** (the bird) out (and set him free)' (Kronasser 1966:567)

unna can appear with or without the particle *kán* in Old Hittite (thus Josephson

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Fragments of letters in Hittite (CTH 209)

1972:92,93). It is used without in the following example from the Laws (Table I §71 63,64):

Attestation 3rd singular u-un-na-i

ták-ku GUD-*un* ANŠU.KUR.RA ANŠU.GÌR.NUN.NA-*an ku-iš-ki*

ú-e-mi-ya-zi na-an LUGAL-*aš a-aš-ka* ***u-un-na-i***

'If someone finds a cow, a horse (or) a mule, **he drives** it to the King's gate'

(KBo VI 3 III 63 in Friedrich 1971:40)

A "mixed" preterite is attested *unnešta* 'he drove' (KBo XIV 15[593] II 12)

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Deeds of Šuppiluliuma 29-43: V. Fragments of subsequent tablets (CTH 40)

#116. *uppa-* 'send (here)', 'fetch'

The first element in this verb is directional preverb *u-* 'hither' (< PA **aw-páy-*[594]) (thus Sturtevant 1933:214, *up-pa-a-i*), an element which appears as well in the verbs *unna* 'drive/lead hither', *upai* 'raise' and *uda* 'bring (here)', which see.

The first singular is attested in the Birth Rituals, not as part of the actual ritual text, but rather in a "footnote", where either the scribe or, more likely, the mid-wife herself, can't remember the actual words of a certain ritual "by heart", and must fetch the written document from Kizzuwatna:

Attestation 1st singular present up-pa-aḫ-ḫi (Kronasser 1966:547)

[(*n*)*a-aš* ^{GIŠ}*kur-ta-aš i-y*]*a-an-za na-aš* ^{URU}*Ki-iz-zu-wa-at-na nu-mu-kán*

EZEN KA x U-*it* [*Ú-UL kar-ta n*]*a-an a-pí-e-iz* ***up-pa-aḫ-ḫi***

'[it (=the ritual) is writ]ten up [as a *kurta*-tablet]. And it is from Kizzuwatna.

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Thus Melchert (1994:104). The ultimate source is old IE preverb/adverb **h*$_4$*eu-* 'away (from)' (Mallory and Adams 1997:37), in Old Irish *ō* 'from', Latin *au-* in *au-ferō* 'carry away', Latvian and Lithuanian *au-* 'away' Avestan *ava-* 'down', 'off', Sanskrit *áva* 'from', and in Hittite as here, *u-* 'hither' as well as *awan* 'away' (an "adverb strengthening the notion of motion or direction"). It should be noted that Puhvel (HED 1:245, from whom the explanation of *awan* is taken) considers the "much-cited" connection of *awan* and prefix *we-/u-* "less probable" than *awan*'s relation to Lithuanian *aurè* "much as *duwan* 'hither' parallels Gk. δεῦρο 'hither'".

And I [do not know] the festival orally [by heart, b]ut (rather) **I will fetch** it from there'. (KBo XVII 65[595] obv. 38,39 Beckman 1983:136)

Here, it is troops which are being relocated:

up-pa-aḫ-ḫi

'**I send/fetch** [the troops] here' (KBo IX 82[596] Rs, KUB XIII 3[597] III 16, in Kronasser 1966:547)

Attestation 2nd singular present up-pa-at-ti

up-pa-at-ti

'**You deliver** (rebels) out of...' (KBo X 12[598] III 33, in Kronasser 1966:547)

Attestation 3rd singular present up-pa-a-i (VBoT VIII 81 in Oettinger 1971:489)

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595 When a Woman Conceives (CTH 489)

596 Letter from Maša to his Lord (CTH 197)

597 Palace servants (CTH 265)

598 Treaty with Aziru of Amurru: II. Hittite version (CTH 49). This is a relatively late text (Šuppliluliuma I ?).

(Kronasser 1966:289,547)

The *-š* preterite is attested: *uppaš* (Kronasser 1966:378)

#117. *uda-* 'bring'

As with the previous verbs, preverb *u-* is the first element in this verb. The second formative is *da-* 'take', giving the combined meaning 'take hither' = 'bring' (Oettinger 1971:501). It is attested in the first and third person singular present (preterite in the Anitta text). Kronasser (1966:382) compares *udaḫḫi* 'I bring' to Greek deponent (?) middle κομίζομαι 'get/carry back'.

Attestation 1st singular present ú-da-aḫ-ḫi

ú-da-aḫ-ḫi

'I will bring' [them (booty and prisoners) here] (KBo III 3[599] i 23 in Kronasser 1966:535)

Attestation 3rd singular present

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Arbitration about Barqa; Treaty with Duppi-Tešub of Amurru (CTH 63) See Bryce (1998:216, with additional references) for discussion of this treaty and the political situation which gave rise to it. Duppi-Tešub does not seem to have been an upstanding citizen: he is rumoured to have sold his father Aziru to the Egyptians for a sizeable amount of gold.

The third singular appears in a ritual context:

t-ašta ^{NINDA} *tūnik* [...] ^{NINDA} *kuuittann-a par*[*ā* ...] ***udai***

'**brings** forth t. and k. (two types of bread)' (KUB LVI 46[600] vi 7-9 in HED 4:315)

Indication that the univerbation was early is given by the regular appearance of this verb with independent directional preverbs such as *arḫa* (KBo III 4 I 34 in Götze 1967:316), *katta* (KBo II 5 III 55), and *anda*, as in the following:

-an-kán É-*ri anda* ***ú-da-a-i***

'he **brings** him/it (the god) into the house'

See Kronasser (1966:535) for several other third singular attestations. Götze (1967:316) cites third singular preterite *udāš* (KBo XIX 30 I 24).

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Festivals Naming the "Sister of the Deity" Priestesses (CTH 649)

#118. *wai-* 'cry'

13. Emotion middle?

Attestation 3rd singular present wa-a-i Kronasser (1966:491, 549)

Kronasser cites two third singular attestations of this verb, one in a Hurrian context, i.e., KBo II 21[601], 8, the other from the Madduwattaš text.

The verb is related to reduplicated *weyaye*, haplological *weya*, *úiwai.* It is most often used to describe animal noises (crying of birds, grunting, etc.), and is undoubtedly onomatopoetic (see HED 1:13,14).

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Miscellaneous Ḫurrian Rituals (CTH 778.III)

#119. *wak-* 'bite (off)'

Jasanoff (1992:141) lists *wāk-, wakk-* 'bite' as a member of a group of *-ḫi* conjugation verbs best referred to as aorists (cf. Greek (Ϝ)ἄγνυσι 'breaks', perfect (Ϝ)ἔ(Ϝ)αγε 'is broken' aorist ἐ(Ϝ)άγη 'broke (intransitive)'. Jasanoff notes (*ibid*) that the latter form points to a "probable earlier *Ϝάκτο". Attested forms can be accounted for by assuming aorist *u̯ág̑-e* (or *u̯ág̑-e*).[602] With the development of "new" middles in *-ri* (e.g. *lagāri* 'becomes crooked') and in opposition to it, *wāki* assumed a transitive value. Jasanoff notes that "[t]he use of these and other aorists as presents in Hittite was an innovation made possible by the merger of the Proto-Indo-European imperfect and aorist into a single Anatolian category, the preterite. The ablaut of the *-ḫi* verbs that derive from aorists is in general no different from that of true presents".

Watkins (1995:413) relates *-ḫi* verb *wāki* 'bites' to words for the archetypal weapon [*(-)Ϝαγρος] 'the breaker' in IE formulaic phrases. Noting that the original semantics must have been 'the biter' ("teeth" in connection with blades) ("as in IE **bheid-* in Germanic (*bite, beissen*) and its association with the weapon in Germanic legend"), he cites cognate weapon

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See also Petersen (1928:274) who notes that "an association between perfects and aorists in general existed from early times" and suggests that this close association was responsible for the transfer of the aorist marker *-k-* to the κ- perfects of Greek (a process which he claims occurred at the earliest strata of the Greek language, antedating the dialects).

words (with suffix *-ro*) *vájraḥ* (Vedic) [perhaps rather Latin *vegeō*, see Puhvel (1987), *Comparative Mythology*, 201-202], *vazrō* (Avestan) whence Finnish *vasara* 'hammer', Tocharian AB *wāk-* 'split open (intransitive)'. Also cognate are Latin ***vāgīna*** **'sheath' (for the** 'weapon'), and Greek Μελέαγρος (< ***mele-wagros*** 'caring for cudgel').

The following usage is from the Laws:

Attestation 3rd singular present wa-ki

ták-ku LÚ.ULÙ^{LU}-*an EL.LAM* KA xKAK-*še-it ku-iš-ki* ***wa-a-ki***

'if someone **bites** a free man on his nose' (Table I §13, (33), Friedrich 1971:18)

See also Kronasser (1956:195); Friedrich (1960:98); Kronasser (1966:574), who suggests a preverb *we-/u-/*wa-* (515) as the first element; Luraghi (1997:13,14).

#120. *walḫ-* 'fight'

3. Reciprocal domain (c) Naturally reciprocal events

This root belongs to the "impressive Hittite collection of verbs in the area of 'strike smite, destroy', covering some of the Hittites' favorite activities" (Puhvel 1992:263). Sturtevant (1927c:220) lists *walḫ-* 'strike' as "[a]nother instance of Hittite *w* beside IE *g*^{w}".[603] He relates it to Greek βάλλω 'throw' which lexeme also had an initial labio-velar element as "shown by Arcadian ἐσδέλλοντες = ἐκβάλλοντες". Mallory and Adams (1997:567) list the following as cognates: Latin *vellō* 'pluck, tear' > *volnus* 'wound', Old Norse *valr* 'corpse on the battlefield' (cf. *Valhalla*), Hieroglyphic Luwian *wal(a)-* and Tocharian A *wäl-*, both 'die'.

Through the link with cognates meaning 'die' (including perhaps Luwian *walant(i)* ~ *ulant(i)* 'dead' (Mallory and Adams 1997:150)), a vast and ancient group of IE words derived either from *$\underset{\sim}{u}elh_{2}$- 'strike, kill, die' or (the almost certainly related) *$\underset{\sim}{u}el$- 'die' may also be included here. Greek ὐλάω 'howl', 'bark', 'bay' (regularly of animal noises, but, note that when the verb refers to humans, middle voice is employed) and ὀλολύζω, an [Mediterranean?] onomatopoeic verb which appears often in the context of burial (also Latin *ululāre*, belong here, as well as Ukrainian *valjava* 'body-covered field', Latvian *velis* 'spirit

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*g^{w} > d/_ e ; *k^{w} > t/_ e.

of the dead', OHG *wal* 'battlefield'. Mallory and Adams (1997:650) note the interchange of **r* ~ **l* in nominal derivatives meaning 'wound' : **r* (in the east e.g. Sanskrit *vraṇa* 'wound') ~ **l* (in the west e.g. Latin *volnus* 'wound'. They suggest that the *-l-* is original. See also Kronasser 1966:424, 525; Sihler 1995:486.

Attestation 2nd singular present wa-al-aḫ-ti (KBo X 12[604] II 31)

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Treaty with Aziru of Amurru (CTH 49). See Bryce (1998:184ff) who discusses the influence of Aziru whom he calls one of the "most colourful personalities of Late Bronze Age Syria".

#121. *walla*-'praise'

13. Emotion middle (b) 2-participant

This verb appears in a religious context. Melchert (1994:81ff) includes *walla-/wallu-* 'praise, boast' in the "mounting evidence for assimilation of */-ln-/ to /-ll-/ in Hittite and probably Luvian." In this case, he suggests that the verb would derive from **wal-neh$_2$-* inviting a comparison with **tr̥(K)neh$_2$-* > *tarna* 'let go'. The nasal suffix, as elsewhere, would "have a transitivising effect, hence 'make strong' > 'magnify' > 'praise'. The *ye/o-* stem in Hittite *walliya-* and the CLuvian cognate *walliya-* 'lift, raise' would be secondary, as often" (1994:82).

On the matter of the geminate *ll* as arising from **ln*, see also Puhvel (1992:263), where a similar process involving a possible though unattested root containing cluster **ln* may be at work in *hall(a)-* 'smite?'. Puhvel (*ibid*) notes that the cluster **ln* suffered a similar loss in Greek (*στάλνᾱ > Aeolic στάλλᾱ, Ionic στήλη).

Attestation 1st singular present wa-al-(la-)aḫ-ḫi (Kronasser 1966:547)

wa-al-(la-)aḫ-ḫi

'**I praise** (the gods)' (KUB XXIV 7 I 12.22.24)[605]

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Hymn to Hurrian Ištar (CTH 717)

#122. *wārra-* 'light' (a fire), 'burn'

This verb, with an "active" human subject can mean 'light (a fire)', as in the following from Kronasser (1966:286,452, 534):

Attestation 3rd singular present warai

paḫḫur-a ***wa-a-ra-i***

'Und **zündet** ein Feuer **an**'

'and (he) **lights** (or ignites) a fire' (KUB XVII 27 II 26)

Even with any ostensible causative marker, the meaning as in the above citation has a causative (or at least deliberative, in the sense or purposeful action) sense of 'light', 'enkindle'. Also attested is the derivative with what appears to be the causative extension *-n*: *warani*. Thus:

paḫḫur ***ú–ra-a-ni***

'The fire **burns**[606]' (Kronasser 1966:534)

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This seems an odd semantic twist, as the verb with the causative extension has intransitive force, meaning 'burns' (with subject fire, a torch, a fruit tree branch, a body (in whole or in

The basic form and its derivation have been discussed by Sommer (1927), and commented on by Kronasser (1966:534); the suggestion has been made that the attested form *ú/wa–ra-a-ni* is a dissimilation from an unattested form in *-ri* **warari*. This suggestion has much merit, as and *wa–ra-a-ni* clearly has a "passive" meaning (which **warari* would have had) in the following description of a Hittite burial rite (the Hittite practised both cremation and interment):

nu ak-kán-za ku-e-da-aš uk-tu-[*ri*]*-ya-aš wa-ra-a-ni*

'And in(to) the eternal fire the deceased (*ak-kán-za*) is burned (*wa-ra-a-ni*)

(KUB XXX 15 Vs. 10, in Gamkredlidze and Ivanov 1995:725)

The PIE root **u̯er-* can mean 'burn' (see Mallory and Adams 1997:88) or 'boil, cook' (Mallory and Adams 1997:125); this last mean is seen in several daughters, e.g. Lituanian *vérdu* 'cook, boil', Tocharian A *wrātk* 'cook', but the meaning is 'burn' or 'ignite' in Hittite, rather than 'cook', although clearly the meanings are related. Mallory and Adams (1997:125) suggest that Germanic forms such as ON *varmr*, OE *wearm* represent a "conflation of **u̯er-* with the PIE root **gwhermós* ~ **gwhormós* "seen in, among others, Latin *formus* 'warm', Albanian *zjarm*, Greek θερμός , Vedic *gharmá*. PIE root **u̯er-* can also mean 'burn'

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part: 'head and feet' as in KUB VII 56 II 2)).

#123. *warešša*-'help'

3. Reciprocal domain

warešša 'save', 'come to aid' is the iterative of *warrai*- 'come to aid'[607]. The IE source is **u̯er*- 'surround, cover, contain' (Mallory and Adams 1997:134), 'defend (oneself), save (oneself), protect (oneself)' (Gamkrelidze and Ivanov 1995:645). Cognates are plentiful, and generally refer to guarding, fortifying, defending (oneself or another) against harm. Indic cognates include *vṛṇóti* 'restrains, defends', *várman* 'defense' (cf. *varū-tár* 'defender'), Avestan *vərəθra* 'opposition'; Homeric Greek has middle ἐρύομαι 'protect' (see Mallory and Adams 1997:134 for "problematic" lack of expected digamma), Albanian *varr*- 'grave' (i.e., cairn of stones which 'protects' the body). Latin *aperiō* (< **ap-u̯er-i̯ō*) 'open', 'uncover' belongs here too.

Celtic cognates include the Old Irish name of Ireland *Ériu* 'Ireland' (Pokorny 1959:1161, *apud* Gamkrelidze and Ivanov (1995:645)); Germanic cognates include Gothic *warjan* 'defend', OHG *weren* 'defend'.

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According to Melchert (1994:78) the Hittite iterative *warrišša*- 'help, aid' "is based on a CLuvian stem **warri(ya)*- (Starke, 1990:155f). This stem is also a *-ḫi* verb in *-i*-, as proven by the HLuv. pres. 3sg. *wa+ra/i-ya-ya* [...]. The original paradigm was **wérh₁i-/wṛh₁i̯-*). The former leads to Luvian *warri(ya)*- the latter to OH *ūrryer* (*u-ur-ri-er*). In all cases of final **-h₁i-* [...], laryngeal-sonorant metathesis [...] would lead to **-ih₁s-*, whence *-išš-*."

Attestation 2nd singular present wa-ar-ri-eš-ša-at-ti / wa-ar-ri-iš-ša-at-ti

(Kronasser 1966:554)

(*-ši*) *píran šara* ***wa-ar-ri-eš-ša-at-ti***

'**You go to** (his) **aid** before' (KBo X 12[608] ii 52)

Greek ἦρα 'service', 'gratification' is cognate (in ἦρα φέρειν 'gratify') (<[ϝ]ἦρα), as are possibly Old Norse vær̀r 'snug', 'comfortable', and OHG *alawāri* 'friendly' (LSJ I:777).

Kronasser (1966:553, 554) cites the "contaminated" 3rd singular preterite ending *-št-* is attested: *wa-ar-ri-iš-ši-iš-ta.*

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Treaty with Aziru of Amurru: II. Hittite version (CTH 49)

2. 449 (707)

#124. *wāš-/was-/us-* 'buy/sell' (perhaps barter?)

2. Reflexive (and related middle) situations
(c) Indirect middle: verbs of coming into possession

Benveniste, in *Indo-European Language and Culture* (1973:101) indicates that this root (which he suggests is from IE **wes*) represents "one of the most ancient forms of the Indo-European vocabulary". Also attested widely is the equally ancient synonym *$k^{W}r\bar{\imath}$ 'buy' (whence Sanskrit *krī-* 'buy', Tocharian *kuryar* 'trade', Old Irish *crenid* 'buy', Welsh *prynn* 'buy', Old Lithuanian *krienas* 'bride-price' and Greek *πρίαμαι (see LSJ II:1463 for the rationale for the asterisk; this word is another instance of *$k^{w} > \pi$ in Greek).

Benveniste suggests a split distribution with **wes* in Hittite, Indo-Iranian, Greek, Latin, and Armenian, and *$k^{W}r\bar{\imath}$ in Indo-Iranian, Greek, Celtic, Slavic, and Baltic (1973:103). On the issue of isoglosses see also Puhvel (1994b:317) who suggests a split between "West-Indo-European" (including Italic, Celtic, Germanic, Tocharian and Anatolian) and "East-Indo-European" (including Indo-Iranian, Armenian, Greek, Slavic and Baltic). This would explain the distinct lack of one-on-one lexical isoglosses between Sanskrit and Hittite, and indicate that "Anatolian never had much contact with Indo-Iranian between Proto-Indo-European and the Mitanni period, and that even diffusionary ties were limited in kind and scope" (Puhvel 1994b:319)[609].

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"The perspective changes when Anatolian is confronted with its close neighbours, Armenian

On the meaning of this root, Buck (1952:49) indicates that transference of meaning from 'take, obtain' (as in Kemmer 1993) to specialized 'buy, obtain in trade', is common in IE languages: Latin *emō* "orig. 'take, obtain'[...] but specialized to 'obtain in trade, buy'. Similarly It. *comprare* 'buy', Fr. *acheter* 'buy' NE purchase, all from 'get, obtain'. Conversely G. ἀποδίδωμι in aor. mid. 'sell', and NE *sell* orig. 'give, offer' (cf. OE *sealde his ancennedan sunu* 'gave his only begotten son')."

So compatible are verbs of 'buying/coming into possession' with middle semantics, that in some languages verbs meaning 'buy' have been grammaticalized as markers of middle voice. In Kannada, a South Dravidian language spoken in Southern India, the use of *koLLu* 'buy, take, acquire', either in its full or reduced form, is a "reflexive, self-benefactive" marker whose use indicates "that an action is carried out for the benefit of the agent of the action" (Schiffman 1983:86). Schiffman (1983:88) provides the following examples:

togo- ~ *takko* 'take (for oneself)' (< LK (=Literary Kannada) tegedu + koLLu)

malko- ~ *makko* 'lie down' (< LK malagi + koLLu)

okko- ~ *vakko* 'wash (one's clothes)' (< LK vagi + koLLu)

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to the east and Greek to the west. Those languages were part of the Hittite contemporary sense of place, as spoken in Hayasa and Ahhiyawa, and diffusion must have been rife on top of whatever Pan-Indo-European heritage there was, as well as areal borrowing from common or related sources" (Puhvel 1994b:319).

On the shape and phonology of the root, several proposals have been put forward. Melchert (1994:100, 105) gives Hittite *wāš-* 'buy' < PA **wós-* (already with *o*-grade in root). He notes that /a/ (**phonetic** [ā]) < */o/ in accented open syllable. **Phonemic** /ā/, on the other hand, derives from */o/ in accented closed syllable: all the verbs like *māld, sipānd, kānk* fall into this class. Watkins (1982:1550) however indicates that *o*-grade appears only in suffixed forms: IE **wes-* 'to buy' > "**wos-nā-* in Greek *ōnē* 'a buying'" (Homeric ὦνος (< ϝοσ-νος) 'Kaufpreis', ὠνή 'Kauf', ὠνέομαι 'kaufe', dial. ὠνῆν 'verkaufen'. Kronasser (1956:50) also cites nominal cognates from the suffixed root: "ai. *vas-na* 'Kaufpreis', lat. *vēnum* (**ves-no-m*) 'zum Verkauf'". (Note also Latin *vēnum dare* 'put up for sale' as source of French *vendre* 'sell', and Old Russian *věno* 'bride-price'). See also Mayrhofer (III:177) re Sanskrit *vasnám* 'price, value'.

Beekes' (1995:229-230) suggests that Sanskrit *vasnayáti* and Greek ὠνέομαι are both derived from substantives (in *-n*) via suffix *ei-e*, positing PIE stem "**wosn-éie* 'to buy/sell'. Melchert's arguments for *o*-grade in the verbal root (prior to any nominalization) however, are totally convincing. See discussion of this root in Mallory and Adams (1997:185), Gamkrelidze and Ivanov (1995:650), who note (nt.13) that the meaning 'trade' in Anatolian "can be regarded as a derivative of the Proto-Indo-European meaning 'wealth, income'. Trade was thus regarded as an economic activity which produced abundance or wealth. Synchronic semantic analysis of the Hittite meanings suggest an original meaning 'trade' in Hittite (Neu 1974:81); this may be true of Hittite, but it is not true of Proto-Indo-European".

The 3rd singular present is common in Hittite Laws, where it is used without the particle *-za*. In later texts, the particle occurs with increasing frequency (Hoffner 1973b:526).

Attestation 3rd singular present	was-i	(Kronasser 1956:46,50)
	wa-aš-i	(Kronasser 1966:515)

*ku-iš-[(ki **wa**)]-**a-ši** ....*	*li-e ku-iš-ki **wa-a-ši** ....*
'..someone buys ...	someone does not buy...'

(Table I § 47a, (66), § 48 (50), in Friedrich 1971:32)

The ablaut variant *us-* stem is seen in characterized *mi*-verb *ussaniya-* (Kronasser 1966:500) 'verkauft für sich' (with and without *-za*). See Hoffner (1973b:526) for other verbs involving commerce and "two-sided" transactions.

#125. *wašta-*'sin'

14. Cognition middle

Puhvel (1994b:320, also *Epilecta* 196-198) lists *wašt(a)* as an "item which ties Hittite firmly to the West, and at the same time involves Greek". He considers the usual translation 'sin' an "overreaction to Hittite religious literature" and claims a more accurate rendering would involve a target shooting metaphor 'miss a target shooting' extended to 'come up empty'[610]. In this sense, the meaning is similar to Greek ἁμαρτάνω 'miss the mark' > 'fail, err, sin'. Also possibly related, through a metaphorical extension of the shooting metaphor, is Greek ἀ(Ϝ)άομαι 'to be deluded' = 'empty minded' (See also Kimball 1999:328). "Thus an important term of target shooting, reapplied metaphorically to political, mental, and moral situations of vacuity, takes in Anatolian, Greek, and Italic-Celtic-Germanic" (Puhvel 1994b:320).

The noun derived from this root, *waštaiš,* though normally translated 'sin', has a much more involved and subtle meaning. In the funerary ritual which accompanies the cremation of the Hittite monarch, the death of the king or queen is referred to as a *waštaiš,*

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If the ultimate source is an IE adjectival etymon meaning 'empty'(*$\underset{\sim}{u}(e)h_a stos$, as in Mallory and Adams 1997:179), this would make perfect sense, although these authors suggest that *waštul* belongs "elsewhere". The subtle metaphorical meanings involving loss, emptiness, or moral inadequacies associated with this root and its derivatives support Puhvel's interpretation.

a 'calamity', or, often, 'emptiness/vacuum', just as the expression *šalliš waštaiš* means 'the empty period between kings': 'interregnum'. As Gurney (1977:59) comments: "The death of a Hittite king or queen seems to have been regarded as a violation of the divine order of things".

Following an idea first outlined in Eichner, Kimball suggests that

> [wasta-] is perhaps a denominative from a PA noun **wasto*-attested in Luvian forms in Hittite context [...] A possible source for PA **wasta*- is **womsto*- : **wems*- in ON *vinstri* "left", OE *win(e)stre* id., OFr. *winster* id., OS, OHG *winistar* id. and as unextended **wem*- in Skt. *vāma*- id., if the original meaning were something akin to "unpropitious, unlucky" (1999:328).

Attestations in 3rd singular are extremely common in the Laws (see Luraghi 1990:36,168,169), describing various 'abominable' sexual offenses (*ḫurkil*), whether with animals (cows, sheep, dogs) or relatives (mothers (§75 (26)) and stepmothers (§76 (30)), daughters (§75 (27)), sons (§75 (28)). The following are typical (note the regular pairing with *katta*):

takku LÚ-*iš* GUD-*aš katta kuiški* [***wašt***]***ai***

'if a man (LÚ-*is*) **commits sinful acts** with a cow'

(Table II § 73 (23) = Friedrich 1971:82)

takku ŠAR UR.ZÍR-*aš katta kuiški* ***waštai***

'if anyone **commits sinful acts** with a pig or a dog'

(Table II § 85 (16) = Friedrich 1971:86. A sheep is involved in Table II § 74 (23))

Cognate items possibly include Latin *vāstus* 'empty, unoccupied', OE *wēste* 'waste', desolate', Old Irish *fās* 'empty, waste' (but see Mallory and Adams 1997:179). There are many citations of this verb in combination with 'hand', *keššar waštai* (see HED 4:160).

#126. *wātarnaḫḫ-* 'enjoin, command'

13. Emotion middle (d) speech action

Most probably, this verb is a denominative from **h₂wed-* 'speak' (this etymon is seen in such basic vocabulary items as Hittite *uttar* 'word', Sanskrit *vad-* 'speak', Greek αὐδή 'voice'). The last items may be ablaut variants, **au-d-* : **u̯-ed-* (Beekes 1969:127)). See Oettinger (1979:458), Melchert (1994:50)

Attestation 1st singular present wātarnaḫḫi

mān ^{D}UTU-*ŠI-ma laḫḫi ukila ŪL paimi nu tuzziya kuin* DUMU-LUGAL *našma BE*[*L* GAL] ***wātarnaḫḫi*** *nu tuzzin laḫḫi apāš peḫutezzi*

'but if I the king do not myself go on campaign, the prince

or high officer whom **I ordain**[611] for the army, he leads the army on campaign'

(KUB XIII 20 I 16-17, in HED 5:1)[612]

611

The form *wa-a-tar-na-aḫ-ḫi* is ambiguous: it could, under certain circumstances, be a third person. The translation could read either : 'whom I appoint to the army' or 'whom he appoints to the army'. Nevertheless, "the logic of the sentence seems to compel a first person subject ("if I don't go myself, I appoint a deputy"), thus **watarnaḫ-ḫi* beside 2 sg. *watarnaḫ-ti*, 3sg. *watarnaḫḫ-i* " (Puhvel: p.c.).

612

Tudḫaliya II's Instructions for the Military (CTH 259)

This passage is difficult: I have parsed it as follows:

mān	^{D}UTU-*ŠI-ma*	*laḫḫ-i*
if	'royal manner of expressing 1sg-but	warpath-LOC

uk-ila	*ŪL paimi*	*nu tuzz-iya*	*ku-in*
ego-ipse	not go+1sg-*mi*	CONN army+DAT	who+ACC

DUMU-LUGAL *našma BE*[*L* GAL]		***wātarnaḫḫi***
prince or	big lord	appoint+ 1st sg. *-ḫi*

nu	*tuzz-in*	*laḫḫ-i*	*apāš*	*peḫutezzi*
CONN	army+ACC	warpath-LOC	that one	leads+3rd sg. *-mi*.

'but if I the king do not myself go on campaign, the prince or high officer whom **I ordain** for the army, he leads the army on campaign'

I believe the emphatic use of 'I myself' reinforces the sense that, if 'I myself' do not go on the military campaign, it is the alternate 'prince or high officer' whom I appoint who will take my place. The use of the *-ḫi* conjugation verb in this context reinforces the formality of the appointment.

Attestation 2nd person singular wa-tar-na-aḫ-ti

Attestation 3rd person singular wa-a-tar-na-aḫ-ḫi

Oettinger (1979:458) cites third singular *ua-a-tar-na-aḫ-ḫi* and preterite *ua-a-tar-na-aḫ-ḫi-š* (KBo III 38 Vs.23').

#127. *weda-* 'build'

Kronasser (1956:195;1966:475,535,544). Both Sturtevant (1933:214) and Kronasser (1966:71,544) suggest that preverb *u-we-/wi-* is the first element in this verb from stem *-da-/-te-* 'locate'. The items 'built' may include palaces, temples, houses, mills, etc.

Attestation 1st singular present ú-e-da-aḫ-ḫi (Sturtevant 1933:214)

ú-e-da-aḫ-ḫi

'I build' (Kronasser 1966:544)

Third singular preterite *ú-e-da-aš* is cited in Kronasser (1966:544) (KBo XII 39[613] I 17)

613

Treaty with Alašiya (CTH 141)

#128. *wewakk-* 'demand'

13. Emotion middle (d) Speech action

This verb, which is apparently identical in meaning to its unreduplicated source *wek-*, shows "Redoublement simple (consonne + voyelle) par e: [...]we-wakk- : wek 'demander'" (Van Brock 1964:120). In the great majority of cases of this type: "the vocalisme du redoublement est celui de la syllabe initiale du thème verbal simple" (1964:123). Kronasser (1966:387) seems to suggest quantitative ablaut in the simple verb *wek-/wik-/*wak-*: " *e/a* (*u= we/wa*)".Melchert (1994:100) suggests *wewakk-* 'request, demand' < PA **wéwok-*.

Attestation 3rd singular present ú-e-wa-ak-ki

ú-e-wa-ak-ki

'**(s)he demands**' (KBo V 2 I 52[614], in Kronasser 1966:511)

614

Ammiḫatna (CTH 471)

#129. *wiwa-* 'cry'

13. Emotion middle (d) Speech action

The term for a woman in labour – *wiwiškitallaš* 'the one who keeps on wailing' (Pringle 1993:137) -- is built to this root, a reduplicated (and undoubtedly onomatopoeic) derivative of *wai-* cry'. The *-sk-* is an iterative morpheme meaning 'to keep on doing' something. Many of the derivative latter forms with *-sk-* are *-mi* verbs. See also Van Brock (1964); Oettinger (1979).

Attestation 3rd singular present wiwai

ú-i-wa-i

'**she cries out**' (Kronasser 1966:121, 490, 549,571)

#130. *zāḫ-, zaḫḫ-* 'fight, contend against', 'strike'

3. Reciprocal domain (c) Naturally reciprocal events

The root is of "uncertain origin" (Watkins 1995:430; Kronasser 1966:378). Kimball (1999:397) indicates that the stem "should be [tsāḫ-] < **dsóh₂-* : [tsāh-] < **dséh₂-* in e.g. *[zāhur] < **dséh₂-wr̥*, cf. **d-h₂s-* in Hmc. δαϊ- "in battle" (Schindler apud Oettinger, Stammbildung 446-7)". For the Homeric cognates, see LSJ (I:366,367). Among these would be δάις 'war', 'battle' (whence dative form cited above, as in Iliad 13.286), δαΐζω 'cleave asunder', participle δᾰΐκτάμενος 'slain in battle' (Iliad 21. 146, 301). See also Melchert (1994:96).

Watkins (1995:430) provides a link between the Anatolian root za*ḫ*(*ḫ*)- and ideograms and hieroglyphic signs describing the weapons which the Storm God *Tarḫuntaš* carries in his right fist: variously a "*vajra*-like scepter" or a "battle axe". The root occurs as well in Hieroglyphic Luvian *za-ha-nu-wa-ta* (KARKEMISH A 1 a 6) (*ibid*).

The alternate root shapes/spellings are "found in forms of several *hi*-conjugation paradigms where an accented *o*-grade would be expected" (Kimball 1999:397), and suggest an original *o : *e ablaut (see also Jasanoff 1992:129-155). The alternation between voiced and voiceless fricatives [i.e. *ḫ* : *ḫḫ*] is analogical after paradigms of such verbs as *āk-*, *akk-* 'die', *ištāp-*, *ištapp-* 'close, cover'. Other *-ḫi* verbs which show the same patterns (and consequently (possible) original *o : *e ablauting paradigms) include *nāḫ-*, *naḫḫ-* 'be afraid,

fear' and *sāḫ-*, *saḫḫ-* 'clog, stuff, cram'.

The simple root has various derivatives, including *zaḫḫai-* „Schlacht" (Kronasser 1966:204)- compare φυγή from φεύγω, πειθώ from πείθω, suggesting that the accentual form of the derivative may have been *zaḫḫái-* from *záḫ-*.

Attestation 3rd singular present za-a-ḫi (Kronasser 1966:387)

za-a-ḫi

'**He** violates (or **crosses**) (the border)'?

This root also attested in derivatives (*zaḫ(ḫ)ešk*, *zaḫ(ḫ)iya*, *zaḫ(ḫ)ianu-*).

#131. *zai-* 'cross', 'transgress'

11. Translational motion
Metaphorical extension to:
14. Cognition middle ('transgress'= 'cross a moral line')

Two different compositional analyses are offered for this verb:

1 Sturtevant (1927c:222) suggests *zai-* is a compound of preverb *ze-* 'through' (cognate with Greek aspectual (or better termed Aktionsart) preverb διά- cf. next entry) and motion verb *-*ei*-'go' (which Mallory and Adams (1997:227ff) call "the least marked verb of motion in PIE") . See also Kronasser (1966:160).

2 Kimball (1999:453), following Melchert (1984 = SHHP 101) derives the verb from *$seh_1(i)$- 'go forward, advance'. Mallory and Adams (1997:228) also list *zāi-* (< *$sóh_1i̯ei$) under this root. If this is the correct source, the following are cognates: Greek ἰθύνω 'press forward' < *sih_1-*dhú,* Sanskrit *sādhati* 'goes forward, succeeds' < *sādhu-* leading to success'.

If one adopts the principle of Occam's Razor, the former seems the preferable analysis, given the proclivity of *-ḫi* verbs to 'take' preverbs, the problems with deriving the initial *z-* from IE **s* (see Kimball 1999:452, and next entry), the similarity in paradigm to

fellow diphthongal *-ḫi* verbs (all arguably compounds) such as *tai-* 'place', *nai-* 'lead', *išhai-* 'bind', *pai-* 'give', the latter a compound of "Indo-Hittite" *bhe* + *ēi* (Sturtevant 1933:214), and the very literal sense of motion which regularly adheres in the root. I might note that the direction of semantic change is generally from the concrete > abstract, not vice versa. The original (older) meaning would have involved a literal 'going', such as seen in various attestations (where motion is often across a literal obstacle, i.e. body of water (river or sea)or mountain (Kronasser 1966:542[615]).

That this root is old can been seen also in the morphology of the preterite 3rd singular *za-a-i-iš* – "the peculiar affinity of forms with suffix *s* for the preterite of the *hi*-conjugation is strongly reminiscent of IE" (Sturtevant 1933:217), as both show a lack of "discrimination between present and aorist". The addition of *-s* (aoristic?) is the most common method of forming preterites in 3rd person singular *-ḫi* verbs (Sturtevant 1933:230ff).

Attestation 2nd singular present za-a-(i-)it-ti (Kimball 1999:453)

-kán pariya(n) ***za-a-it-ti***

'**You cross/come over** (into the town)' (Kronasser 1966:542)

Attestation 3rd singular present za-a-i

615

Gilgameš: Hittite fragments (CTH 341.III)

2. 466 (724)

za-a-i

'**he crosses** (a river)' (Kronasser 1966:542)

Also attested is the -*š* preterite:

za-a-iš '**he climbed** over (a wall)' (KUB V 1[616] I 67.82, KBo XII 39[617] Vs. 18)

za-a-iš 'the enemy **crossed** the Ḫalyš river' (= ^{ÍD} *Ma-ra-aš-ša-an-da-an* > ***maru-*** 'red', cf. Turkish *kızıl irmak* 'Red River'

(KBo III 6 II 6 in the Apology of Ḫattušili) (Kronasser 1966:167, Sturtevant and Bechtel 1935:68, von Otten 1981:10). Also Friedrich (1960:101), Kronasser (1966:542,574).

616

Oracle questions about king's campaign in Kaška area (CTH 561)

617

Treaty with Alašiya (CTH 141)

#132. *zi/enna-* 'finish', 'bring to an end ', 'complete', 'destroy', 'be ready'

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11. Translational motion
Metaphorical extension of original meaning 'send through' (Sturtevant 1933:214)

Two different analyses have been put forward for this verb:

1. Sturtevant (1927c:222) (also Kronasser 1966:160) suggests preverb *ze-* 'through'+ *nai* 'send'. In this case, the original source consonant would have been (unaspirated) *t* from IE **d* as in cognate Greek preverb διά- 'through'. The preverb here would have aspectual force: "The aspectual value of adpreps is often, perhaps most typically, actuated with verbs of motion" (Friedrich 1987:134), who notes that Greek διά- denotes "realization". This is consistent with the attested meanings, including 'finish', 'complete', etc.

2 Kimball (1999:453) suggests rather this verb "may be from **si-n-h*$_1$-, weak stem of a nasal present **si-ne- h*$_1$- (cf. Lat. *sinere* "let go of")" , and relates it to verb *zēa-* 'be cooked' < ** 'be done' (3rd singular present *zi-e-a*, OH etc., *ze-e-a-ri*) which "could continue an acrostatic middle **séih*$_1$-o". She cautions that the etymology of the latter verb [and, by implication the link with *zinna-*], "depends on the treatment of the [*root] initial **s*." See her discussion of problems and possibilities associated with the rendering of sibilants which "varied regionally and chronologically"

(1999:106ff).

Kimball (1999:453) also mentions links of *zinni/a-* 'finish, end' to nominal root *zēna-* 'autumn' which derives ultimately from **sen-*'old' > *séno-*'year'.

With reference to the preverb Hittite *ze-* Greek διά-, it is important to note that the (earlier) Aeolic form of διά- was ζά-. This preverb seems to be on the way out even in Homer, where it means 'very', e.g. ζά-θεος 'very sacred, holy, sacrosanct', ζά-κοτος 'exceedingly wroth'. (See also LSJ I:752; Frisk 1973:606). Concerning the phonology of ζ, Sturtevant (1940:59) comments that according to the grammarians, "ζ contains δ [...] accordingly we find ἐλπίζω beside ἐλπίδα." [= 'hope for'/'look for', 'expect' (v), 'hope' (n) (LSJ I:537)]. However, LSJ also cite also ἐλπίσω (aorist subjunctive), ἤλπιζα, ἤλπισα (both aorists), where the alternation is with *s*. Judging from the variation in these attested forms, the voicing is not completely clear. While ζ retained its affinity with the voiced consonants in some cognates, it has voiceless reflexes in others. See Kronasser (1966:160) for other suggestions concerning the etymology of Hittite *ze-/zi-*.

With the infinitive, the verb can have the meaning 'stop doing something' or 'be finished doing something', thus Kronasser (1966:443, 565ff), *zinnaḫḫi* „ ich werde fertig " "mit der Nebenbedeutung des (rituell oder juristisch) Vorschrifttsmäßigen, also etwa „ rite perficere"".

Attestation 1st singular present zi-in-na-aḫ-ḫi

2. 469 (727)

zi-in-na-aḫ-ḫi

'I have finished' (Cited without reference in Kronasser 1966:567)

Attestation 3rd singular present zi-in-na-i/zi-in-na-a-i (Kronasser 1966:567)

kuit ***zi-in-na-a-i***

'What(ever) he finishes' (KUB XXII 70[618] Rs. 67)

See also Kronasser (1956:198); Friedrich (1960:135); also Melchert (1994:82) who refers to Oettinger (1979:150ff) for paradigm. Kronasser also cites "contaminated" *zi-in-ni-e*[*š-ta*].

618

Oracles on Cult of Arušna (CTH 566)

2.1 Discussion and Conclusions

I have argued here that the Hittite *-ḫi* conjugation is an archaic present tense, geared to the special interests of the subject, and marked as such by the direct case pronominal suffix realized by the velar fricative *-ḫ* < $*h_2$. I have identified the velar fricative which marks the centripetal voice as ultimately the same element as the velar stop *-k* which marks the direct case pronoun **ek* > *uk* 'I'. It is this element which is cliticised to the verb to mark voice. This direct case element is opposed to the more outwardly oriented (and often more transitive, hence its proclivity to accept characterization) *-mi* conjugation, marked by the oblique case pronominal suffix *-m*.

As has been documented above in Volume II, the vast majority of the Hittite *-ḫi* verbs fall within the semantic range of "middle" voice verbs, as defined in Kemmer 1993. Of those that do not fall under the traditional "middle semantics", most are utilized in Hittite ritual and/or religious observance, legal vocabulary, or the vocabulary of "Treaty and Covenant"–in other words, are employed in a "marked" context of high human cultural activities. Two examples from my current related research may suffice to reinforce this point clearly. Given the ratio of *-ḫi* verbs to the more plentiful and productive *-mi* verbs, one would expect a distribution of this sort to be seen in texts of all types. My investigations, although preliminary, show this <u>not</u> to be the case. In certain types of texts, those of a ritual or religious nature, *-ḫi* verbs predominate.

I looked at two important Old Hittite Ritual texts, the Ritual for the Royal Couple, and the Ritual of Anniwiyani, a text containing two magic rituals directed to a certain god.

In each Ritual text, I counted every singular usage of verbs of both conjugations (as these are the surest proof of conjugation membership). In the Ritual for the Royal Couple, there were 132 singular finite verbal forms. Of these, 51 (38%) were *-mi* verbs; fully 81 (62%) were *-ḫi* verbs. All things being equal, given the ratio of 4/1 (*-mi* verbs to *-ḫi* verbs), in a text containing 132 finite singular verbs, one would have expected there to be 105 *-mi* verbs, and 27 *-ḫi* verbs. In this sacred text, this is clearly NOT the case. The heavy use and skewed distribution of *-ḫi* verbs demands an explanation: Religious and ritual observance is of course the quintessential human activity. Because *-ḫi* verbs are "marked" for special interests of the subject, their appearance in this special type of text is to be expected.

I found similar results in the Ritual of Anniwiyani. This document contained 65 singular finite verbal forms. 42 (64.6%) were *-ḫi* verbs, 13 (35.4%) were *-mi* verbs. Again, given the "typical" ratio, we would have expected there to have been 52 *-mi* verbs and 13 *-ḫi* verbs. The explanation is that verbs marked for "special" interest of the human subject appear in these "sacred" texts.

Of the 132 *-ḫi* verbs, a large proportion were from *o*-grade roots. As I have argued, this is a voice distinction marked by ablaut.

This study is meant as an proactive argument for the *-ḫi* conjugation as centripetal (= "middle") voice. I am aware that there are numerous counter arguments that may be made to many of the proposals I have advanced here. It is quite true that *-mi* verbs do appear with regularity in many of the same contexts as do *-ḫi* verbs. Forms in *-ri* are clearly, unarguably

employed in what are traditionally called "middle" or "medio-passive" uses. The are rightly identified as in, e.g. Puhvel, as MIDD forms. Nevertheless, I believe I have advanced strong evidence for the preponderance of *-ḫi* verbs in contexts "traditionally" understood as middle voice, as in Kemmer 1993. Those that do not fit neatly into Kemmer's categories reflect the *original* sense carried by the self-oriented diathesis: the special context of personal interest in matters religious, ritual, or uniquely human interactions, mirrored in the original subjective vs. objective flexion.

The morphological element *-r* was in origin identical with the marker of the third person plural, used as an "impersonalizing" device, and spreading by linguistic diffusion thence to other persons. This is the explanation for the inflectional patterns of the Latin deponents, which show *-r* occurring after the suffixes which originally indicated both person and diathesis. The use of the "impersonal" *-r* established itself as an isogloss in the Celtic and Italic branches, with only Hittite maintaining BOTH the older binary differentiation via suffix, and the impersonalizing device, which latter became productive upon the demise of the original diathesis (Luraghi 1998:185, also Luraghi 1990: 39nt75).

This study is meant as an introductory enquiry only. Despite the length of this document, I have only scratched the surface of this group of verbs. There are numerous sidetracks which I have not taken for reasons of time and space. It is my hope that this introductory work will prove an inducement to further study of this most ancient, interesting and intriguing group of verbs.

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APPENDIX I

LIST OF ATTESTED HITTITE ḪI VERBS

	Root	Meaning
1	(*-ai)	'give'
2	ak(k)-, ek-	'die', 'be put to death'
3	al(l)p(p)aḫḫ-	'spit (at)'
4	alwanzaḫḫ-	'bewitch, hex'
5	anš-	'wipe'
6	appai-	'be finished'
7	ar-/er-	'reach, come, arrive'
8	arai-	'(a)rise, lift', 'rein in, check'
9	arawaḫḫ-	'make free'
10	ark-	'mark off, (sub)divide'
11	ark-	'copulate with'
12	armaḫḫ-	'impregnate'
13	arr(a)-	'wash'
14	aš-/eš-	'sit'
15	ašas-/ašes-	'seat'
16	au(š)-	'see, look at'
17	ḫalāi-	'set wheel in motion'
18	ḫaliḫlai-	'genuflect, make obeisance'

19	ḫalzāi-	‘call, shout’
20	ḫalzessa-	‘crave’
21	ḫamank-	‘bind’
22	ḫān-	‘draw water’
23	ḫanna-	‘judge, litigate’
24	ḫandai-	‘join, put together’
25	ḫappinaḫḫ-	‘enrich’
26	ḫarra-	‘crush’
27	ḫaš-	‘give birth’ (ḫaš-/ḫeš ‘open’)
28	ḫatk-	‘lock’, ‘conclude’, ‘cover’
29	ḫatta-	‘slaughter’
30	ḫuittiyai-	‘draw’
31	ḫulla-	‘smite’
32	ḫuwai-	‘run’, ‘march (before)’
33	ḫuwapp-	‘ill treat’
34	ḫu(wa)rt-	‘curse’
35	iyan(n)a-	‘go, be on one’s way’
36	in(n)araḫ(ḫ)-	‘strengthen’
37	išḫai-	‘tie, fasten’, ‘marry’
38	išḫamai-	‘sing’
39	išḫuwai-	‘pour, scatter, throw’

40	išiyaḫḫ-	‘reveal’
41	iškalla-	‘slit’
42	išk-	‘salve’
43	iškar-	‘pierce, stick’
44	iškit(t)aḫḫ-	‘signal’
45	išk/ḫunaḫḫ-	‘stain’
46	išpai-	‘prosper’
47	(i)špand-	‘libate’
48	išpar-	‘scatter’
49	išša-	‘do’, ‘work’
50	ištamaš	‘hear’
51	ištap(p)-	‘close’
52	idalawaḫ-	‘treat badly’
53	yaya-	‘?’
54	kānk-	‘hang’
55	karap-	‘eat up, devour’
56	karmalašša-	‘suffer harm’
57	kartimmiyaḫ(ḫ)-	‘anger’
58	kiš-	‘become’
59	kururiyaḫ(ḫ)-	‘wage war (on)’
60	lāḫ(ḫ)u(wai)-	‘pour out’, ‘empty’

61	lā(i)-	'loose'
62	lāk-	'knock out', 'tumble'
63	lilakk-	'topple'
64	lilḫuwai-	'pour out (liquids)'
65	lil(l)ipa(i)-	'lick (up)'
66	mai-/miya-	'grow, prosper'
67	malla-	'mill, crush, grind'
68	māld-	'recite, vow (something)'
69	maniyaḫḫ-	'distribute'
70	ma(n)ni(ḫ)kuwaḫ-	'approach'
71	mark-	'divide'
72	maušš-/mu-	'fall'
73	mema-	'speak'
74	mimma-	'refuse, decline'
75	nāḫ(ḫ)-	'fear'
76	nāi-	'turn'
77	nanna-	'drive', 'ride in'
78	pai-	'give'
79	paḫš-	'protect'
80	papraḫḫ-	'defile'
81	parai-	'blow'

82	pariparai-	'blow'
83	parai-	'appear', 'emerge (locusts)'
84	parḫ-	'chase'
85	parš(iya)-	'break'
86	paršiyanna-	'break'
87	pašš-	'swallow'
88	pa/idda-	'dig'
89	penna-	'drive', 'accept'
90	peda-	'take, transport'
91	pippa-	'knock down'
92	pidda(i)-	'run, flee'
93	šāḫ-	'clog, stuff'
94	šāi-	'press', 'shoot'
95	šak-/šek-	'know'
96	šalik-	'approach'
97	šanna-	'keep secret, conceal'
98	šarap-/šarep-	'sip'
99	šarra-	'separate'
100	šešḫa-	'order, arrange'
101	šipant-	'sacrifice'
102	šišša-	'impress'

103	šuḫḫa-	'pour out', 'hiccup'
104	šunna-	'fill'
105	da-	'take'
106	dāi-	'place, accept'
107	taištāi-	'load'
108	dākk-	'resemble'
109	dala-	'let be, leave'
110	tariya-	'tire'
111	tarna-	'let go'
112	dašuwaḫ(ḫ)-	'blind' (trans.)
113	dusk-	'rejoice'
114	duwarna-	'break'
115	unna-	'drive hither'
116	uppa-	'send here'
117	uda-	'bring (here)'
118	wai-	'cry'
119	wāk-	'bite (off)'
120	walḫ-	'fight'
121	walla-	'praise'
122	wārr(a)-	'ignite'
123	wareššа-	'help'

124	wāš-	‘buy’
125	wašta-	‘sin’
126	wātarnaḫḫ-	‘enjoin’
127	weda-	‘build’
128	wewakk-	‘demand’
129	wiwa-	‘cry’
130	zāḫḫ-	‘contend against’
131	zai-	‘cross’
132	zenna-	‘finish’

APPENDIX II

A CHECKLIST FOR MIDDLE SEMANTICS

(Closely adapted from Kemmer 1993:267-270 = her Appendix A to *Middle Voice*)

1. Emphatic domain

   (a) Emphatic/contrastive 'self' ('I did it myself')
   (b) Emphatic reflexive ('I hit MYSELF')
   (c) Identify etymology of emphatics where possible ('body', 'soul', 'head', 'breath', etc.)

2. Reflexive (and related middle) situations

   (a) Direct reflexive ('John saw himself in the mirror')
   (b) Indirect reflexive ('Mary gave herself a present')
   (c) Indirect middle: verbs of coming into possession, desiring to come into possession ('beg', 'acquire', 'receive' 'request', 'buy', 'seize'; also, perhaps, verbs of ingestion like 'eat')
   (d) Logophoric reflexive: coreference in complements of verbs of saying, belief, feeling, etc. ('He said that he would go') Check for restrictions on person, number.

3. Reciprocal domain

   (a) Prototypical reciprocal ('The girls looked at each other')
   (b) Chaining reciprocal ('The graduates followed each other onto the stage')
   (c) Naturally reciprocal events ('wrestle', 'struggle', 'meet', 'greet each other','fight', 'make love', 'converse', 'join', 'divide', 'stick together')
   (d) Collective, group actions
   (e) Naturally collective actions ('flock together', 'huddle', 'nestle', 'scatter', ' tangle', 'mingle', 'multiply')

4. (Middle) passive ('lights are lit').

5. Impersonal ('They say that....', 'One doesn't do that')

6. Facilitative ('This chapter reads easily', 'the book sold old in three weeks', 'he tested positive')

7. Grooming ('bathe', 'shave', 'wash', 'dress', 'adorn oneself', 'comb-hair', 'gird

(loins)', 'arm oneself')

8. Non-translational motion ('twist', 'bend', 'lean', 'nod', 'wave', 'bow', 'stretch')

   (a) Contained nontraslational motion: no change in configuration ('shake', 'tremble', 'shudder', 'move', 'stir')

9. Change in body posture: motion with reference to change in body configuration and with fixed locational endpoint ('sit down', 'stand up', 'lie down', 'kneel', 'squat', 'crouch down')

10. Other body actions ('scratch', 'sneeze', 'cough', 'breathe', 'relieve oneself', 'masturbate')

11. Translational motion: motion with reference to a path ('go', 'fly', 'swim', 'leap', 'fall', 'approach', 'run', 'flee', 'move', 'wander', 'stroll', 'climb', crawl', 'stay', 'remain' (negative motion).

12. Positionals: express configuration of body or - by extension- object with relation to another, often supporting, object ('be lying', 'be sitting', 'be standing', 'be hanging')

13. Emotion middle

   (a) 1-participant ('be glad', 'be frightened', 'wonder at', 'be amazed', 'be surprized', 'be amused', 'weep', 'mourn', 'suffer', 'endure', 'rejoice', 'feel (+ state)')
   (b) 2-participant ('love', 'hate', 'despise', 'pity', 'trust in', 'regret'
   (c) desiderative: ('hope', 'need', 'expect', 'desire', 'await')
   (d) speech action ('denounce', 'lament', 'pray', 'ridicule', 'lie', 'boast', 'curse', 'vow', 'scold', 'deceive')

14. Cognition middle ('know', 'suppose', 'think', 'recognize', 'realize', 'remember', 'forget', 'imagine', 'mediate', 'consider').

15. Perception middle ('see', 'hear', 'touch', 'taste', 'smell')

   (a) Intensional: ('intend', 'plan', 'try')

16. Spontaneous events

   (a) Motion ('rock', 'swing', 'oscillate', 'waver', 'droop', 'spin', 'revolve',

'rotate') change of state ('fall', 'sink', 'rise', 'spread out', 'approach', 'recede')

(b) Position ('hang', 'float','be spread out', 'be draped', 'be hanging', be lying')

(c) Spontaneous events associated with:

(i) animate beings ('die', 'perish', 'drown', 'be born', 'hatch', 'grow', become [+state]']

(ii) inanimate beings

A. change of position/location ('sink', 'rise', 'fall')

B. change of shape ('swell up', 'puff up', 'expand', 'contract', 'spread out', 'lengthen', 'shorten', 'stretch', 'widen')

C. physico-chemical change ('burn', 'cook', 'bake', 'ripen', 'rot' 'boil', 'melt', 'freeze', 'heat', 'cool', 'evaporate', 'dissolve')

D. partial disruption of object's material integrity ('break', 'snap', 'crack', 'rip', 'tear', 'rupture', 'split', 'erode', 'erupt')

E. global disruption of object's material integrity ('burst', 'smash', 'explode', 'disintegrate', 'collapse', 'shatter', 'fall apart')

F. existential change/denaturement ('vanish','disappear', 'evaporate', 'dissipate', 'disintegrate', 'dissolve', 'arise', 'develop', 'originate')

G. object-specific: substance [state with respect to another substance coming into contact] ('flood', 'fill', 'empty') port ('open', 'close') general ('change', 'become/turn' (+specified state), 'develop')

H. property of activities ('begin', 'end', 'start', 'finish', 'stop', 'succeed')

I. inanimate state ('join',, 'divide', 'branch', 'split' (waves, etc), 'split off', 'fork')

(iii) inanimate state/activity impinging on human sensory organs : visual ('flash', 'shimmer', 'twinkle', 'shine', 'glow', 'flicker') auditory ('ring', 'squeak', 'rattle', 'sound') tactile ('scratch', 'sting', 'burn', 'pinch', 'squeeze', 'hurt')

(iv) property of inanimate entity filtered through cognitive interpretive mechanisms: visual ('appear', 'look', 'seem'). May have general cognitive extension, beyond purely visual: auditory ('sound') olfactory ('smell') gustatory ('taste') tactile ('feel').

APPENDIX III

LIST OF TEXTS CITED

(For a list of text citations from Chapter Seven, Volume I, see the end of this section)

The following provides specific citation information, including the *Catalogue des textes hittites* (CTH) number, as well as the type of specific text from which the citation is taken. All citations are *-ḫi* singulars unless otherwise indicated. The person of the attestation is given on the far right and includes first (1), second (2) or third (3). Exceptions which will be noted include certain *-mi* forms (= *-mi*), plurals (= 3pl). Notable forms include first singular forms in *-e* (example (1)-*e*), *-š* preterite (example: (3)-*š*), "contaminated" preterites (example: (3)-*št*), preterite presents (present forms with *-a* ending), abbreviated as *prpr*. I also specify whether the verb is from an *o*-grade or lengthened grade root. An asterisk means that the verb fits into a Kemmer Middle voice category. Generally, I follow Kronasser's 1996 alphabetical order.

Identification	CTH	Type	Verb (person)
		-A-	
2. **ak-* *o*-grade, *š*-preterite			
KBo XXII 2	3	Historical (Zalpa Text)	(3pl)
KBo VII 14	15	Historical(Ḫattušili I)	(2)
KBo VI 2	291	Legal (Code)	(3)
	292	Legal (Code)	(3)
KBo III 38	3	Historical (Zalpa Text)	(3pl)
3. **allap(p)aḫḫ-* factitive 'make a whiteness'			
KBo XVIII	416	Ritual (Royal Couple)	(3)
4. **alwanzaḫḫ-* factitive 'make a magic charm'			
KUB XXXV145	338	Mythological (Symphonie P.)	(3)
5. **anš-* *o*-grade			
KBo XIX128	625	Festival (ANTAḪŠUM)	(3)
KBo IV 9	612	Festival (ANTAḪŠUM)	(3)
6. **appai-* stative			
KUB II 8	617	Festival (ANTAḪŠUM frags.)	(3)
KUB II 3 I 50	627	Festival (KI.LAM)	(3)
KUB XXXIX 4	450.1	Ritual (Funerary tablets)	(3)
KUB XVII 28 iv	426	Ritual (Army in retreat)	(3)
KBo V 11	263	Administrative (Gateman)	(3)
7. **ar-* *o*-grade, *š*-preterite			
KUB XV11	584	Vows (Dreams of Queen)	(1)

KBo IV14	123	Historical (Treaty Tudḫaliya IV)	(1)
KUB VIII 50 iii	341.III	Mythological (Gilgameš)	(2)
KUB XII 58	409	Ritual (Tunnawiya)	(3)
KBo VIII112	669	Festival (fragments)	(3)
KUB XXI 1	76	Historical (Treaty w. Alak.)	(3)
KBo XX 2 Rs.7	3	Historical (Zalpa)	(3)
8. **arai-* *o*-grade, *š*-preterite			
KBo XII103	456	Ritual (Purification)	(1)
KUB VII 53	409	Ritual (Tunnawiya)	(3)
KBo XIII13	536.04	Omen (Šumma alu)	(3)
KUB VIII 1	532.II.01	Omen (Lunar eclipse)	(3)
KUB XII 65	348.09	Mythological (Ḫedammu)	(3) *-š*
KUB XXXVI 89	671	Festival (Storm God of Nerik)	imperative
9. **arawaḫḫ-* factitive 'make free = right'			
KBo VI 34	291	Legal (Code)	(3)
10. *ark-* 'mark off' *o*-grade			
KBo VI 4	291	Legal (Code)	(3)
KBo XI 46	647	Festival (Prince)	participle
11. *ark-* 'copulate' *o*-grade, preterite-present			
KBo X 45	446	Ritual (House purification)	(3)
KUB XLI 8			(3)prpr
12. *armaḫḫ-* factitive 'make moon bound'			
KBo XVII 65	430	Ritual (Birth)	(3)
KUB XXXIII 120	344	Mythological (Kumarbi)	(1) pret
KUB XVII 10 I 14	324.01	Mythological (Telepinu)	participle
13. **arra-* 'wash'			
KUB VII 1	390	Mythological (Ayatarša...)	(1)
KBo XVII 1	416	Ritual (Royal Couple)	(3)
14. **aš-* 'sit'			
KBo XVII 74	613	Festival (Storm and Thunder)	(3) prpr
KBo XIX128	625	Festival (ANTAḪŠUM)	(3) prpr
15. **ašaš-* 'seat'			
KBo III 28	9	Historical (Chronicles of Ḫattušili I)	(1)*-é*
KUB VII 1	390	Ritual (Ayatarša, Wattiti & Šušumanniga)	(1)
KBo XV 25	396	Ritual (against Wišuriyanza)	(1)
KBo V13	68	Historical(Kupanta-LAMMA Muršili II)	(2)
KBo III 22	1	Historical (Anitta)	(3)
KUB VII 41	446	Ritual (Purification of a house)	(3)
KBo IV 9	612	Festival (ANTAḪŠUM Fragments)	(3)
KBo VIII 121	634	Festival (Arinna)	(3)*-é*
16. **auš-* conflated 2,3, *-št*			
KBo VIII 41			(1)

KBo III 34 i 3	8	Historical (Ḫattušili I)	(1)
KUB XXIX 11	533	Omen and Oracle (Lunar Omens)	(2)

-H-

17. *ḫalāi-* *o*-grade, *š*-preterite			
KUB IX1	428	Ritual (Soldier's Oath)	(3)
KUB XXXVI 60	360	Mythological (Appu Tale)	(3)-*š*
18. *ḫaliḫlai-*			
KBo III 34	8	Historical (Chronicles of Ḫattušili I)	(2)
KUB XIV1	147	Historical (Madduwattaš)	(3)
19. *ḫalzāi-*			
KUB XIII 27	138	Historical (Treaty with Kaska)	(1)
Unidentified ref			(1)
KUB XXVI 86			(1)
KBo VIII 63	590	Vows (Fragments)	(1)
KUB XII 63	412.03	Ritual of Zuwi	(1)
KUB XII 63	412.03	Ritual of Zuwi	(1)
KUB XIV 1	147	Historical (Madduwattaš)	(2)
KBo XIX128	625	Festival (ANTAḪŠUM)	(3)
20. *ḫalzešša-*			
KUB XXX10	373	Hymns and Prayers (Kantuzzili)	(1)
KUB XIV1	147	Historical (Madduwattaš)	(2)
KUB XVII 7	345.01	Ullik Tabl 1	(3)
KBo XXI 85	628.11f	Festival (Hittite *ḫišuwaš* Festival)	(3)
KBo XVII 43	744	Texts in Other Languages (Hattian)	(3)
KUB IX 31 2 12			(3)
21. *ḫamank-*			
KBo XII 96	40	Historical	(1)
KUB IX 22	477	Rituals (Birth)	(3)
KBo V1	476	Ritual (Papanikri)	(3)
KBo XII 26	40	Historical (Muršili II)	(3)
KBo XII112	470	Ritual (Fragments)	(3)
22. *ḫān-*			
KUB X11	660	Festival (Offerings to Royal Images)	(3)
23. *ḫānna-*			
KBo XIX 70	69	Historical (Treaty Muršili II)	(1)
KUB XXXI 135	374	Hymns and Prayers	(2) prpr
KBo III 3	63	Historical (Arbitration Muršili II)	(3)
24. *ḫandai-*			
KBo III 23	24	Historical (Pimpira Fragment)	

KBo III 6	81	Historical (Apology) Kronasser 1966:476)	(3)
25. *ḫappinaḫḫ-* factitive 'make rich'			
KUB XLI 32	458	Ritual (Fragments of Incantations)	(1)
KUB XLVII 99	337	Mythological (Naming Pirwa)	(3)
26. *ḫarra-*			
27. *ḫaš-* 'give birth' *o*-grade			
KUB XXI 40	209.02	Historical (Fragments of letters)	(3)
ḫaš- ḫeš- 'open'			
KBo XXI 22	820		imperative
28. *ḫatk-*			
VBoT 58	323	Mythological (Disappearance of Sun)	(3)
KUB IX 31	394	Ritual (Ašḫella vs. plague in the army)	(3)
KUB XX 87	670	Festival (Festival Fragments)	(3)
KBo II 9	716	Festival (Ritual for Ištar of Nineveh)	(3)
29. *ḫatta-*			
KUB X 63	715	Festival (Ritual for Ištar of Nineveh)	(3)
KBo XX 40	670	Festival (Fragments)	(3)
KUB XLI 22	470	Ritual (Fragments)	(3) prpr
30. *ḫuittiyai-*			
KUB XXVII 67	391.1	Ritual (Ambazzi for Tarpatašši)	(3)
KBo XVII 88	744	Texts in Other Languages (Hattian)	(3)
KBo II 9	716	Festival Texts (Ritual for Ištar of Nineveh)	(1)
KUB XXXII 8	762	Texts in Other languages (fragments)	(3)
KBo III 66	655	Festival (Festival naming King Ḫantili)	(2)
KUB XXIX 1 ii 11	414	Ritual	(2)
KUB XXIX 30	292	Legal Texts (Laws 101 to 200)	(3pl) prpr
31. *ḫulla-*			
KBo VI 28	88	Historical (Decree. *ḫekur* of Pirwa)	(3)
KUB XXVI 50	225 (Landgrant of Tudhaliya IV to Šahurunuwa)	Administrative	(3)
KBo XXII 6	310	Literary Texts (Šar tamḫari)	istu + instr
KUB XVI 39	573	Omen texts (Bird Omens)	istu + instr
32. **ḫuwai-* 'call'-*š* preterite			
KBo XI 19	788	Texts in Other Languages (Salasu Ritual)	(1)
KBo III 4	61 I	Historical (10 year annals)	(3) *-š*
KUB XIV 13	378.04	Hymns and Prayers (4th Plague)	(3)
KUB XIX 39	61 II.06	Historical (Extensive annals) Muršili II	(3)
33. *ḫuwapp- š* preterite			
KUB VII 57	412.02	Ritual (Zuwi)	(1)
KUB XXVI 1	255	Administrative (Tud. IV to Princes & Lords)	(2)

KBo XVII 88	591	Festival (Monthly)	(3)
KBo XX 67	591	Festival (Monthly)	(3)
KUB XLIII 75	8	Historical (Chronicles Ḫattušili I)	(3)-*š*
34. *ḫuwart-* *š* preterite, figura etymologica			
KUB XXXIII 1	346	Mythological Texts (Kurmarbi Frags)	(1)
KUB IX 15	456	Ritual (Purification)	
KUB XXVI 71	1	Historical (Anitta)	(1)
KUB XXX 45	277	Administrative	
KUB XXII 70			(3)-*š*
		-I-	
35. *iyanna-* *š* preterite			
KBo XVII 4	416	Ritual (Royal Couple)	(1)-*é*
KBo XX 48			(3)
36. *innaraḫḫ-* *š* preterite			
KUB XXXVI 110	820	Text in Other Langs. (Labarna benediction)	(1)
	51	Historical(Treaty)	
	52	Historical(Treaty)	
37. *išḫai-*			
KBo XVIII 74	188	Historical (Letter to King/Queen)	(1)
KUB XIII15	292	Legal (Code)	(3)
KUB XII 58	409	Ritual (Tunnawiya)	(3)
38. *išḫamai-*			
KUB XXXIII 96	345.01	Mythological (Song of Kumarbi)	(1)
	364	Mythological (Song of Silver)	(1)
			(3)
39. *išḫuwai-* *š* preterite			
KUB XV 11	584	Vows (Dreams of the Queen)	(1)
KUB XXXI 84	261	Administration (Instructions for Border Officials)	(1)
KUB XII 44	392	Ritual(Anna's Ritual for an Unfruitful Vineyard)	(3)
KUB XXXVI 89	671	Hymns and Prayers (Storm God of Nerik)	(3)
KBo XIX 128	625	Festival (ANTAḪŠUM)	(3)
KBo X 24	627.1b	Festival (Hittite KI.LAM)	(3)
KBo V 2	471	Ritual (Ammiḫatna)	(3)
KUB II 72.	626.1	Festival (Outline of the Festival of Haste)	(3)
KUB XXIX 1	414	Ritual (Foundation)	(3)
KUB VII 54 ii 7 - iv	425.02	Ritual (Dandanku)	
42 b. *iš-ḫu-(u)-wa-an-na-aḫ-ḫi*			
KUB XII 44	261	Administration (Instructions for Border)	(1)
41. *išiyaḫḫ-*			
KUB XXXVI104	8	Historical (Ḫattušili I)	(3)-*š*
42. *iškalla(i)-*			

KBo VI 4	291	Legal (Code)	(3)
43. *išk-*			
KUB 29.44	285	Administrative (Treaty)	(1)-*mi*
KUB VII 1	390	Ritual (Ayatarša, Wattiti, & Šušumanniga)	(1)
KUB XLIV 61			
44. *iškar-*			
KUB XXXI 1 + KBo III16	311	Literary (Naram-Sin in Anatolia)	(1)
KBo XVII 96			(1)
KBo XII126	402	Ritual (Alli)	(3)
45. *iškitaḫḫ-*			
KUB X 1	627.1c	Festival (Hittite KI.LAM)	(3)
46. *iškunaḫḫ-* *-š* preterite			
KUB I 16 + KUB XL 65 6		Historical (Ḫattušili I)	(3) *-š*
47. *išpai-*			
Bo 4491			(3)
48. *išpand-*			
KBo XVII 6	416	Ritual (Royal Couple)	(1)-*é*
KBo XVII 1	416	Ritual (Royal Couple)	(1)
KBo XVII 3	416	Ritual (Royal Couple)	(1)
KUB II 13	591	Festivals (Monthly)	(3)
KBo V 2	471	Ritual (Ammi.)	(3)
KUB VI 45	381	Festival (Muwatalli's Prayer)	(3)
KBo XVII 75	631	Festival (Storm and Thunder)	(3)
KBo XXI 76	461	Ritual (Fragments of Medical rituals)	(3)
49. *išša-*			
KUB XIV 8	378.02	Hymns and Prayers (2nd Plague Prayer)	(1)
KBo V3	42	Historical (Šupplilulium I)	(1)
KBo XI 1	19	Historical (Telepinu)	(1)
KUB XXVII 38	775	Texts in Other Langs. (Ištanuvian)	(1)
KUB VII 5	406	Ritual (Paškuwatti vs. impotence)	(1)
KUB II 11	81	Historical (Apology)	(2)
KUB XXX10	373	Hymns and Prayers (Kantuzilli)	(2)
KUB XXIV 1	377	Hymns and Prayers (to Telepinu)	(3)
KBo VI 5	291	Legal (Code)	(3)
KBo XXII1	83.01	Historical (Ḫattušili III) NH	(3)
KUB XV 3	584	Vows (Dreams of the Queen)	supine
KUB XXIX 24	292	Legal (Code)	supine
KUB I 16	6	Historical (Ḫattušili I) OH	supine
50. *ištamaš-*			
Kbo V13	68	Historical (Treaty)	(2)
KBo V 4	67	Historical (Treaty)	(2)
KBo V 3	42	Historical (Treaty)	(2)

KBo V 3	42	Historical (Treaty)	(2)
KBo XII 96	433	Ritual (d.LAMMA kuršaš)	(2)
KUB XV 8	525	Cult Inventory Texts (Sanctuaries)	(2)
KBo III 38	3	Historical (Zalpa) OH	
51. *ištap-*			
KBo XVII 3	416	Ritual (Royal Couple)	(1)-*é*
KBo XVII 3	416	Ritual (Royal Couple)	(1)-*é*
KBo VI 26	292	Legal (Code)	(3)
KUB XXIII	137		(3)
KBo V 11	263	Administrative (Gateman)	(3)
52. *idalawaḫḫ-*			
KBo V			(2)
KUB VI 4	68	Historical (Treaty)	(2)
53. *yaya-*			
KUB XLIV 61			(3)
KBo XXI	461	Ritual (frags. of medical)	(3)

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54. *kank-* *o*-grade			
KBo XVII 1,2,3	416	Ritual (Royal Couple)	(1)
KBo XVII 1,2,3	416	Ritual (Royal Couple)	(1)-*e*
KUB IX 31	757	Texts in Other Langs. (Zarpiya's Ritual)	(1)
VBoT 24	393	Ritual (Anniwiyani's Ritual)	(1)
KBo XVII 2	416	Ritual (Royal Couple)	(3)
KUB XV 31	484	Ritual (Evocation)	(3)
KUB VII 60	423	Ritual (Evocation of Enemy gods)	(3)
55. *karap-* *o*-grade, *š* preterite			
KBo VI 2	292	Legal (1-100)	(3)
56. *karmalašša-*			
KBo VI 4	291	Legal	(3)
57. *kartimmiyaḫ(ḫ)-*			
KBo XVII 65	489	Ritual (Birth=When a woman conceives)	(3)
58. *kiš-*			
KBo XXII	3	Historical (Zalpa)	(1)prpr
KUB XIV	378.03	Third Plague Prayer	(1)prpr
KBo XVII	489	Ritual (Birth=When a woman conceives)	(2)prpr
KUB XXIX 1	414	Ritual (Foundation)	(2)prpr
KUB XIX 50	69	Historical (Treaty)	(2)prpr
KUB XXXIX 9	450.III	Rituals (Funerary)	(3)prpr
KBo XXV 139	752	Texts in Other Languages (Palaic)	(3)prpr
KUB XXXVI 105	8	Historical (Anecdotes)	(3)prpr
KUB XIII 4	264	Administration (Instructions)	(3)

KBo VI 2	291	Legal	(3)prpr
KUB VI 28	582	Oracle Fragments	(3)prpr
59. *kururiyaḫ(ḫ)-*		Bronzetafel aus Boğazköy	(2)

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60. *laḫ(ḫ)u(wai)-*			
KUB VII 1	390	Ritual (Ayatarša etc.)	(1)
KUB XXX 34	401.03	Ritual (Iriya)	(2)
KBo XVII 1	416	Ritual (Royal Couple)	(3)
KUB X 3	606	Festival (ANTAḪŠUM 2)	(3)pl
61. *lai- o*-grade			
KBo XVII 54	458	Hymns and Prayers (Incantations)	imperative
KUB XVII 27	434	Ritual (Ḫannaḫhanna + Gulšeš)	(3)
KBo XIII 137	654	Festival (Naming)	(3)
KUB I 13	284	Administrative (Kikku,)	(3)
KBo XIV133	706	Festival (Tešub and Hebat)	(3)
VAT 7470			(3)
62. *lak- o*-grade			
KBo VI 2	291	Legal	(3)
63. *lilak-*			
KUB XXIV 8	360	Mythological (Appu)	(3)
64. *lelḫuwai-*			
KUB XLV			(3)
KBo XII 112	477	Ritual (Birth)	(3)
ABoT 7	628.IIf	Festival (*ḫišuwaš*)	(3)
VBoT 1	151	Historical (Letter)	(3)
65. *lil(l)ipa(i)-*			
KUB VIII 67	345.02	Mythological Texts (Ḫedammu)	(3)

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Note: CTH 458.1 and CTH 426.2 are in birth Rituals (1983:85)

66. *mai-*			
KUB XXVII 10	324.01	Mythological (Telepinu: first version)	(3)
KBo III 7	321	Mythological (Illuyanka)	(3)
KUB XLIV 4			(3) *-št*
67. *malla-*			
KBo XV 35	330.01	Mythological (Stormgod of Kuliwišna)	(3)
68. *mald- o*-grade			
cited in text			(1)
KUB XXVIII 95	744	Texts in Other Languages (Hattian)	(3)
KUB I 14	744	Texts in Other Languages (Hattian)	(3)

69. *maniyaḫ(ḫ)-*			
KBo IV 4	61 II.05	Historical (Muršili II)	(1) pret
KBo IV 4	61 II.05	Historical (Muršili II)	(2)
KBo V 9	62.II	Historical (Muršili II)	(2)
KUB XLIII 26	631	Festival (Storm and Thunder)	(3)
70. *manninkuwaḫḫ-*			
KUB XI 32	738	Texts in Other Languages (Teteshapi)	(3)
71. *mark-*			
KUB XVII 3	416	Ritual (Royal Couple)	(1)
marra-			
KUB 43.60	457	Ritual (Incantation and Myth)	
72. *maušš-/mu*			
KUB XLIII 60	457	Ritual (Incantation and Myth)	(1)
KUB VIII 24	535.01	Omen and Oracle (Astral Omens)	(3)-*mi*
KUB I 16	6	Historical (Ḫattušili I)	(3) -prpr
73. *mema-*			
KBo XVII 5	416	Ritual (Royal Couple)	(1)
KBo XVII 7	416	Ritual (Royal Couple)	(1)
KBo XVII 1	416	Ritual (Royal Couple)	(1)
	393	Ritual (Anniwiyani)	(1)
cited in text			(2)
	81	Historical (Apology)	(3) -*št*
KBo XXII 2	3	Historical (Zalpa)	(3 pl)
KUB XV 31	484	Ritual (Evocation)	(3)
KUB XII 12	628.IIb	Festival (*ḫišuwaš*)	(3)
KUB II	725	Texts in Other Languages	(3)
KBo XI 19	788	Texts in Other Languages	(1)
74. *mimma*			
KBo VI 2			(3)
cited in text	291	Legal (Laws)	(3)

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75. *naḫḫ- o*-grade			
KUB XXXI 100	275	Administrative (Instructions)	participle
KUB I 16	6	Historical (Ḫattušili I)	participle
KUB XLIX 3	573	Omens (Bird Oracles)	(3)
KUB XXXIII 24	325	Myth (Disappearing Stormgod)	(2)
KBo XIII 131	401.02	Ritual (Iriya, for town purification))	(2)
KBo XXI 90	738	Texts in Other (Festival for Teteshapi)	(2 imp)
KBo XXI 103	738	Texts in Other (Festival for Teteshapi)	(2 imp)
	81	Historical (Apology of Ḫattušili III)	(2)

76. *nai-* *o*-grade			
KUB 26.71	18	Historical (Ammuna 'Chronicle')	(3)
KBo 3.4	61.I	Historical (Muršili II)	(3)
	291	Legal (1-100)	(3)
KUB IX 31	394	Ritual (against plague in army)	(1)
KUB I 16	6	Historical (Ḫattušili I)	(2)
KBo IV 9	612	Festival (ANTAḪŠUM fragments)	(3)
77. *nanna-*			
KUB IXX 18	40	Historical (Muršili II)	(3)
cited in text			(3)
KBo XXII 2	3	Historical (Zalpa)	(3)-*mi* pl
KUB XXVI 71	18	Historical (Ammuna)	(3 pl)

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78. *paḫš-*			
KUB XXIII	105	Historical (Treaty)	(1)
			(1) prpr
KUB I 16	6	Historical (Ḫattušili I)	(2) prpr
KBo V 3	42	Historical (Treaty with Ḫukkana of Ḫayaša)	(2) prpr
KUB XXXVI 127	131	Historical (Treaty)	(3) prpr
79. *pai- š* preterite, *o*-grade			
KUB XLIII	416	Ritual (Royal Couple)	(1) -*e*
KBo XVII 56	416	Ritual (Royal Couple)	(1) -*e*
KBo XVII 4	416	Ritual (Royal Couple)	(1) -*e*
KUB VII 1	390	Ritual (Ayatarša, Wattiti, & Šušumanniga)	(1) pret
KBo V 3	416	Ritual (Royal Couple)	(1) -*e*
			(2)
KUB XXVI 19	140	Historical (Kaška Treaty)	(3)
	291	Legal (Laws)	(3)
80. *papraḫḫ-*			
KUB XXIV 7	363	Mythological Texts (Cow and Fisherman)	(2)
KUB XXXIII 120	344	Mythological Texts (Kumarbi)	(3)
81. *parai-* 'blow'			
KBo XI 11	411	Ritual (Uruwanda)	(1)
KBo XX 78			(3)
			(3) -*š*
82. *pariparai-* 'blow a musical instrument'			
KUB XXXV163	754	Texts in Other Langs. (Palaic)	(3)
83. *parai-* 'appear'			
KUB VIII 1.ii 17	532.II.01	Omens (Lunar eclipse)	(3)

KUB VIII 1.iii 9-10	532.II.01	Omens (Lunar eclipse)	(3)
84. *párḫa*			
KUB I 11	284	Administrative (Kikkuli)	(3)
84. *párḫanna-*			
KBo V 3	284	Administrative (Kikkuli)	(3)
85. *pár-aš / pár-ši-ya*			
KBo XVII 3	416	Ritual (Royal Couple)	(1) prpr
KBo XI 28	711	Festival (Ištar of Šamuḫa)	(3)
KBo XXX 4		Ritual (Birth)	(3)
KUB X 17	594	Spring Festival at Tippuwa	(3)
KBo IX 140	616	Festival (ANTAḪŠUM 29th day)	(3) prpr
86. *pár-ši-ya-an-na-*			
87. *pašš-*			
	757	Texts in Other Langs. (Zarpiya's Ritual)	(3)
KUB XXVII 29	780.4	Texts in Other Langs.(Allaituraḫi Ritual)	(3)
88. *pa/idda-*			
KUB XII 44	392	Ritual (Anna's vs. Fruitless Vineyard)	(1)
KBo XVII 5	416	Ritual (Royal Couple)	(1)
KUB XXIX 30	292	Legal (Code)	(3)
KBo X 37	429.01	Ritual (OH curse)	(3)
89. *penna- -š* preterite			
KUB IX 31	394	Ritual (Ašḫella against a plague in the army)	(1)
KUB XXIII 87	209	Historical (Letter fragments)	(2)
	292	Legal (Code)	(3)
KBo VI 2	291	Legal (Code)	(3)
		Kikkuli text	(3)
90. *peda-š* preterite			
KBo XVII 61	430	Ritual (Birth)	(1)
KBo XVII 4	477	Ritual (Royal Couple)	(1) *-e*
KUB XXX 34	401.03	Ritual (Iriya's Ritual)	(2)
KUB 37.223	547.II	Omens (Liver in Akkadian and Hittite)	(2)
KBo V 2	417	Ritual (Ammiḫatna)	(3)
B aus B	106	Historical (Treaty with Ulmitešub)	(3)
	291	Legal (Code)	(3)
	81	Historical (Apology of Ḫattušili III)	(3)-*š*
91. *pippa-*			
		Citation in CDH	(2)
KUB XVII 27	434	Ritual (Ḫannaḫanna + Gulšeš)	(3)
92. *pidda*(i)- *o*-grade			
KBo IV 14	123	Historical (Treaty with an Unknown party)	(3)

KBo XVII 43	744	Texts in Other Languages (Ḫattian)	(3)

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93. *šaḫ- o*-grade			
KUB XXXIX 88	718	Texts in Other Languages	(3)
KUB XXXVI110	820	Texts in Other languages (Labarna Ben.)	derivative
94. *šai- o*-grade			
KUB XLVIII 99	337	Mythological Texts (Pirwa)	(3)
KUB XXXIX 9	450.III	Rituals (Funerary)	(3)
Possibly to be restored in the expression 'press to heart' = 'remember':			
KBo XVII 65	489	Rituals (When woman conceives) *karta šai-*	(1)
KBo XVII 65	489	Rituals (When woman conceives) *karta šai-*	(1)
95. *šak- o*-grade			
KUB XXIII 45	209.15	Historical (Letter fragments)	(1)
?KUB XXIII 86	210	Historical (Varia)	(1)
?KUB XXV	145		(1)
KBo X12	49	Historical (Treaty with Aziru of Amurru)	(1)
KUB XXVI 1	255	Administration (Tudḫaliya IV)	(2)
KUB XXIV 8	360	Mythological (Appu)	(2)
KBo XI 1	382	Hymns (Prayer to Tešḫub of Kummanni)	(2)
KUB XXXVI 32	351	Myth (Ea)	(2)
KBo I 30	305.II	Lexical (LU)	(3)
VBoT LVIII 1	323	Myth (Disappearance of the Sun)	(3)
	Kronasser 1966:517		(3)
?KUB XXVI 26			
96. *šalik-*			
KUB V 6	570	Omen and Oracle Texts (Liver)	(2)
KBo II 2	569	Omen and Oracles (purification of kingship)	(2)
KUB XIII 4	292	Legal (Code)	(3) prpr
97. *šanna-*			
KBo III 38	3	Historical (Zalpa)	(1)
KBo XVII 1	416	Ritual (Royal Couple)	(1) *-e*
MORE			
KUB XXIX 20	291	Legal (Code)	(3)
KUB XXXIII 67	477	Ritual (Birth Rituals)	(3)
?KUB 8.1 ii 17			
98. *šarap- o*-grade			
KUB XXVII 29	780.4	Ritual (Allaiturašḫi)	(3)
	Kronasser 1966:520		(3)
99. *šarra-*			
	49	Historical (Treaty with Aziru of Amurru)	(2)

KBo V 9	62.II	Historical (Treaty with Duppi-Tešub of A.)	(3)
KUB XVII 21	375.1	Hymns and Prayers (re Nerik)	(3)pl-*mi*
KUB XIV1	147	Historical (Madduwattaš)	(2) prpr
KBo VI 34	427 II	Ritual Texts (Soldier's Oath)	(2) prpr
KUB XXVI108	25	Historical (Treaty)	(3) prpr
KUB XXII 68	582	Omen and Oracle Texts (Fragments)	(3) prpr
KUB XX10	373	Hymns (Kantuzilli's Prayer)	(1) pret
KUB XIV1	147	Historical (Madduwattaš)	(3) pret
100. *šešḫa-*			
KUB XV11	584	Vows (Dreams of Queen)	(1)
		Bronzetafel aus Boğazköy	(1)
KBo V 9	62.II	Historical (Treaty with Duppi-Tešub of A.)	(3)
101. *šipant-*			
KUB VII 5	406	Ritual (Paškuwatti)	(1)
KBo V 2	471	Ritual (Ammiḫatna)	(1)
KUB VII 1	390	Ritual (Ayatarša etc)	(1)
KBo XV10	443	Ritual (Ziplantawiya)	(3)
102. *šišša-*			
KUB I 16	6	Historical (Ḫattušili I) OH	(2)
103. *šuḫḫa-*			
KUB XXVII 67	391.1	Ritual(Ritual of Ambazzi for Tarpatašši)	(3)
KUB VI 45	381	Ritual (Muwatalli's Prayer to Storm-God)	(3)
KUB VIII 36	279	Administration	(3)
			(3) -*š*
104. *šunna-*			

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105. *da-*			
KBo XVII 4	416	Ritual (Royal Couple)	(1) -*e*
KBo V 1	476	Ritual (Papanikri)	(3)
KUB XXXIX 71	718	Texts in Other Languages (Babylonian)	(3)
KUB XII12	628.IIf	Festival (ḫišuwaš)	(3)
106. *dāi-*			
KBo XXII 2	3	Historical (Zalpa) *karta dāi-*	
KBo XII104	393	Ritual (Anniwiyani)	(1)
KBo XII104	393	Ritual (Anniwiyani)	(1)
KBo XVII 4	416	Ritual (Royal Couple)	(1) -*é*
KBo III 28	9	Historical (Palace Chronicles)	(2)
KBo V 1	476	Ritual (Papanikri)	(3)
KBo V1	476	Ritual (Papanikri)	
KBo III 28	9	Historical (Ḫattušili ?)	

KBo XXIV 9	402	Ritual (Alli)	(3)
KBo III 15			(3) *-š*
KUB XXXVI100	15	Historical (Zukraši of Aleppo)	(3) *-š*
KUB III 53			(3) *-š*
107. *taištāi-*			
	292	Legal (Code)	(3)
KBo X .2	4	Historical (Ḫattušili I)	participle
108. *dakk-*			
KUB XLIII 53	412.08	Ritual (Zuwi)	(3)
109. *dala-*			
KUB XIII 20	259	Administrative (Tud.II)	(1)
			(2)
KUB XXXIII120	344	Mythological (Kumarbi)	(3)
110. *tariya*			
111. *tarna-*			
KBo XVII 1	416	Ritual (Royal Couple)	(1) *-e*
KBo XVII 1	416	Ritual (Royal Couple)	(1) *-e*
KBo XVII 1	416	Ritual (Royal Couple)	(1)
KBo XVII 60	430	Ritual (Birth)	(2)
KBo IV 2	398	Ritual (Ḫuwarlu)	(2)
KUB XXXIII	67		(3)
KUB XLIV 61 i	9	Medical Texts	(3)
KUB XLIV 61 i	13	Medical Texts	(3)
KUB XLIV 61 i	16	Medical Texts	(3)
KBo XXI 76	13	Medical Texts	(3)
KUB XLIV 63 ii	7-8	Medical Texts	(3)
KUB XLIV.63 ii	8	Medical Texts	(3)
	292	Legal (Code)	(3)
112. *dašuwaḫḫa*			(3)
113. *dušk-*			(2)
			(3)
114. *duwarna-*			
KBo XI19	788	Texts in Other Languages (Ritual.Šalašu)	(1)
KUB XXIV 9	402	Ritual (Alli)	(3)
KUB XXIV11	402	Ritual (Alli)	(3)

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115. *unna-* preverb			
KUB XXIII 87	209	Historical (Letters in Hittite)	(1)
		Kronasser 1966:567	(2)
KBo VI 3		Legal (Code)	(3)

KBo XIV 15	40	Historical (Deeds of Šuppiluliuma)	(3) *-šṭ*
116. *uppa-* preverb			
KBo XVII 65	489	Ritual (When a Woman Conceives)	(1)
KBo IX 82	197	Historical (Maša to his Lord)	(1)
KUB XIII 3	265	Administrative (Palace Servants)	(1)
KBo X 12	49	Historical (Treaty with Aziru of Amurru)	(2)
VBoT 8.81		Kronasser 1966:547	(3)
		Kronasser 1966:378	(3) *-š*
117. *uda-* preverb			
KBo III 3	63	Histrorical (Treaty)	(1)
KUB LVI 46	649	Texts in Other Languages	(3)
KBo XIX 30	238	Administrative (Lists of cities)	(3) *-š*

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118. *wai-*			
KBo II 21	778.III	Texts in other Languages (Ḫurrian Rituals)	(3)
119. *wak-*	291	Legal (Code)	(3)
120. *walḫ-*			
KBo X 12	49	Historical (Treaty with Aziru of Amurru)	(2)
121. **walla-*			
KUB XXIV 7	717	Texts in Other Languages (Hymn to Ištar)	(1)
122. *wāra-*			
KUB XVII 27 II 26	434	Ritual for Ḫannaḫanna + Gulšeš	(3)
KUB XXX 15 Vs. 10	(*warani*)		
123. **wareššа-*			
KBo X 12	49	Historical (Treaty with Aziru of Amurru)	(2)
124. **waš-* *o*-grade			
		Legal (Code)	(3)
125. **wašta-*	292	Legal (Code)	(3)
	292	Legal (Code)	(3)
	292	Legal (Code)	(3)
	292	Legal (Code)	(3)
KUB LVII 56	252	Administrative Texts (from Ašmunikal)	(3)
126. **wātarnaḫḫ-*			
KUB XIII 20	259	Administration (Tudḫaliya II's Instructions/Military)	(1)
cited in text			(2)
cited in text			(3)
KBo III 38	3	Historical (Zalpa)	(3) *-š*
127. *weda-*		Kronasser 1966:544	(1)
KBo XII 39	141	Historical (Treaty with Alašiya)	(3) *-š*
128. *wewakk-*			

KBo V 2	470	Ritual (Ammiḫatna)	(3)
129. *wiwa-*		Kronasser 1966: 490, 549	(3)

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130.*$z\bar{a}ḫ$- *o*-grade			
cited in text		Kronasser 1966:387	(3)
131.**zai-* preverb, *o*-grade			
cited in text		Kronasser 1966:542,574	(2)
cited in text		Kronasser 1966:542	(3)
KBo III 6	81	Historical (Apology)	(3) *-š*
KUB V 1	561	Oracle questions about king's campaign.	(3) *-š*
132.**zinna-* preverb			
cited in text		Kronasser 1966:567	(1)
KUB XXII 70	566	Omens and Oracles (Arušna)	(3)
			(3) *-št*

Other citations from Volume II:

KBo III 60	17	Historical Cannibal Story OH (Josephson 1972:322)		Various
KBo III 1	19	Historical Telipinu Proclamation II	OH	Various
KBo XVI 98				

Citations from Volume I, Chapter Seven:

KBo XXII 2 Rs. 11-13 (Otten 1973:12). Fragments naming the City of Zalpa. (CTH 3)

KBo III 34 II 6-7 (Friedrich 1967:57). Anecdotes (Palace Chronicles) of the Reign of Ḫattušili I. (CTH 8)

KBo III 60 = BoTU 21 (Güterbock 1938:104,105). The Cannibal Story. (CTH 17)

KUB XI 1 (BoTU 23B) + KBo 19.96 XI 1, 32-34. The Proclamation of Telepinu, Hittite Version. (CTH 19)

KBo XVI 98 II 12. Oracles concerning the purification of kingship (Tudḫaliya IV). (CTH 569)

KUB VII 1 II. Ritual of Ayatarša, Wattiti, and Šušumanniga. (CTH 390)

KUB VII 1 I 2. Ritual of Ayatarša, Wattiti, and Šušumanniga. (CTH 390)
KUB XIV 17 II 12. Extensive Annals of Muršili II (1339-1306), year 7. (CTH 61.II.04)

KUB XV 34 IV 12. Evocation (CTH 483)

KBo V 8 II 16-17. Extensive Annals of Muršili II (1339-1306), years 15-22. (CTH 61.II.07)

KBo II 6 II 24-25. Oracles concerning the purification of kingship (of Tudḫaliya IV). (CTH 569)

KBo XV 10 I 32. Ziplantawiya. (CTH 443)

KUB XV III 42. The Madduwattaš Text. Arnuwanda I (1420-1400). (CTH 147)
Bo 3217 Vs.7

KUB V 6 IV 5. The Liver Oracles. (CTH 570)

KUB XLIV 63 II 10. Hethitische medizinische Texte (StBoT 19 = Burde 1974).

KBo V 1 IV 4. Papanikri. (CTH 476)

The Proclamation of Telepinu (1525-1500). KUB XI1 (BoTU 23B) + KBo XIX 96.

The Apology (CTH 81) (also treated in StBoT 24 = Otten 1981).

KUB XVII 28 IV 45. Ritual for an Army in Retreat. (CTH 426)

Bo 2025 ?KBo IV 2 III 40. Muršilis Sprachlähmung Rs. 21.

APPENDIX IV

LIST OF HITTITE KINGS

[Sources: Gurney 1974, Otten StBoT; Justus 1983, 1995; Kammenhuber 1993; Bryce 1998 (where sources disagree, Bryce appears in parentheses)]

OLD HITTITE PERIOD (early 18th century BCE- 1500 BCE)

Pithana	Early 18th century BCE
Anitta	Mid 18th century BCE
Labarna	ca. 1680-1650 BCE
Ḫattušili I	ca. 1650-1620 BCE
Muršili I	ca. 1620-1590 BCE
Ḫantili	ca. 1590- 1560 BCE
Zindanta I	ca. 1560- 1550 BCE
Ammuna	ca. 1550- 1530 BCE
Ḫuzziya I	ca. 1530-1525 BCE
Telipinu	ca. 1525- 1500 BCE
Ḫantili II	ca. 1500-1450 BCE
Zidanta II ?	
Ḫuzziya II ?	
Muwatalli I ?	

Middle Hittite (New Kingdom)

Tutḫaliya II	ca. 1450-1420 BCE (1400-1360)
Arnuwanda I	ca. 1420-1400 BCE (1400-1360)

Tutḫaliya III ca. 1400-1380 BCE (1360-1344)

Ḫattušili II ? (1400-1360)

The Classical New Hittite Empire (1380 - 1200 BCE)

Šuppiluliuma I ca. 1380-1340 BCE (1344-1322)

Syncretisms with Egyptian Akhenaton (1354-1337) have caused the dates of Šuppliluliuma's reign to be recomputed downwards by 20 years or so.

Arnuwanda II ca. 1340-1339 BCE (1322-1321)

Muršili II ca. 1339-1306 BCE (1321-1295)

During the reign of Muršili II (ca. 1350 BCE in Justus 1995:246), the use of the *Glossenkeile* (double wedges) was introduced before words in a Hittite text to mark them as foreign (usually Luwian). When such foreignisms became extremely common, this usage was discontinued.

Muwatalli II ca. 1306- 1282 BCE (1295-1272)

Muršili III ca. 1282-1275 BCE (1272-1267)

Ḫattušili III ca. 1275-1250 BCE (1267-1237)

Ḫattušili III's wife was Puduḫepa, a Ḫurrian priestess from Kizzuwatna. This resulted in an upsurge in Ḫurrian influence and the recopying of several OH texts.

Tutḫaliya IV ca. 1250-1220 BCE (1227-1209)

Karunta ? ca. (1228-1227)

Arnuwanda III ca. 1220-1215 BCE (1209-1207)

Šuppliluliuma II ca. 1215-1200 BCE

APPENDIX V

REPRESENTATIVE PARADIGMS OF THE HITTITE *-ḫi* CONJUGATION

I. Consonant stems

	šāk- 'know'	ak- 'die'	ār- 'arrive'
PRESENT			
	Singular		
1.	šāk-ḫi (šaggaḫḫi) 'I know'	----------	ār-ḫi 'I arrive'
2.	šak-ti 'you know'	ak-ti 'you die'	ār-ti 'you arrive'
3.	šakk-i 's/he knows'	ak-i 's/he dies'	ar-i 's/he arrives'
	Plural		
1.	šekk-ueni 'we know'	akk-ueni 'we die'	e-ru-weni 'we arrive'
2.	šek-teni 'y'all know'	akk-teni 'y'all die'	e/a/ār-teni 'y'all arrive'
3.	šekk-anzi 'they know'	akk-anzi 'they die'	ar-ānzi 'they arrive'
PRETERITE			
	Singular		
1.	šagga-ḫḫun 'I knew'	--------	āraḫḫun 'I arrived'
2.	šak-ta 'you knew'	--------	---------
3.	šakkiš 's/he knew'	ak(k)-iš 's/he died'	ār-aš 's/he arrived'
	šak-ta	ak-ta	
	šek-ta		
	Plural		
1.	šekk-uen 'we knew'	--------	er-wen 'we arrived'
2	--------	--------	-------
3	šekkir 'they knew'	ekir/akir 'they died'	er-ir 'they arrived'
			ara-ir

IMPERATIVE

Singular

1.	šeggallu	aggallu	
2.	šāk	ak	
3.	šākdu	aku	
		akdu	aru

Plural

1.	--------	-------	------
2	šekten	-------	arten
3	--------	akkandu	------

Participles: šekkant- 'knowing' akkant- 'dead' arant 'arrived'

II Vocalic stems

da- 'take' dai- 'put' uda- bring' mema- 'say'

PRESENT

Singular

1. daḫḫi 'I take'	teḫḫi 'I put'	udaḫḫi 'I bring'	memaḫḫe 'I say'
2. datti 'you take'	dāiiti 'you put'	udatti'you bring'	mematti 'yousay'
3. dāi 's/he takes'	dāi 's/he puts'	udāi's/he brings'	memai 's/he says'

Plural

1. dāu̯eni 'we take'	tiịau̯eni 'we put'	utummeni 'we bring'	memau̯eni 'we say'
2. datteni 'y'all take'	tāitteni 'y'all put'	udatteni 'y'all bring'	mematteni 'y'all say'
3. danzi 'they take'	tiịanzi 'they put'	udanzi 'they bring'	memanzi 'they say'

PRETERITE

Singular

1. daḫḫun 'I took'	teḫḫun 'I put'	udaḫḫun 'I brought'	memaḫḫun 'I said'
2. dāš 'you took'	------	-------	------
3. dāš 's/he took'	dāiš 's/he put' dāišta	udaš 's/he brought'	memišta 's/he said'

Plural

1. dāu̯en'we took'	tii̯au̯en 'we put'	utummen 'we brought'	---------
2. datten 'y'all took'	-------	------	memišten 'y'all said'
3. dāir 'they took'	piēr 'they put'	uter (utir) 'they brought'	memir 'they said'

IMPERATIVE

Singular

1.	-----	-----	-----	memallu
2.	dā	dāi	uda	memi
3.	dāu (daddu)	dāu	udāu	memau

Plural

1.	-------	--------	---------	-------
2	datten	dāišten	udatten	memišten
3	dandu	tii̯andu	udandu	memandu

Participles:	dant-	tii̯ant-	udant-	memant-

III Mixed /Irregular

PRESENT

Singular	Plural
1. uḫḫi 'I see'	aummeni 'we see'
2. autti 'you see'	auteni 'y'all see'
3. aušzi 's/he sees'	uu̯anzi 'they see'

PRETERITE

Singular	Plural
uḫḫun 'I saw'	aumen 'we saw'
ašta 'you saw'	-------
ašta 's/he sees'	auer 'they saw'

IMPERATIVE

Singular	Plural
1. uu̯allu	------
2. au	ašten
3. ašdu	uu̯andu

APPENDIX VI

SOME MORPHOLOGICAL AND SEMANTIC COGNATES OF HITTITE *-ḫI* VERBS WITH IE "MIDDLES"

(Bolded items are both morphological and semantic cognates. This is a partial listing only.)

Hittite *-ḫi* conjugation verb	Greek "middle"	Sanskrit *ātmanepada*	Latin "deponent"
ak- 'die'		*márate* 'he dies'	*morior* 'I die'
anš- 'wipes'	ὀμόργνυμαι 'I wipe off'		
ār- 'arise'/'arrive'	**ὄρνυμαι** 'I rise' γίγνομαι 'I arise' ἀφικνέομαι 'I arrive'	*pravartate* 'arises'	***orior*** 'I rise'
ark- 'mounts'	**ὀρχεῖται** 'he writhes lasciviously'	***ṛghāyáte*** 'he is impetuous'	
ašāš- 'sit'	**ἧσται** '(s)he sits' κάθημαι 'I sit'	***āste*** 's/he sits', ***āse*** 'I sit'	
auš- 'see'	δέρκομαι 'I see'	*ṕkṣe* 'I see'	
ḫalāi 'sets in motion'	**ἄλλομαι** 'I leap'		
ḫaliḫlai 'genuflects'	**λιάζομαι** 'I shrink'		

ḫalzai- ‘ call’	παραμυθέομαι ‘I encourage’ παρακαλέομαι ‘I exhort’	*háve* ‘I call’ *bhāṣate* ‘(s)he speaks ***hrādate*** ‘sounds’ *navate* ‘cry out’	*hortor* ‘I encourage’
ḫānna- ‘judge’	ἀποκείρομαι ‘respond’ (< κείρω ‘I judge’)	*avapari-ṫkṣe* ‘I judge’	*arbitror* ‘I judge’
ḫamank- ‘bind’	δέδεται ‘(s)he binds’		
ḫanna- ‘quarrel’	**ὄνομαι** ‘quarrel’		
ḫatk- ‘lock’, ‘cover’	**ἄχθομαι** ‘be burdened’	***bādhate*** ‘presses’ *várate* ‘covers’	
ḫuwai- ‘run’	**ἴεμαι** ‘I go’		
iyānna- ‘ go’	ἔρχομαι ‘I come’	*gacche* ‘I go’, ***iye*** ‘I go’	*proficīscor* ‘I set out’ *trānsgredior* ‘I cross’
išḫamai- ‘sing’		*gāye* ‘I sing’	
iškit(t)aḫḫ- ‘signal’	**ἡγέομαι** ‘I perceive’ αἰσθάνομαι ‘I perceive’		
ištamaš- ‘obey’	πείθομαι ‘I obey’		
kank- ‘hang’		***śáṇkate*** ‘(s)he doubts, hesitates’	***cunctor*** ‘I delay’
karap- ‘eats’		***ja(m)bhate*** ‘(s)he snaps at’	

kiš- 'become'	πέλομαι 'I turn/become' γίγνομαι 'I become'	*vartate* 'turns/becomes'	
la(i)-	**λύομαι** 'I ransom'		
lak- 'tumble'	λέχομαι 'I lie down'		
mai- 'grow'	αὐξάνομαι 'I grow'	*edhate* 'grows' ***mimṝte*** 'is conceived'	*augētur* 'grows'
mald- 'recite'			*precor* 'I pray'
mauš- 'fall'	ἀμύνομαι 'defend self against'		
mema- 'speak'	μυθέομαι 'I speak' **μέμνημαι** 'I remember'	*bhāṣe* 'I speak' ***mamné*** 'thinks'	*loquor* 'I speak'
naḫ- 'fear'	φοβέομαι 'I fear'	*bháye* 'I fear'	*vereor* 'I fear'
nai- 'lead', 'turn'	ἡγέομαι 'I lead'	*vartate* '(s)he turns'	*comitor* 'I accompany'
pai- 'give'	δωρέομαι 'I give'		*mūneror* 'I donate'
paḫ- 'protect'		*rākṣase* 'you protect'	***pascor*** 'I protect' *tueor* 'I protect'
pašk- 'plant'			***paciscor-*** 'agree upon'
šaḫ- 'clog'	**ἄμεμαι** 'satisfy oneself'		

šak- 'know'	ἐπίσταμαι 'I know'	*manye* 'I think', *rabhate* '(s)he thinks'	
šalik- 'approach'	προσέρχομαι 'approach'		
dakk- 'is the same as'	**δέκ/χομαι** 'I accept'		
dušk- 'rejoice'	ἥδομαι 'I am delighted'	***tośate*** 'be satisfied'	*fruor* 'I enjoy'
uda- 'bring'	κομιζομαι 'I carry back'		
walḫ- 'fight'	ἔρχομαι 'I fight' μάχομαι 'I fight'		*aggredior* 'I attack' *adorior* 'I attack'
nanna- 'drive'		*aje* ' I drive'	
waš- 'buy'	**ὠνέομαι** 'I buy'		

APPENDIX VII

COMPARISON OF VOICE-RELATED ENDINGS

	PreIE	PIE	Hittite	Sanskrit Perfect	Sanskrit *ātmanepada*	Greek Perfect
1sg	$-H_2$	$-H_2e$	sak-ḫ-i	véd-a (< $*-H_2e$)	-i (< $*-H_2$)	oîd-a (< $*-H_2e$)
2sg	$-tH_2$	$-t^he/o$	sak-t^h-i	vét-tha (< $*-tH_2e$)	-thas (<$*-tH_2$)	oîs-tha (< $*-tH_2e$)
3sg	-Ø	-e/o	sak(k)-i	véd-a (< -o?)	-ta	oîd-e (< *-e)

APPENDIX VIII

COMPARISON OF SIMPLE AND COMPLEX PHONEMES, WITH SOME POSSIBLE OUTCOMES

PIE sequence of STOP + $*H_2$ became the voiceless aspirates in IE. The following is an example of how such developments were manifest in the three archaic daughters.

IE COMPLEX	IN DAUGHTERS		GREEK		SANSKRIT		HITTITE
$*PH_2$	PH	>	ph /ϕ/ = [p^h]	=	फ [p^h]	=	N/A [-p^h]
$*TH_2$	TH	>	th /θ/ = [t^h]	=	थ [t^h]	=	(-*ti*) [-t^h]
$*KH_2$	KH	>	kh /χ/ = [k^h]	=	ख [k^h]	=	(-*ḫi*) [-k^h]
These are all in opposition to the "plain" stops:							
	P	>	p /π/ = [p]	=	प [p]	=	N/A [-p]
	T	>	t /τ/ = [t]	=	त [t]	=	(-*zi*) [-t]
	K	>	k /κ/ = [k]	=	क [k]	=	(*uk*/*g*) [-k]

At a very early stage, the "complex" could have any of the following reflexes. I use $*KH_2$ as an example:

$*KH_2$

- k (plain velar stop) — (attested in the independent direct case 1st person singular pronoun *uk* 'I'.
- kh (aspirated velar stop) — (attested in 2nd sg. "middle" endings of Greek θ and Sanskrit थ)
- ḫ (reflex of IE $*H_2$) [x] — (attested in the cliticized Hittite 1st person singular direct case marker - *ḫ*, the source of the verbal inflection marking centripetal diathesis)
- h (independent aspiration) — (implied in Sanskrit *ah-* 'I', later with the particle *-am*)