

# Phonology and Philology in a Cuneiform-written Language\*

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*Cum gratitudine Martino Peters dicatus*

1.1. This book is in many ways an unprecedented landmark in Anatolian studies; before the late sixties hittitology had made but little progress towards the establishment of a regular comparative grammar, especially in historical phonetics, which covered 48 pages (18-66) in the second edition of Sturtevant's *Comparative Grammar of the Hittite Language* (1951), where only *Paradeetymologien*, hence a small part of Hittite vocabulary, were made use of, and interpreted in a manner which convinced nobody but Sturtevant himself. In Kronasser's *Etymologie der hethitischen Sprache* (1966) only internal evidence was considered, and furthermore often uncritically. Thus Kammenhuber could write, HO p. 181: "[D]ie schriftliche Wiedergabe des Lautstandes ist ähnlich mangelhaft wie die des Griechischen in der kyprischen Silbenschrift und im Linear B (...). Wir müssen uns deshalb zunächst von dem Vorurteil frei machen, daß man eine Sprache nur begreifen könne, wenn man ihre Phonetik, ihre Phonologie, kenne. Wir kennen sie beim Heth. nicht". Twenty-five years later the 457 pages of the *Anatolian Historical Phonology* not only testify that a comparative phonology of Hittite is no longer beyond our hope, but also present the first Hieroglyphic Luvian, the first Lycian, the first Lydian, the first Carian phonetics, the first systematic approach to Anatolian comparative linguistics: in these matters, almost a *proles sine matre creata*.

1.2. Not only quantitatively is this book a turning point. The few scholars of Anatolian phonetics in the seventies (Čop, Held and Schmalstieg, Eichner, later Melchert, Oettinger, Puhvel, Starke, Kimball, etc.) worked at first separately and came to divergent results, which did not help sceptics in believing that scientific Hittite phonetics was possible. Now the isolated research converges and a *communis opinio* emerges: For instance, Eichner had assumed that *scriptio plena* transcribed long vowels developed from accented vowels irrespective of their original quantity, at least in open syllables<sup>1</sup> (MSS XXXI, 1972, pp. 72, 73sq., n. 78 p. 98; *LuE*, pp. 128sq. n. 41, 144 n. 65, 162, 163; etc.); this rule was distorted by Oettinger § 436, rejected by Melchert, HHP, n. 11 p. 84, and Kimball did not come to very positive results in her PhD *Hittite Plene Writing*. But Zucha p. 370sq. followed Eichner, and Melchert, *Towards a Hittite Grammar*, 1992, p. 186,

and here p. 27, now joins them. All agree that accented *e* and *i* were kept distinct phonemes at all epochs of Hittite (p. 100), or upon how Cuneiform Luvian treated short vowels (p. 261sq.). "There is a broad, though not universal, consensus on the development of laryngeals in Anatolian" (Melchert p. 64); the remaining controversies affect (besides \*°RH°, q.v. 4.2.4 and 4.3.1) \*°Vh<sub>2</sub>g° (see 1.2.1) and \*°h<sub>3</sub>V° (see 1.2.2).

1.2.1. The determination of the outcome of \*Vh<sub>2</sub>g depends on the interpretation of but one group of words, *ša-a-ak-hi* MH, *ša-a-ak-k[i]* MH, 3Pl *ša-ak-kán-zi* OH, Part. *ša-ak-kán°* 'know', *šagāi-* (pl. *ša-ag-a-e-e[-eš]* KBo XVI 46 Vs.? 10) 'omen', *šākijezzi* 'to reveal'. They were united by Eichner, MSS XXXI, 1973, p. 71 and n. 69-70, Oettinger, pp. 255, 345, 413sq. and Zucha p. 289sq., under one root \*seh<sub>2</sub>g- 'find the scent' (*šākki* 'knows' [šākki] < \*sōh<sub>2</sub>g-e+i, *šagāi-* < \*sh<sub>2</sub>g-ēi, with denominative *šākiie-*) by means

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\*\* I feel deeply indebted to Prof. Eichner for much more than what I have quoted from him, and to Mr. Liebl for having improved my English as much as he could without rewriting the whole paper himself.

<sup>1</sup> Melchert pp. 107, 131sq., 135, 146sq. (also *Per una Grammatica Hittita*, p. 186, but with examples now withdrawn) holds that in closed syllables IE \*i, \*ú and \*á were not lengthened, but only IE \*ó and \*é, arguing a *silentio* that no *scriptio plena* is found in that case; but *scriptio plena* is never compulsory, and peculiarly rare in graphically closed syllables (only once for *ganēšš-* 'know' ≤ \*gñēh<sub>2</sub>- and *še-e-eš-zi* 'sleeps'; never for *me-ir-zi* 'dies', etc.); a unique example thereof for \*i, \*ú and \*á suffices against hundreds of ambiguous *scriptiones defectivae* to refute Melchert. *Scriptiones plenae* are indeed attested in *pa-a-ah-ša-an-ta*

KBo XXI 22 38' mh. [páxšəndə] < \*páh<sub>2</sub>s- + -ent-o, *ha-a-an-za* < \*h<sub>2</sub>ánt-s 'in front' KUB IX 28 II 12-13, KBo XXV 122 II 6 *ha-a-aš-še-eš ha-an-za-a[-aš-še-]eš* 'grandchildren and great-grandchildren' < \*hámsa-, etc., and abundantly by Melchert himself for \*ú p. 132 (his only example for \*ú remaining short in closed syllable, *tug* 'thee', 200x *defectivae* written, is irrelevant, for, like so many personal pronouns in oblique cases, it is unaccented). *Alpant-* 'weak' shows *pace* Melchert p. 147 a *scriptio plena* in *a-al-pa-a-an-za* KUB XXX 48 Vs. 2-3 (< \*álpō- *secundum* Melchert; why with \*°#a°? Lith. *álpti* 'to swoon'). What remains possible is that PA primary geminates partially prevented the lengthening of all accented vowels, which turned into short or half-long in Hittite, long in Luvian: *an-na-* 'mother' (never *plene*), Luv. *a-an-na-*, Lyd. *ēna* < \*ánnā; *at-ta-* 'father'. Secondary geminates came into being after lengthening due to accent: (*ú-e-el-lu-ya*) 'meadow' KUB VIII 41 Vs. II 16 [wéllowa] < \*uélš/nu-, cf. Melchert p. 81).

of two rules (\*Vh<sub>2</sub>g > Vgg, and \*°ēi(C)# > °āi), but constantly split by Melchert (here p. 69) in two roots (*šagāi-* and *šākie-* to \*seh<sub>2</sub>g-, but *šakk-* to \*sek<sub>2</sub>h<sub>2</sub>- 'cut'), and rightly so: (1) \*h<sub>2</sub>g > gg is an *Einmannregel*, and no parallel rule \*h<sub>2</sub>d > dd has ever been found. (2) *sagāi-* ≤ \*sh<sub>2</sub>g-ēi is contradicted by *utnē* 'earth' < \*h<sub>1</sub>ud-n-ē(i). (3) *šagāiš* 'omen', like all -āi-Nomina *acti*, matches the Greek type ἡχώ, and must have full grade in the root like λεχώ; this is consistent with Melchert's \*seh<sub>2</sub>g-ōi > *šagāiš* [šāyāiš]. (4) Eichner's denominative \*sh<sub>2</sub>g-i-je- should be suffix-accented, even if *šākie-* had been reinterpreted as a deverbal to *šākki* (most *ie*-deverbals are oxytone). But the oblique stem of Melchert's \*seh<sub>2</sub>g-ōi would be \*séh<sub>2</sub>g-i- with root-accentuation<sup>2</sup>; acting as derivation stem<sub>2</sub> it explains *šākie-*. (5) Eichner, *Laryngaltheorie* p. 137 n. 46, wants to keep *scīre* separate because of the constant -ī- in all its derivatives. But *scīō* is related to *secāre secui* < \*sek<sub>2</sub>h<sub>2</sub>-eje-, and from the analogy of Ved. aor. *ásāt* < \*é°seh<sub>2</sub>-t, Prs. *syāti* and *sināti* 'to bind' < \*sih<sub>2</sub>-je- ≤ \*sh<sub>2</sub>(i)je- (whence, with reinterpretation of the root as \*s<sub>2</sub>ieh<sub>2</sub>-, \*si-n-eh<sub>2</sub>- could be formed), we can reconstruct (a) an aor. \*sk<sub>2</sub>eh<sub>2</sub>- (root-noun *vi-chā-* AVPaip. 'a stab'), (b) three presents <sup>1</sup>\*sek<sub>2</sub>h<sub>2</sub>- (≥ *secāre*); <sup>2</sup>\*sk<sub>2</sub>h<sub>2</sub>(i)je- / °- ≥ \*sk<sub>2</sub>ih<sub>2</sub>-je- / °- (Ved. *chyāti* 'cut off, shave', Gāth. 2Pl Imper. *siiōdum* Y.48,7 'smash', Lat. *scīre*, MBret. *squeiaff*, σχιζω); <sup>3</sup>\*sk<sub>2</sub>h<sub>2</sub>-eje- > σχώω; and (c) a perfect \*sók<sub>2</sub>h<sub>2</sub>-e > Hitt. *šākki* (cf. for the *Schwebeablaut* Got. *kann* 'can' < perfect \*gón<sub>3</sub>-e, γέγωβε 'proclaim, publish' ≤ \*gón<sub>3</sub>-e beside the aorist \*gñ-ēh<sub>3</sub>-t > ἔγνω, *jñēyam*, *nōuī*, OE *cnāwan*).

1.2.2. All scholars now agree that \*h<sub>3</sub> disappears in in- and auslaut; but Melchert p. 72 adduces two arguments for \*#h<sub>3</sub>V > #h:

1.2.2.1. Since normally Luv. *h* matches Hitt. *h* (Melchert p. 258; Oettinger, MSS XXXIV, p. 103; the only counterexample cited by Neumann, HO p. 378, Lyc. *esedēñewe* 'kindred' < \*hamsatanna- might be interpreted differently: Houwink ten Cate, LPG p. 173. 197; Melchert, *Lycian Lexicon* p. 21), a correspondence Hitt. *h* ÷ Luv. *ø* should indicate \*h<sub>3</sub>°. But in the sole example, *happar-* / \*happen- (*happinant-*) 'selling price, benefit' ≈ Lyc. *epirije-* 'sell', the laryngeal must in fact be \*h<sub>2</sub>°, since the shortness in Ved. *āpas-* 'work' and the contrast of quantity in Av. *huuāpah-* preclude \*h<sub>3</sub>°. The explanation of *epirije-* must be circumstantial: the expected form of this -je-denominative was \*h<sub>2</sub>p-r-je- > \*Prje- ≥ \*ap(ə)rije- (through analogy with \*hāpər-), which survived in Lycian and ousted the laryngeal from the word-family (*epenētijatte* 48,7 'mercari', Hitt. *happinant-* 'rich'). In Hittite, the nominative *h<sub>2</sub>ópri* > *happar-* and the stem of its genitive \*h<sub>2</sub>opp-s

≥ \*h<sub>2</sub>ópen-s, later \*xapir- replaced \*ap(ə)r-: *ha-ap-pi-ra-a-an-zi* KBo V 4 Rs. 40, *ha-ap-pár-ra-an-zi* KBo VI 26 II 21-22<sup>3</sup>.

1.2.2.2. Weitenberg's etymology (*Heth. u-Stämme* § 571) *harganāuš* 'sole, palm' ≤ \*h<sub>3</sub>rēg-n-ōu is appealing; but Eichner assumes an analogical influence of *har-ki-* 'white' < \*h<sub>3</sub>rēg-ēi-, for palm and sole are often paler as the flat of the hand; a unique etymology is not enough to establish a rule.

Other pieces of evidence might have been adduced:

1.2.2.3. An initial third laryngeal would explain neatly the *o* of Old Irish *orgid*, which then would have to be connected with *hark-* 'slain' with *ro-ort* ≡ *har-ak-ta* and thus \*h<sub>3</sub># > h-<sup>4</sup>.

1.2.2.4. Yet if two roots, \*h<sub>1</sub>er- 'meet, reach' (\*h<sub>1</sub>r-sk<sub>2</sub>°/- > ἔρχομαι, *rcháti*) and \*h<sub>3</sub>er- 'move' (Narten-Aorist \*h<sub>3</sub>ēr-ṃ, \*h<sub>3</sub>ér-to > Gāth. *ārāšuuā* Y.33,2, prob. *ārām* Y.43,10; Ved. *ārta*, ṛpto), are to be distinguished (Rix, MSS XXVII, pp. 92. 98), morphologic parallelism and semantics favour tying *a-ar-ta* KBo III 46 vs. 45 (OH); 35 13', *ar-ta* KBo XVII 15 Rs. 14' 'stand' with \*h<sub>3</sub>ér-to (and *a-ar-i* 'come to' with \*h<sub>1</sub>e-h<sub>1</sub>ór-e > Ved. *āra*, Av. *ārōi*), the conjunction of both arguments making it a still better case for h<sub>3</sub> > ø than *harganāu-* for #h<sub>3</sub> > h-.

It is only safe to conclude that the evidence does not suffice to ascertain the reflex of #h<sub>3</sub>- in Anatolian.

1.3.1. But Melchert's whole *Phonology* may not be read with such reliance as in the chapter devoted to laryngeals. It would be tedious to pick out all proposals that in my opinion should be somewhat changed, and it would result in a book as long as Melchert's, and not so good. All my criticism can be said in one: Melchert's *Anatolian Historical Phonology* is no *Phonologie* in the Prague sense, or, *aliis uerbis*, philologically weak.

<sup>3</sup>) For a similar spread of the laryngeal-less form of a stem cf. (1) Hitt. *ut-tar* 'word, thing' (never *†ū-ut°!*), dat. pl. *ud-da-na-a-aš* ABoT 65 Vs. 14 abl. *ud-da-a-na-az* 4x (built upon the locative \*ud-da-a-an), pl. *ut-ta-a-ar* [ṽḍḍār, ṽḍḍnās, ṽḍḍānac, ṽḍḍār] (with generalized root zero-grade and oxytony), Luv. *u-ya-at-tar-ša*, gen. *ū-ut-na-aš-ši-in-za* KUB XXXV 45 II 19 [owāḍḍar<sup>2</sup>, ūḍ(ḍ)naš] (generalized barytony, but still apophony) ≤ collective \*h<sub>2</sub>uédh<sub>2</sub>-ör, gen. \*h<sub>2</sub>udh<sub>2</sub>-n-és, loc. \*h<sub>2</sub>udh<sub>2</sub>-én with laryngeal-loss under the influence of the singulative \*(h<sub>2</sub>)uód(h<sub>2</sub>)-r > \*uāḍr → *uātarnahhi* 'command' (Eichner, *LuE* n. 41 p. 129, n. 69 p. 146), (2) the \*ch<sub>2</sub>-feminines, and (3) at least partly the Lycian -a-factitives < \*-ahh- (*prñawati* 'builds'; Melchert p. 312).

<sup>4</sup>) But *orgid* may reflect an old perfect like Old Irish *con-tethaig* 'shares', *ad-águr* 'I fear' (< \*h<sub>2</sub>e-h<sub>2</sub>g<sup>h</sup>-, Got. *óg*), or like the perfective presents of *fo-loing* < \*lunge- 'warrant' and *toing* 'swear' < \*to-n-g-j<sup>h</sup>°/-: a *fo-choim-lich* 'what he may warrant' Bürg. 26 § 72 < \*le-loug-e (perfective with potential sense: Thurneysen § 769); *ni-con-ei-tig* 'refuse' Leg. V,76,11 < \*te-tog-e; thus, its *o*-grade might be morphological, and *orgim* reflect \*h<sub>2</sub>org- or \*porg-.

<sup>2</sup>) Tremblay, BSL XCI, 1996, § 14sq.; Av. *nasāum*, gen. perhaps *nasuš* V.10,1 beside *nasāuuō* V.6,26sq. < \*nek<sub>2</sub>-ou-m, gen. \*nek<sub>2</sub>-u-s 'corpse'.

Not only are the chapters on synchrony sketchy and unsystematic (p. 12-34 for "Cuneiform Orthography", p. 92-116 for "Hittite Phonology", and even these few pages are but the gathering of synchronically evident phonetic changes), but they take *a priori* all graphemes at face or etymological value. It is symptomatic that Melchert almost never resorts to the developed transcription, so that his book, otherwise so rich in new ideas, remains silent on the use of cuneiforms: no statistics, not even research on free, rare and non-existing sign permutations: Friedrich's or Kronasser's cursory remarks are not replaced. Instead of Sturtevant's list of words where *e* and *i*, *u* and *ú* vary or not, classified according to the phonetic context (Lg. XVIII, p. 181-192), we find by Melchert p. 26 in the case of *u* and *ú* a statement without example or reference to this paper or Forrer's, ZDMG LXXVI, p. 199-202. The cuneiformist will search here in vain for a match to Speiser, IH, or Bush, GHL, or a study of (possibly) dialectal variation or diachronic evolution within Hittite as in Jucquois, *Phonétique comparée des dialectes moyen-babyloniens du Nord et de l'Ouest*, Louvain, 1966. It is to me a paradox that an *Anatolian Historical Phonology* could be written without considering the Hurrian or Akkadian loan words in Hittite.

1.3.2. Such a disdain of synchrony, or even minute philology, is rooted in Melchert's exclusive confidence in etymology to elucidate Anatolian phonetics. Here lies a methodological failure: outside the synchronic system, without interpretation, a fact does simply not exist. Before etymologizing and without any regard to etymology, the possible pronunciation(s) must be reconstructed with the help of writings alone; only then a tentative etymology may be proposed. Rules must be established first from synchronic shibboleths: the strongest arguments for Verner's law are minimal pairs such as OHG. *was*, *wārun* 'was, were'. Eichner once told me that the proof that *scriptio plena* wrote quantity, and that long vowels proceed from accented ones, had been for him that two *scriptiones plenae* can occur in the same word (it cannot be twice accented), but never in clitics.

*I do not believe in etymology*: that is, etymologies are always questionable things, and ten possible etymologies are not worth a single minimal pair. Even indisputable etymologies are of little value for establishing a rule; for, as dead stars, they project a possibly outdated, illusorily Indo-Europeanized image of the word as if *analogical remodelling* did not exist: for a hundred years positivist scholars rejected Brugmann's Law because of indisputable etymologies where IE \*oCV > Ved. āCV.

1.3.3. Still worse, Melchert adduces as equal pieces of evidence, mostly without comment, secure, probable, arguable ("Hitt. *hazziya*- 'strike, play' (...) < \**h<sub>2</sub>étye*-" p. 62), merely possible ("huettiya- 'pull, draw' <

\**h<sub>2</sub>wedh<sub>2</sub>-ye*-" p. 69), disputed<sup>5</sup>, dubious<sup>6</sup>, arbitrary<sup>7</sup>, *ad hoc*<sup>8</sup>, and even (to me at least) unintelligible<sup>9</sup> etymologies. The reader may have the impression that "Proto-Indo-European" or "Proto-Anatolian" exist in each case only to justify Melchert's etymology. Such a haste turns out to be deceptive when Melchert quotes, as (circular) proofs, preforms according to his rules without comparative basis: "*enh<sub>2</sub>ye-ské-* > (...) *anniške-*" (pp. 85; the only justification of the laryngeal is to explain *nn*, upon which cf. 4.4.3); "*\*ensternē* > *istarna* (...) *arkanzi* 'they cut' < \**érknti* (...) vs. *ārki* < \**órkei*" (p. 137); "*huwappa-* 'evil' < PA \**Hwápo-*" (p. 104; why \**a?*); "The geminate /ss/ of the (...) 'relational' suffix *-ašša/i-* demands an assimilated cluster" (p. 77; that is just *quod est demonstrandum*, cf. *infra* 4.1); "Lyd. *os-* 'that' < (virtual) PA \**ówsi-*" p. 346. Not only are divergent opinions never signalled (cf. n. 5), but inexistent or truncated evidence is adduced: for instance "*pašš-* < \**peh<sub>3</sub>s-* 'swallow'" p. 152 in favour of \**h<sub>3</sub>s* > *šš*; but apart from *pa-a-aš-šu-an-zi* KBo XXXII 114 obv.? 6 all clear forms have one *š*: *pa-a-ši* KUB XXVII 29 III 9, etc., *pa-a-šu* KBo X 45 IV 4, etc., *pa-[ša]-an-[zi]* KBo XXXIV 2 40. Or, "Likely counterexamples [to pretonic fortification of *š*] include \**kēsáHje-* and \**lēsáHje-* > *kišāi-* and *lišāi-* ..." p. 152: but according to IE rules \**kēsah<sub>2</sub>-jé-* would be more probable, and *li-i-ša-iz-zi* KUB XV 31 II 15, *ki-i-ša-a-id-du* KBo XXI 8 III 14' point to barytony [*kíšāici*].

<sup>5</sup>) "\**yéh<sub>1</sub>-* 'do' > \**ǵ-* > Hitt. *ē-* (beside restored *iē-*), CLuv. *ā-*" p. 75. Eichner, MSS XXXI, 1972, p. 80, and after him Oettinger, SHV p. 350sq., who propose another etymology \**h<sub>1</sub>éj-e-* ≈ Tokh. A *ypam*, 2Sg *yat* [*y<sup>h</sup>am*, *yat*], are not even quoted. Grounding his belief on this word and Lyc. *ta-* 'put' < \**d<sup>h</sup>eh<sub>1</sub>-* (Melchert p. 60; why not \**d<sup>h</sup>h<sub>1</sub>-?*), Lyd. *taac-* < \**d<sup>h</sup>eh<sub>1</sub>-ti* (but why not *d<sup>h</sup>h<sub>1</sub>-ti?*), Melchert (pp. 60. 67) sets forth without explanation a non-trivial rule, that \**eh<sub>1</sub>* became PA *ǵ* and did not merge with \**ē*. Such negligence of argumentation is unfair (divergent opinions are omitted), partial (out of many interpretations allowed by ambiguous cases – cf. p. 245 –, only those consistent with the defended rule are presented), and conceals the evidence (the relevant bibliography is not quoted under the statement of the rule and the cases are disseminated throughout the book): it does not allow to make up one's own mind.

<sup>6</sup>) "\**srakur-ye-* 'water' > \**srakru-ye-* > \**sakruye-* > *šakruwe* ... belong[ing] to the poorly attested *š(a)raku-* ... 'to water'" p. 169; "Lyc. *lada-* 'wife' < PA \**lā/ōdā*" p. 290.

<sup>7</sup>) "Mil. nom. sg. *Trqgiz* 'Storm-god' < \**trqgēts* < \**t<sup>h</sup>hénts* (compensatory lengthening)" p. 292: are other explanations of the *i* precluded?; "*kete* 'according to' (?) < PA \**káto*" p. 284.

<sup>8</sup>) "*hēū-* 'rain' < \**h<sub>2</sub>éyh<sub>1/3</sub>u-*" p. 132; "*kunna-* < \**kūh<sub>2</sub>no-* 'the strong one'" p. 162, with rejection, upon purely circular grounds, of the straightforward comparison with Ved. *śunā-* 'luck'.

<sup>9</sup>) "CLuv. *ilhā(i)-* 'wash' < *ēIHāye-*" p. 80; "*drowāH<sup>h</sup><sub>2</sub>* 'hand over' > [Lyd.] *tro(d)-* (via syncopated \**drwāy<sup>h</sup><sub>2</sub>*...) p. 364 (cf. p. 331), "perh. *tāzzu-* 'place, put' < (virtual) PA \**dó-du-*" p. 191 (cf. p. 194sq.).

Even a trained hittitologist is sometimes at pains to appraise or recognize Melchert's material; how easy for a scholar from another field (the majority) to get lost!

The rest of this review will try to show through case-studies how a phonological method might improve some of Melchert's results.

2. First of all *ú* and *u*. Melchert (p. 26sq.; *Towards a Hittite Grammar* p. 186sq.) and Kimball (*Sprache* XXXVI, 1994, p. 6sq.) reject the proposal<sup>10</sup> that *u* conveys [o] and *ú* [u] because (2.1) both interchange and (2.2) *u* reflects sometimes IE \**u*, *ú* \**Vu* (n. 11-12).

2.1. These critics miss the point. As it occurs in South-Old-Babylonian (von Soden, GAG § 8 Ib. 1), interchange between *e* and *i* is disappointingly frequent, much more than between *u* and *ú*.<sup>11</sup> But (1) no one has ever drawn the conclusion that the signs for *e* and *i* had the same value, because in other cuneiform languages the opposition between *e* and *i* is firm (condition for a graphical opposition). And (2) *e* and *i* were distinct phonemes in Hittite, since there are words where *e* is used with exclusion of *i* and vice versa (condition for a phonological opposition), how few they may be (a phonological opposition can have a slow rendering). The interchange between *a* and *e* in Lithuanian, especially in anlaut, does not prove that these letters convey no opposition in this language, and still less that they have the same value in the Latin script, but only that in some environments the phonological opposition is neutralized. Now does the opposition between *u* and *ú* match the conditions (1: graphical) and (2: phonol-

ogical)? Yes, indeed.

2.1.1. The problem is not only Hittite, as Melchert p. 26 seems to say. Values [o] for *u*, [u] for *ú* have long been proposed for Elamite (already Oppert, cf. 2.1.2) and the Hurrian *Mitanni Letter* (Bork, *Mitannisprache*, MVAG XIV, 1/2, 1909, p. 110; *Der Mitannibrief und seine Sprache*, Königsberg 1939; Speiser, IH p. 22-25); the intransitive marker /o/ *u* contrasts with the transitive /u/ *ú* (Bush, GHL p. 195-198; Neu, *Das Hurritische: Eine altorientalische Sprache in neuem Licht*, AWLM 1988,3, p. 8sq. n. 18). A similar opposition between *u* and *ú* was recognized in Old Babylonian by Ungnad, *Materialien zur altakkadischen Sprache*, p. 5-21, MVAG XX,2 1916; Poebel, *Studies in Akkadian Grammar* p. 116sq. and n. 1, 1939; Knudsen, JAOS XC, 1970, p. 336, Westenholz, ZA LXXXI, 1991, p. 10-19; von Soden, in the fourth edition of his *Akkadisches Syllabar* p. XXV acknowledges this progress in the decipherment. Poebel, *The Sumerian Prefix Forms e- and i- in the Time of the earlier Princes of Lagaš*, Chicago, 1931, more recently Lieberman, "The Phoneme /o/ in Sumerian" (*Studies in Honor of Tom B. Jones*, AOAT CCIII, 1979, p. 21-28), Civil, MSL<sup>2</sup> 14,9, and Bobrova – Militarev, *Лингвистическая реконструкция древнейшей истории Востока. Материалы к дискуссиям на Международной конференции, Москва 29. 5. - 2. 6. 1989* (Институт востоковедения Академии Наук СССР, 1989), p. 99sq. put forward that *u* signified [o] already in Sumerian. In the transcriptions of Egyptian I found the following distribution<sup>12</sup>:

Cham.-Sem.	New Egyptian	MBab.	Assyr.	Greek	Coptic
*ā, āua, á'a	ʔ, w, ø ([ā] >) [ō]	u	(u), ú	ω, ου	οοϣ, ο, ω
*ū	w [ú]	ú	ú, e	υ, ε, η, οι	οϣ, η, ε

Thus, there are several arguments, independent of Hittite, that *u* had in all cuneiform scripts before the XIIIth century the value [o], and should be renamed as *o*. The Hittites could have let fall into disuse *u* as Middle Babylonians, Cassites, and Urartians did, or as they did with *s*; the very fact that they did not proves that they heard *o*'s in their speech.

<sup>10</sup>) Weidner, p. 2sq.; Marstrander, *Caract. i. e. de la langue Hittite*, 1924, p. 106-111; Friedrich, "Heth. und kleinasiatische Sprachen", *Gesch. der idg. Sprachwiss.* II,5,1, 1931, p. 19; HE § 7c; Held – Schmalstieg, *Gen. Lingu.* IX, 1969, p. 106; Eichner, *LuE*, p. 156; Hart, TPS 1983, p. 124sq.

<sup>11</sup>) This interchange is rare (Friedrich, HE § 12). E. g. *lu-u-ri* 'disgrace', 11x OH+ with -u-, but nom. sg. *lu-ú-re-eš* KUB XIII 4 III 34, *lu-ú-ri-iš* KUB XIII 18 III 6; *mu-u-g°* 'evoke' 9x MH+ but *mu-ú-ga-it* KBo III 7 I 13 OH/NS; *mu-u-ri°* 6x OH+ 'grapes' and *mu-u-ri-ia-l°* 'grape-shaped pastry' 9x vs. *mu-ú-ri-iš* KBo 884 II 8, *mu-ú-ri-ia-lu-uš* KBo 2689 II 11 (all loan words!); *ú-da*- very often, but *āπαξ* *u-da*-

2.1.2. More than that: *u* and *ú* interchange in fewer than ten words (except beside *h* and after vowel); in more than fifty they do not, such as Melchert's and Kimball's favoured *ú-uš-ši-ja*- and *u-un-ni-ja*, *nu*-verbs,

*secundum* Melchert (*non repperi*); Imper. 3Sg -ú > 100x but 1x *da-a-u* 'Let him give' KUB XII 26 III 22sq. The same preverb is written *ú-* in *uššija*- 'draw curtains', compound of *šai-* < \**soi-h*- and *u-* in *unnija*- 'urge', of *nai-*, *nehhi* < \**noi-*, rebuilt after the plural; etc.

<sup>12</sup>) Examples for *u*: *Pa-at-mi-us-tu-u* < \**tāpa*-, Copt. το, Gr. Σομ-τῶνς, Σομ-τοῦδς; *Ni-i-u* 'Thebes', Hier. Nyʔ (Vycichl p. 137, Osing p. 463); *Za-ab-na-ku-u* 'Caban's Ka', Hier. ḫb-n.kʔ, Copt. S ko- (Osing p. 380); \**šaw* '6' MBab. *ša-u*, Copt. S cooy, BF co; *Ku-u-šu* and <sup>MATU</sup>*Ka-ši* 'Land of Kush', Hier. Kšš, copt. S εσωω, B εωωω. Examples for *ú*: *pa-ma-hu-ú* 'Goddess Mhu', Gr. Παμχης, Ψευε-μχοις, Copt. Λ² ἱζη (Osing, n. 879); *ti-ú* '5', Copt. SB οϣ; *pa-qu-ra*, *pu-ú-ra* 'The Great', Hier. Pš-wrj, Gr. Ποηρις, -ουηρις (Osing, p. 149 and n. 663-665); -ú [-*(w)ū*], plural morph in *pi-ta-ti-ú* 'bow-covers' or *nam-du-ú* 'words'. Cf. Vycichl p. 105.

-ul-nomina instrumenti (iš-hi-ú-ul 'treaty' > 30x, aš-šu-ú-li 'favour' VBoT 2; 18; 20; 21), in °u-u-me-n°-elatives (Ka-a-ta-pu-u-me-ni-eš 'Katapians' KBo XX 3 Vs. II 5', etc.); in lu-ú-li- 22x (OH+) 'pond', mi-u-ra, mi-e-u-ra OS 3x, nu-ú- 'Well!; delight' 23x, in nu-u-ma-an 'not want to' 13x, nu-u-ya and nu-u-a 'still' 18x, etc. In anlaut ú, never u, transcribes [u] (Melchert, p. 26). U and ú are morphologically opposed in u-uh-hi 'I see' (likewise mu-u-uh-hi 'I fall' KUB XLIII 60 I 33 OH/NS) vs. ú-me-(e)-ni 'we see', and, in u-stems, in neutral sing. -ú and commune -ú-uš, -ú-un (mi-ú-mi-ú 15x, mi-ú-uš, mi-ú-un 'soft' 9x, ši-ú-šu° 'god', etc.) vs. neutral pl. -u (mi-u, aš-šu-u 'goods' > 100x). The variations gathered by Melchert HHP p. 13, such as 11x lu-u-ri vs. 2x lu-ú° in the same text, which confuses e and i (cf. n. 11), or Imper. 3Sg -ú (> 100x) vs. u-da-u 1x, do prove the contrary of what they are intended to: if Hittite were an unknown language such facts would suffice to conclude that u and ú do not render the same sound: Weidner p. 2-13 before Hrozný's decipherment, or Jules Oppert in 1879, *Peuple et la langue des Médes* p. 41 (for Elamite which he understood so little that he believed the Medes spoke it), were not in want of more proofs and logically transcribed u as o: does our deeper knowledge make us duller?

2.2. Then remains Melchert's second argument: whereas in u-uh-hi ÷ ú-me-ni the u and ú plausibly reflect \*Vu and \*u respectively, Melchert adduces cases where u reflects IE \*u, and conversely ú an Indo-European u-diphthong. This objection is not diriment (that u and ú do not mark the same sound is a fact that appears from their complementary distribution; our inability to explain a fact does not affect its existence: the distribution of Avestan ū and u, ī and i does not match that of IAr. \*ū and \*u, \*ī and \*i. It does not signify that their opposition should be illusory) and easily overcome: ú never indisputably reflects an IE accented u-diphthong<sup>13</sup>: accented \*au, \*ou and \*eu resulted in u [ō] only, but are not its unique origin: [u]

<sup>13</sup>) ya-ah-nu-ú-mi KBo XVII 1 II 18 OH may reflect \*-neu-/nu- like Gr. -vō-/vū-; a zero-grade in ku-ú-za-za 'wall' [kūc] < \*\*g<sup>h</sup>u-t-s is no more puzzling than in Av. nom. pl. xšnūtas-ča 'joy', Ved. ²kṛt- 'doing', or viś- 'village', etc. (AIG II,2, § 12ca). ú-uš-ši-ja- vs. u-un-ni-ja- may be explained either through an ablaut \*(H)au / (H)u (BSI. u, Ved. ava, Lat. au, αὖ 'anew, then' / ὕβρις 'violence' < \*(H)u-g<sup>h</sup>rh<sub>2</sub>i-, cf. βῆριθω; Ved. u 'also, else, then') or through the possibly different result in Hittite of accented \*áu > [ō] u and unaccented \*āu > [ō] > [ū] ú, both allomorphs being later lexicalised.

<sup>14</sup>) For instance hu-u-la[-ni] KBo III 8 III 8 'wool' ≤ \*h<sub>2</sub>u<sub>h</sub>₁-nēh<sub>2</sub>-, an-tu-u-uh-ša-aš KBo II 43, Vs. II 31 'men' < \*en-d<sup>h</sup>uh<sub>2</sub>-és- (Eichner, *Sprache* XXV p. 77), hu-u-ul-la-az-zi 'smashes' < \*h<sub>2</sub>u<sub>h</sub>₁-nh<sub>2</sub>-(je)-, me-e-hu-u-ni 'in the morning',

has been lowered in [o] beside h<sup>14</sup>, before r<sup>15</sup>, before u<sup>16</sup> and before and after a vowel<sup>17</sup>. None of these rules is very surprising. i is lowered to e beside r and h in Akkadian (von Soden, § 9h) and an u to o in Babylonian (Westenholz, ZA LXXXI, 1991, p. 18); for ú > u after a vowel cf. Standard High German Haus [haʊs].

3.1. A second problem is that of the schwas. For Melchert, it cannot be decided: "I prefer to interpret all cases [...] as orthographic representations of a preserved cluster" (p. 29sq.; but cf. p. 175sq.). Apparently his solution is as good as any other: a cluster [°CC°] is mostly rendered by °CVC° in cuneiforms, so that the choice between interpreting [CC°] or [CVC] seems to be but a matter of taste or of confidence in etymology.

3.2.1. Now Hittite has inherited from its Akkadian teachers CVC-signs, some of which (maybe not all!) do not reduplicate CV- or VC-signs, but have a special use, in particular (but probably not only) kán, kar, har, pá-r, pát, pít, and tá-g: they do not alternate with any other sign in some words<sup>18</sup>, and almost never with a

le-el-hu-u-un-da-in 'vessel' cf. lahhuu<sub>2</sub>ai-, etc. The rule might apply also when n stands between u and h: u-un-ha-zi KUB XXXV 79 I 5, pl. u-un-ha-an-zi OH+ [ōxci, ōxənci] 'suck'.

<sup>15</sup>) ku-u-ru-ri KBo VI 2 Vs. I 52 OH, ku-u-ru-ur MH 6x LH 7x 'hostility' [kōrur] < \*\*g<sup>h</sup>urur, Av. zūrah- 'deceit', Ved. hvárate 'go askew', ku-u-ur-ka- 'colt' < \*kurkó- (Forssmann, KZ XCIV, p. 72), iš-nu-u-r° 'dough-bowl' < \*išn-ura- 'dough' (Ved. danturá- 'buck-toothed' from dānt- 'tooth'), etc.

<sup>16</sup>) This dissimilation explains better than Melchert p. 109 why we still find °V-u-u°, though uw > um is still in operation: -u-u° represents [°ou°]: ar-ku-u-ya-ar CTH 382 II 'plea', hu-u-ya-an-te-eš 'winds' CTH 381 [xowāntes] < \*h<sub>2</sub>uanteš < \*\*h<sub>2</sub>u<sub>h</sub>₁-ént-, ka-pu-u-e-ši 'contest' [kaβowéši] < \*kapu-je-; at morpheme boundary, i. e. when -u- is maintained after the rest of the paradigm, the rule uw > um takes place: ar-nu-me-ni [°numēni] 'we set in motion', not †ar-nu-u-e-ni [°nowēni], etc.

<sup>17</sup>) Already Held – Schmalstieg, *Gen. Lingu.* IX, 1969, p. 106. ú-da-u 'give' [uḏāq] < ú-da-ú [uḏā.u], he-e-u-uš KUB XIX 50 IV 27 [Xéqš] < he-e-ú-uš [xé.úš] KUB XIX 14 I 9 'rain' < \*h<sub>2</sub>éj<sub>1</sub>-us, a-ni-u-ri [anīqri] KUB XXXV 54 III 45, etc. < a-ni-ú-ur [ani.ur] KUB V 6 II 52. 59 'sacrifice, rite'. Even [u] is affected through shift of syllable boundary: -a<sub>2</sub>u-> -au<sub>2</sub>u-> -a<sub>2</sub>.(u)a-: i-na-ra-u-an-za 'strong' [inarāq.ānc] < \*innarau<sub>2</sub>ant-s < \*innara- + -u<sub>2</sub>ant-, te-e-pa-u-ya-az CTH 381 = StBoT 24, 10 I 21 'from the few' [téβaq.āc], pl. te-e-pa-u-e-eš CTH 378.II [téβaq.ēš]; etc.

<sup>18</sup>) har-ni-ik- 'annihilate', har-ši-(i)- 'breadloaf'; har-na-a-u- 'seat', har-ki- 'white', har-ak- 'perish', har-(ak)- 'have'; pād-da-(a) 'dig' and pát-tar 'wings'; ták-š° / ták-ki-iš- / ták-ki-e-eš [tākš-, tākšs-, tākēš-] 'bind, associate'; pâr-ah- 'chase', pâr-ki-ja- 'raise', pâr-ku-i 'clean', pâr-ši-ja- 'break' and all their derivatives (> 500x; one exception, pa-ar-ša-nu-ut KUB XXXII 121 II 31 'break' or 'chase'), pâr-ta-a-u-ya-ar 'wing', pâr-šu-u-ur 'cooked dish', etc. The oblique cases of per- 'house' are always written with pâr- (E-ir, gen. pâr-na-aš 'house' [pér, pərnás] < \*pér-r, pṛ-n-és).

*scriptio plena*<sup>19</sup>; they occur in clitics (-*kán*, -*pát* 'ipse', *kat-ta*), and in some evident etymologies reflect unaccented \*CVC<sup>20</sup> and \*CR<sup>21</sup>, \*CCC, but not CCV<sup>22</sup> clusters. Hence they must represent extra-short vowels, *jers* or *schwas* [CəC], [CəC], [CəC].

3.2.2. CCV is normally reflected by *Ca-C°* with single second consonant, *ergo* without phonological *schwa*; but sporadic writings *Ca-a-C°* and *Ca-aC-C°* indicate that in \*CC- a phonetic *schwa*, prosodically non-existent and not evidenced by the script (*ša-aš-an-zi* [šášánci] 'they sleep'), could appear, and in some (*lento* or cantillating?) performances become a full vowel which can be stressed: *ša-a-ra-pi* 'sips' [šárāβi] (affective accent-protraction on the anlaut) < \*[šá.rā.βi] < *ša-ra-a-pi* [šárā.βi], phonological /šárāβi/ < \*srób<sup>h</sup>-e; *ga-a-ra-pi* 'guzzles' [káraβi] ≤ \*grób<sup>h</sup>-e+i; sporadic *h)a-ap-pu-uš-ša-an-zi* KUB XVI 2 IV 11, *ha-ap-pu-ša-an-da-aš* KBo VI 26 II 48 [xə.p°/šənci, xə.p°/šəntaš] < normal *ha-pu-uš-zi*, *ha-pu-ša-an-zi*, *ha-pu-uš-šu-u-u* [a-aš KUB V 7 Vs. 16 'claim' [x°p°/šəci, x°p°/šənci, x°p°/šəntaš].

3.2.3. To sum up: the regular outcomes of CR, of unaccented C°/V°C, and of the umlaut of \*e (> *i*) are *schwa mobilia* ə, *i*, or *u*, which have also been compulsorily produced through anaptyxis in sC° > *ʌ*C and CCC > C°/u°/y°CC. Moreover, in a cluster CC- or CR-, a *schwa quiescens*, phonologically non-existent, may be produced as a free allophone (3Sg *e-ku-zi*, 1Pl *a-ku-*

*-ua-ni* 'drink' [éy<sup>w</sup>.ci, əy<sup>(w)</sup>wáni] or [éy<sup>u</sup>.ci, əy<sup>u</sup>wáni]), and grows sporadically *mobile* (*e-ku-ut-ta* [ē.γᵇ.tə]). Conversely, *schwa mobilia* may become *quiescentia*<sup>23</sup>.

3.3. If Melchert had only taken care of such alternations he would not have deprived himself of precious help in determining etymologies: he would have realised that most examples he adduces for accented *a* remaining short (p. 135; here n. 1) contain in fact [ə]: thus *kán-kán-zi* 'they hang' [kənkənci], *ša-ak-kán-zi* (first syllable never *plena*!) 'they know' [šəkənci], *ar-kán-zi* 'they cut off' KBo XII 96 IV 15 [ərkənci]<sup>24</sup>. He would not have disbelieved<sup>25</sup> (p. 137) the generalization of zero-grade in CeRC-root-presents (Kimball, 708sq.): *pár-aš-zi* 'breaks', *har-ak-zi* 'gets lost', *kár-aš-* 'trend', *pár-ah-* 'expel', etc. He would give up his *Einmannregel* \*eCC > aCC<sup>26</sup> for *ták-ki-iš-* 'assemble' [təḫš-] < \*tks-, his analysis of *pad-da-a-ni* (p. 126) as \*poth<sub>2</sub>-pn- with Sievers' law (cf. p. 22); of *pád-da-a-i*, pl. *pád-da-a-an-zi* KBo XXI 37 rev.? 24, med. *pád-da-a-ri* [pəddāi, pəddānci, pəddāri] as \*b<sup>h</sup>ódh<sub>2</sub>- (p. 77; *scriptio plena* on the second syllable calls for \*b<sup>h</sup>dh<sub>2</sub>-éje- like κτάομαι 'owes' < \*tḫ<sub>2</sub>-eje); of *pár-ku-* [pəḫú-] 'high' as \*bérġu- (p. 117; rather \*b<sup>h</sup>ġh<sub>2</sub>eu-), of *pár-as-tu-e-eš* 'leaves' as \*pórstu- 'bud' (p. 118; which root?); etc.

4. From a descriptive point of view, all Hittite consonants after a true vowel (including *schwa mobile*) may be reduplicated; Sturtevant's law explains graphical double obstruents through Indo-European mutes; but reduplication of spirants (*l*, *m*, *n*, *r*, *š*), for which two series had not existed before Anatolian, is puzzling. According to Melchert, it issued from:

<sup>23</sup>) For instance, the expected reflex of \*mélit- 'honey' should have been \*mi-il-li-it° [mí.li.ḫ] with palatal umlaut of accented *e* in accented *schwa mobile*. Instead of this, *mi-li-t°* [mí.li.ḫ] with *l* immediately following *m* and thus *lenis*, and probably consequent accent-shift on the second syllable, is found. \*mi-il-li-it° [mí.li.ḫ] may have been avoided because most derivatives have zero-grade *ma-li-id-d°* [m°li.ḫ], so that the whole family had the same syllabification. Likewise, the single *m* in *ka-mar-aš-zi*, *ga-mar-aš-šan-zi* 'defecate' < [kə.m.mər-] (*kam-mar-ši-eš-ki-id-du*) < \*kadm<sub>2</sub>- (Luv. *kat-mar-ši-it-ti*) may display a syllabification [kəḫmór.sci, kəḫmór.sən.ci] with *schwa quiescens*, *ergo* phonological syncope.

<sup>24</sup>) The 3Pl ending [-ənci] might be taken from "Narten" verbs like the Avestan participle nominative -ō < \*-nt-s, and *an-da* 'in' can be the generalized prepositional enclitic form [ənda].

<sup>25</sup>) The sole example Melchert acknowledges p. 125 is the much more disputable *a-ar-aš-zi* [šrsci] 'flows' < \*h<sub>2</sub>r-s-ti.

<sup>26</sup>) Considering together this rule and Melchert's "Limited ČOP" \*ēCV > aCC- (p. 74sq.), *e-ip-zi* 'seizes', *e-ip-si* 'seizest', are analogical to *e-ip-pu-un* 'seized' instead of \*apzi, etc., and *e-ip-pu-un* is analogical to *e-ip-zi* instead of \*appun: all these rules are *ad hoc* (and false).

<sup>19</sup>) *da-ga-an-zi-p°* 'soil', never †*da-gán°* > 5x, *ta-ga-a-an-zi-pa-aš* KUB XLIII 30 Rs. III 5. It cannot be a coincidence that the same alternation occurs in *ka-a-an-ki*, pl. *kán-kán-zi* [kánci, kənkənci] 'hang' and *da-a-ak-ki* [ráki], pl. *ták-kán-zi* [təkánci], med. *ták-kán-ta-ri* [təkántári] (always so!) 'fit', or in *-tar* sg. ÷ *-ta(-a)-ar* pl. among all °*tar*-neuters: *ua-a-tar*, pl. *ú-i-da-a-ar* 'water'; *uttar* 'word' n. 3 (counterexamples are illusory: *ha-an-ta-ar* CTH 85 AB is a mistake or an abbreviation of *ha-an-da-an-ta-tar* 'preferment').

<sup>20</sup>) Acc. *ha-lu-kán* OH *passim* 'message' [xlóγən] < \*h<sub>2</sub>l<sup>h</sup> ugh<sup>h</sup>-om (Eichner *apud* Zucha, p. 19), *ha-tu-ú-ga-an* KBo XVII 6 Rs. III 11', *ha-du-kán* KBo X 8 Rs.? IV 9 'terrible'; acc. [-ən] may have spread to the words where it was accented: acc. *har-tág-gán* 'bear' KBo VII 14 Vs. 5 [xərtəkán]. *Kad-du-u-ua-i* [t KUB XXXIII 33,12 'be aggrieved', *kat-ta-ua-a-tar* 'cause for enmity' < \*kat(e)u-.

<sup>21</sup>) *te-e-kán* 'earth' [tēγən] < \*d<sup>h</sup>égh<sup>h</sup>om; *hi-in-kán* > 15x MH-NH 'death' [xíngən] < \*h<sub>2</sub>énk<sup>h</sup>η; *ha-a-tar* 'kind of cereal' KBo XXV 79 Rs.? IV 6', *e-eš-har* 'blood' OH-MH (> 20x) [éšxər] < \*h<sub>2</sub>és<sup>h</sup>h<sub>2</sub>ṛ, *pa-ah-hur* 'fire' (always so!) [páxṛ] < \*péh<sub>2</sub>-ur, etc.

<sup>22</sup>) Dat. *pád-da-a-ni* KBo XVII 3; 4, etc. 'basket' [pəttáni] ≤ loc. \*pth<sub>2</sub>-én + -ei (whence nom. *pát-ta-ar* / *pát-tar* – never †*pa-a-at°*! – [pəttər] ≤ pēth<sub>2</sub>-ōr took its zero-grade, cf. *ut-tar* 'word' n. 3) proves that \*Th<sub>2</sub> became a true geminate. *Lam-mar* [ləmər] ≤ \*nóm<sub>2</sub>-ṛ (Lat. *numerus*) has a *schwa mobile* too; but it may retain its o-grade (> [ə] when unaccented), or have taken up the vocalism (as it took up the accentuation) of the oblique cases of its collective \*nm<sup>h</sup>-n<sup>h</sup> > *lamm<sup>h</sup>-* with anaptyxis.



4.1.1. Assimilation: \*Hs > šš, \*RHV > RR and mn > mm already PA (p. 77-79; 81);

4.1.2. "Limited Čop's Law in Anatolian" (cf. *infra* 4.6.1);

4.1.3. *š* and *n* are reduplicated post-tonically before clitics (p. 153);

4.1.4. *š* is reduplicated before and after every consonant (p. 150sq.), whence athematic stems generalized the reduplicated allomorph as non-alternating (p. 151sq.).

4.1.5. Melchert concludes from the rules he has established by means of etymologies that graphical geminates were phonetic geminates.

*Assurez-vous du fait, avant que de vous inquiéter de la cause*: first we shall try to ascertain through purely synchronic devices which phonetic reality/-ies is/are covered by graphical reduplication, and then look for etymologies.

4.2.1. Excerpting a few pages of Friedrich, *Hethitisches Wörterbuch* (for initials *a*, *e*, *i* and *h*) and Jie Jin, *Retrograde Glossary* has shown 132 occurrences of *šš* against 45 of *š*; 60 of *mm*, against 57 of *m*; 118 of *ll* (+ 53x °*talla*, 78x -*alli*-), against 251 of *l* (+ 64x -*ili*-); but only 10 of *nn*, against 21 of *n*, and 16 of *rr*, against 152 of *r*. These statistics, compiled by hand, are too rough to display but an impression: *primo*, graphical geminates cannot be due to the same rules for all spirants: *šš* is three times as frequent as *š*; the ratios of *mm*, *ll* and *nn* to *m*, *l* and *n* range from 1:1 to 1:2; *rr* is one-tenth as frequent as *r*. When Melchert finds the same causes for the reduplication of *š* and *m* (p. 150-152), he cannot be right and exhaustive. *Secundo*, typology makes it unlikely that *šš*, *mm* and *ll* should represent /šš, mm, ll/: the opposition geminates : single consonants tends to become *fortes* : *lenes* when the proportion of geminates increases (Martinet, *Economie des changements phonétiques*, p. 267); I know of no tongue which ever had three times as many geminates as single consonants. *Tertio*, the main cause of graphical gemination for Melchert is assimilation in groups RH (as in Germanic) and RC (as, say, Latin *annus* < \**at-nos*, *mellis*, *horreo*, *fessus*, etc.). But even by adding the frequencies of Germanic and Latin geminates, we are still far from reaching the Hittite ratios *šš* : *š*, *ll* : *l* and *mm* : *m*.

4.2.2. In Lydian, \**ān* and \**ḡ* become *ēn* before consonant, *ān* before vowels (Melchert p. 348): *ēnaš* 'mother' reflects \**ānnā*-, the verbal suffix -*ēni*- < \**-ānnie*- < \**-ēh<sub>2</sub>i-t-n-je*-, Hitt. *anna*-, *-annie*-; but PN *Ānaš* < \**Āna*- appears in Hittite as *An-na*- too: the grapheme *nn* conveys two phonetic realities, a true geminate /nn/, and something else, maybe a fortis /n/.

4.2.3. If, as per Melchert p. 152sq., *š*, *m* and *l* were only geminated through assimilation or before a consonant, no alternation between graphical geminate and single in the same stem could occur. They are

actually not rare (*marušamma* 7x : *marru<sub>2</sub>ašhan* 2x, *mālla* : *mālant*-, *mēma*- : *memma*- 'speak', cf. 4.4.2), like *šš* and *mm* which have never stood before consonant (*kartimmi<sub>2</sub>ezzi*, *aš-šu*-). In *lāman*, gen. *la-am-na-aš*, dat. *la-am-ni-i*, loc. *la-am-ma-an*, *m* is just doubled when it is prevocalic, and *lam-ma-ni-ja*- 3x against much more frequent *lam-ni-ja*- 'to name' may be rebuilt after the locative, like *ha-ap-pi-ri-ja*- after *ha-ap-pir*- instead of *ha-ap-ri-ja*- 'trade'.

4.2.4. Melchert's proto-Anatolian rules VRh<sub>2</sub>V > VRRV and \*h<sub>2</sub>s > šš (p. 76-80) are likely to be false, since *Rh*, *hš* occur (*tarhu*-, *palhi*-, *malhaššama*); Melchert argues that \*Rh<sub>2</sub>, \*VRh<sub>2</sub>C and \*h<sub>2</sub>sC remained, *pahšanzi* 'protect' having an analogically restituted *h* from *pahšzi*. Neither is it intuitively plausible, that \*Rh<sub>2</sub> and \*VRh<sub>2</sub> could evolve differently, since *Ṛ* first became *əR*, nor that -h<sub>2</sub>- could weaken and be assimilated before vowels, but not before consonants, where it was still weaker: if \*h<sub>2</sub>sV > ššV and \*Rh<sub>2</sub>V > RRV, then \*h<sub>2</sub>sC > šC and \*Rh<sub>2</sub>C > RC are most likely. As a matter of fact, h<sub>2</sub> disappears before consonants in *e-eš-har*, gen. *e-eš-na-aš* 'blood', and *nh* is assimilated in *hh* in *manhanda*, *mahhanda*: *yalhzi* is rather analogical to *yalhanzi* than the contrary. Furthermore, Melchert's proofs for \*h<sub>2</sub>{s, l}V > {šš, ll}V, \*-eh<sub>2</sub>so- > \**ašša*- (p. 77) and \*-oh<sub>2</sub>°lu > 1Sg voluntative -*allu* (p. 162) are not stringent since the stem of these derivatives, the first of feminine and abstracts in -eh<sub>2</sub> > Hitt. -*a*, the second of 1Sg -oh<sub>2</sub> > Hitt. -*ā*, could be rebuilt after the unaugmented form: -eh<sub>2</sub>-sô- ≥ -*āšā*- > -*āšā*- > -*ašša* and \*-ōh<sub>2</sub>°lu ≥ *ā*-lu > -*allu* (Eichner, *Hul*, p. 59; *LuE* p. 163). It is safer to go on assuming \*h<sub>2</sub>s > *hs* and Rh<sub>2</sub> > *Rh*, and only Rh<sub>1/3</sub> > *RR* (examples under 4.3.1).

4.2.5. As in Akkadian (von Soden, GAG § 20i), graphical geminates are very rare between unaccented vowels. With Melchert's rules, gemination would occur with the same frequency in all positions.

4.2.6. *Factum*: Even if most (not all!) of Melchert's rules are right, they fail to explain the frequency of graphical reduplication and must be supplemented by others.

4.3. No etymology has been quoted yet, but massive phenomena, such as a scholar who could not understand a single word in Hittite would perceive. They allow nevertheless to conclude that graphical gemination conveys two phonetic realities:

4.3.1. a true geminate, which is likely to reflect ethical geminates (*anna*- 'mammy'), and assimilated clusters: Rh<sub>1/3</sub> (*a-ar-ri*, 3Pl *a-ar-ri-ir* 'wash' < \*h<sub>1</sub>erh<sub>1/3</sub>-, with constant *rr* and no grammatical alternation like *ha-a-ši*, *ha-aš-ša-an-zi*, *hi-e-šir* 'open'), *rs* > *rr* (Melchert, p. 81sq. 160-163), \**-ns*- and \**-ns*- > *šš* (Eichner, *Hul* p. 58 is more accurate than Melchert p. 163), but not h<sub>1/3</sub>s (-*ēšš* < \**ēh<sub>1</sub>s* after Pl. \**eh<sub>1</sub>s*- or denominatives

of es-neuters? *šešarija* < \**šeh<sub>1</sub>.sr-je-*)

4.3.2. and something else, probably strong spirants [R, L, M, N, Š], caused by other rules than those of Melchert's, which must explain the divergent frequency of *šš*, *ll*, *mm*, etc., and alternation within the same stem (4.2.3). As only vowels and accent can alternate in a single stem, and as graphical geminates are rare between unaccented vowels (4.2.5), accent might be the cause of the second kind of graphical gemination.

Melchert means p. 152 that this intuition "is easily refuted by examples such as \**Huésu-* 'raw' > *hu<sup>e</sup>/š<sub>u</sub>-* and *Huésu-* 'spindle' > *giš<sup>h</sup>hu<sup>e</sup>/ša-, ósi-* > *aši* 'the aforementioned'. Presenting such dubious evidence without any comment as proof is playing a hoax: *hu-u-e-ša-an* [Xoqēšān] 'spindle' is now set to \**h<sub>2</sub>uōi-s-o*.<sup>27</sup> The etymology of *hu<sup>e</sup>/š<sub>u</sub>-* is obscure as is its relation to *huitar-* 'wildlife' (Zucha, p. 121-123; Weitenberg, p. 102-111). And *aši-* 'is', Luv. *ašši-*

<sup>27</sup>) Old Czech *viech*, m., *věcha*, slovak *viecha*, f., Old Russ. *вѣха* 'stake' < \**uoīśá*, Arm. *gi* 'juniper'; cf. Ved. *veṣāte* 'hang, twist', *váyati* 'weave', cf. Tischler, Puhvel and Mayrhofer ssuu. The connection with Ved. *vedá-* 'grass' upheld by Melchert is an old *ad hoc* idea from Kronasser, *Festschrift Pisani* II, p. 611, obviously false in Vedic.

Kimball's proposal (*Sprache* XXXVI, 1994, p. 1-28), that \**oi* and \**ai* were not monophthongized before dental continuants (\**V*{i, u} before all dentals, Melchert p. 148), rests on non-compelling evidence: the 3Sg preterites *na-i-iš* 'turned', *da-iš* 'did' can have been rebuilt after the 3Sg Pst *na-a-i*, *da-a-i* / *da-i* < \**nēē*, *Tēē* < \**noī-ei*, *doī-ei* ≤ perfect \**nōi-e*, *dōh<sub>1</sub>-i-e*. To *u-uh-hi* [ōXi] < \**auhai* must once have corresponded \**a-ú-e* 'hears' after which, like *na-i-iš* after *na-a-i*, \**a-uš* pret. 3Sg could appear. *U-uh-hé*, 2Sg \**u-ut-te*, 3Sg \**a-ú-e*, 1Pl *ú-me-e-ni*, 3Pl *ú-ya-an-zi* [ōXe, ōTe, áwe, uṁēni, uwānci] had to fit the synchronic ablaut pattern full grade *au* / nil-grade *u* (like *nai*, *nīanzi*), where *e* or *o* had no place. Since *ú* [u] becomes *u* [o] before *h* (2.2), *u-uh-hi* [ōXi] could be reinterpreted as /úXi/ and was not altered. But the second person had to follow the third: *a-ut-ti* 'hearest' like *na-it-ti* 'drivest'. Now 3Sg \**a-ú-e* was neither predictable through a proportion *ti-ja-an-zi* : *da-a-i* = *ú-ya-an-zi* : *†a-i*, nor through *da-a-iš* : *da-a-i* = \**auš* : *†a-u*, and, in accordance with the spread of *š* within the paradigms of half-vocalic *hi*-verbs (*na-iš-ta-ni*, *da-iš-ta* KUB XXI 27 I 6, *da-a-iš-te-en*), it could be reformed, as *a-uš-zi* (with a *mi*-ending like *ne-ja-mi* KBo IX,96 I 6 NH, *ne-ja-az-zi* KUB XLIV 61 rev. 18 pre-NH/NS), the 3Sg pret. \**a-uš* acting as *Streckstamm*. As soon as the stem was \**auš-*, the 3Sg pret. *a-uš* did not itself survive untouched, but became consequently *a-uš-ta* like *pa-aš-ta* to *pa-a-ši* / *pa-aš-zi* 'swallow' or *na-a-iš-ta* KBo XVI 17 III 30 (Murš. II). This hypothesis, according to which *a-uš-zi* proves neither a stem \**au-s-*, nor "Kimball's law", looks intricate, but as soon as the same alternation occurs in [mu]-*u-uh-hi*, pret. 3Sg *ma-uš-ta* 'fall' < \**meuh<sub>1</sub>-*, a suppletism \**au*/*au-s-*, *meuh<sub>1</sub>-*/*meuh<sub>1</sub>-s-* in two roots which were unrelated in IE, but happened to display the same shape in Hittite only, is more implausible than an analogical origin. Among the remaining cases for "Kimball's law", *ga-i-na-* 'in-law' < \**kei-* cf. *ἄκοιτις* may, according to the frequent graphy

might be unaccented like so many anaphorics, *š* being lenited in Hittite between unaccented vowels<sup>28</sup>. *a-ša-an-zi* 'they are' is no real counterexample either: the phonetic outcome of \**h<sub>1</sub>s-énti* was \**šanzi*<sup>29</sup>, the weak *š* of which remained when \**šanzi* became *a-ša-an-zi* [əšānci], with morphological zero-grade *a*, so as to be parasyllabic with *eš-zi*. Cf. 1.2.2.

4.4. Let us illustrate how some morphological oppositions, well known and already quoted by Melchert, allow to state phonetic rules for the strengthening of spirants:

4.4.1. *š*, *l* and *n* are strengthened before clitics, but *m* (which is yet twice as often reduplicated as *n*) and *r* are not<sup>30</sup>: Subj. 1Sg *-a=llu*, *nu=nnas*, *kišri=šše/i* but *kiššari=mi* 'manui eius, manui meae', *nu-mašta* 'ac me ergo'. Since it is a general Indo-European rule that accent rests before the clitic, *š*, *l*, and *n* were apparently strengthened immediately after the accent, but not *m* or *r*.

4.4.2.1. In accordance with the prevailing suffix-accenuation of *-ant*-suffixed stems (*natānt-* 'drinking straw'; *a-ša-an-t<sup>o</sup>* ≤ \**šānt-* 'sitting' with zero-grade vs. *e-ša* 'sits'), the contrast between *ma-a-al*, pl. *ma-a-al-la* KBo II 9 I 26 'skill' (*uel sim.*) and its derivative *ma-a-la-an-t* 2x (cf. CHD I pp. 124. 128), and the opposite strengthening of *m* in *gi-im-ma-an-t<sup>o</sup>* 'winter', show that following accent strengthens *m* but lenites *l* [māl, mālā, mālānt-, kāmānt-]; cf. *a contrario* *hu-u-ma-ant-* 'all' with constant *scriptio plena* on the first syllable, and single *m*. Likewise, pret. 3Pl *me-ri-ir*, but imper. 3Pl *me-er-ra-a-an-ta-ru* KBo X 37 II 14, part. *me-er-ra-an-t<sup>o</sup>* 2x 'disappear' [mērr, mērānt<sup>o</sup>] cannot be simply faulty with Melchert p. 165. *š* was strengthened not only by preceding accent – as *l* and *n* (4.4.2) – but also by following accent, as is evident from the participle *ya-aš-ša-ant-t<sup>o</sup>* of *ú-e-eš-ta*, *ú-e-eš-ša-an-ta* 'wear', with root-zero-grade and then probably suffix-accenuation [wāšānt-, wēšta, wēšanta].

*ga-e-na-*, reflect \**koj-enā*, *maišt-* 'solar-disk' can reflect a nominative \**mōist-*, and Melchert's interpretation of *aui-* as 'windpipe, throat' and connection with αὐλός is at best dubious (cf. Puhvel p. 229sq.).

<sup>28</sup>) The preforms reconstructed by Melchert (*Gedenkschrift Pedersen* p. 304) \**os* + *i* (deictic particle) > \**ōsi-* > Hitt. *aši-*, \**és* + *i* > Luv. *ašši-* raise more problems than they solve, since a nominative \**és* is unknown (and monstrous) and a morphological alternation \**os*/\**es* between Hittite and Luvian not a handsome hypothesis. Moreover, when a fully accented word receives a deictic particle (as Melchert assumes for *aši-*), this particle gets the accent as a rule (ταυτοστί).

<sup>29</sup>) With weak *š<sup>o</sup>*: a spirant (*š*, *r*, *l*, *m*, *n*), unlike voiced obstruents (*tittie-* 'put' [tiric] < \**d<sup>h</sup>ed<sup>h</sup><sub>1</sub>-*, Lyc. *ta-* < \**d<sup>h</sup><sub>1</sub>-*) was probably not strengthened in anlaut.

<sup>30</sup>) Götze, *Madduwattaš*, p. 40 n. 3; Sommer, IF LV, p. 291; Friedrich, HE §§ 39. 126; Kuryłowicz, VIII. *Intern. Congr. of Linguists*, 1958, p. 220; Melchert p. 153.



4.4.2.2. Acc. *hāššan*, gen. *haššāš* ‘earth’ < \**h<sub>2</sub>és·h<sub>2</sub>-m*, gen. \**h<sub>2</sub>s·éh<sub>2</sub>-s* (Zucha p. 27sq.) with accent-shift exhibits constant strong [š].

4.4.2.3. Perhaps the clearest cases of strengthening of *m* due to following accent are (1) nom. *la-a-ma-an* [lāmān], but loc. *lam-ma-an* KUB XXXI 127 III 6 [lāmān] ‘name’, and maybe, with accent-shift before clitic, nom. *la-a-am-ma-a-mi-it* KUB I 16 III 13 [lāmāmīt] and (2) *mi-i-nu-mar* KBo XVII 105 III 32, gen. *mi-nu-um-ma-aš* KUB II 1 III 32 ‘flattery, placation’ [mínūmār, minumāš], *a-ar-nu-mar*, gen. *ar-nu-um-ma-aš* [ārnumār, arnumāš] ‘bringing’ < \*-m<sub>3</sub>, gen. \*\**-món-s*<sup>31</sup>.

4.4.3. The suffix-accentuation of *aniie-* ‘do’ (never with *scriptio plena* in the first syllable, nor with *nn*) < \**h<sub>1</sub>on·éje-* is expected from the Vedic pattern, warranted by Lyd. *feñ-avil* ‘accomplish’, *kat-avil* ‘erect’, and compatible with the merely sporadic reduplication and *scriptio plena* of anlaut in Luvian *a-an-ni-it-ti* KUB XXXV 39 III 26, *a-an-ni-i-ti* 14 I 8, *a-a-an-ni-i-[ti]* 88 II 11, *an-ni-i-ti* HT 82,5, pl. *a-ni-e-ya-an-ti* KUB XXXV 15 III 12, imper. *a-ni-ja* 133 III 4. On the other hand, the inchoative *an-ni-eš-ki-iz-zi* is written 22 times with *nn*, 4 times with single *n*; and *scriptio plena* is attested in *a-an-ni-iš-ki-nu-un* KBo II 11 Rs. 17 (Sommer, *Ahhijavā-Urkunden* p. 242); *nn* is again to be found in the possible cognate *an-na-aš-na-an-za* KUB XVII 10 IV 9-10 ‘column’ *uel sim*. Whatever the explanation may be (influence of a neuter \**h<sub>1</sub>énes* > \**évis*? but cf. Oettinger p. 351), initial accent and double *n*, following accent and simple *n* come together. The laryngeal Melchert reconstructs on the sole ground of *an-ni-eš-ki-iz-zi* is here of no use.

4.5.1. Thus, not only Lühr’s law (only for \**h<sub>1</sub>/3*), but also a kind of Verner’s law applies for Hittite:

*š* is fortified before and after accented vowels (Eichner, *HuI*, p. 58; *LuE*, p. 162);

*l* and *n* are fortified after accented vowels (cf. Eichner, *HuI* n. 58 p. 59; *LuE*, n. 71 p. 147);

*m* and *r* are fortified before accented vowels (Eichner, *LuE* p. 163);

Unlike obstruents and H-, spirants are *lenes* in anlaut, and, like all consonants, between unaccented and after inherited accented long vowels (Eichner, MSS XXXI, 1972, p. 100 n. 88).

4.5.2. Whereas the contrast between *fortis* and *lenis* is in operation throughout the history of Hittite for *š*, *l* and *m*, it is waning for *n* and *r*, the *lenis* expanding where the *fortis* was expected: *pa-ah-hu-ye-ni* [Paxwēni] after *me-e-hu-ni* [méxuni], *innarā* ‘with strength’ after

*innarayeš-* ‘become strong’, etc. The cause might be the slow rendering of the opposition *n* : *nn*, and a difficult differentiation between the utterances of [r], [R] and [RR].

4.6.1. The basis for Melchert’s “Limited Anatolian Čop’s Law” (PA \*#ē.C > áCC p. 74sq.; *Gedenkschrift Pedersen* p. 297sq.) is slender: according to him, *aššu-* < \**h<sub>1</sub>ésu*<sup>32</sup>, *ammug* ‘mihi’, Lyd. *ēmi-* ‘my’ < \**Ŵm̥mi-*, and *anna-* ‘that’ < \**éno-*, whereas *anišiyat-* ‘today’ < \**ono-*. Rather than with the possessive pronoun (for which \**émi-* is equally possible, and corresponds perfectly to the other IE languages<sup>33</sup>), *ammug* ‘mihi’ has to be considered together with its much more attractive Lydian match *amu*, and fitted into a paradigm where accent was based on the second syllable: *ammēl*, *ammēdaz* ‘mei, mē’: whatever its original form may be (Melchert’s \**émug* is *ad hoc*), *ammug* must then have been oxytone [amúg], which explains directly its strong *m* and Lyd. *amú* (and not *ému*! Eichner, *Sprache* XXXII, p. 3sq.). The alternation *anna-* : *anišiyat* is more economically explained through accent-shift than through Melchert’s synonyms \*\**éno-* and \*\**óno-* (surviving in *anišiyat-* only): \**óno-* > *anna-*, Lyd. *ēnaš*<sup>27</sup>, but \*\**oni-diğót-* > *anišiyat-*. Had Melchert not rejected *a priori* the accent-bound fortification rule, he would not have been forced to resort to his much more unlikely “Limited Anatolian Čop’s Law”.

4.6.2. Finally, Melchert’s etymologies can lead to different rules, even when they are true:

4.6.2.1. OH *šu-ma-an-za*, *šu-ma-a-an-za[-na-aš]* KBo XX 26 + XXV 34 Vs. 11’ ‘bind’, which – with Melchert p. 75 – matches *ὕμην*, seems to falsify the rule \**m’* > *mm*. Of the 10 occurrences of *šu-ma-an-z°* (with one *m*) which I know, four are certainly neuter, and four possibly so, whereas *šu-um-ma°* or *šum-ma°* are in their seven occurrences animate: two stems existed, a neuter \**séuh<sub>1</sub>·m<sup>n</sup>/i* > Pre-Hittite \**šu-u-ma-an* or \**šu-u-mar* [šómā<sup>n</sup>/i]; and its hysterokinetic collective \**suh<sub>1</sub>·mén*, gen. \**suh<sub>1</sub>·mn-és* (> *ὕμην*, Hitt. *šu-um-ma-a-an°* [šýmā<sup>n</sup>]), the form of which (including oxytonation and animate ending *-za*) was taken up by the neuter, so that only the contrast between *-m-* and *°m-m°* still distinguishes both (Oettinger, KZ XCIV, p. 48sq.; Melchert, *Sprache* XXIX, p. 9sq.).

<sup>32</sup>) The *scriptio plena* *aššu-* excludes Melchert’s PA \**aššu-* according to Melchert himself (p. 135; our n. 1), who assumes \**á* remained short in a closed syllable, and Kimball’s \**h<sub>1</sub>su-* altogether (PhD p. 168): *aššu-* must be a case of strengthening of posttonic *š*: \**h<sub>1</sub>ósu-* > *aššu-*.

<sup>33</sup>) \**óNo*, \**óN#* and *éNV* > Lyd. *ēN* pace Melchert pp. 348sq. 365.

<sup>31</sup>) Hoffmann *apud* Eichner, MSS XXXI, 1973, Anm. 34 p. 92; *aliquantulum aliter* Oettinger, KZ LXXXIII Anm. 9 p. 46sq.; the neuters in *-mar*, *-mnaš* (≤) \**-mōr*, *-mn-és* exhibit a definitely different declension.

4.6.2.2. *šalli-* ‘great, adult’ may be derived from \*solh<sub>2</sub>-i- as writes Melchert p. 51, but through the evolution \*sólh<sub>2</sub>-i- > *sóli-* (Saussure-Hirt’s Law) > *šalli-* (Eichner’s fortification of posttonic *l*); CLuv. *salhitti-* would then reflect \*\*s<sub>l</sub>h<sub>2</sub>(e)i-ti-. In any case the contrast *palhi-* : *salli-* is not understandable if both contain \*<sup>o</sup>lh<sub>2</sub><sup>o</sup> or \*<sup>o</sup>elh<sub>2</sub><sup>o</sup>.

4.6.2.3. *tarra-* cannot proceed from \*terh<sub>2</sub>-<sup>e</sup>/<sub>o</sub>- (Melchert p. 79), for the constant orthography *tar-ra-* requires [TƏR<sup>o</sup>] < \*t<sub>r</sub><sup>o</sup> and the assimilation \*t<sub>r</sub>h<sub>2</sub>- > *tarr-* has not occurred in *tar-uh-zi*, *tar-ru-uh-zi* < \*t<sub>r</sub>h<sub>2</sub>u- (Ved. *tárute*). Now the lexicalized participle GU<sub>4</sub>-MAH-an *tar-ja-an-da-an* KUB XII 63 + XXXVI 70 Vs. 9 ‘the strong ox’ (Hoffner, *BiOr* XXXIII 1976, 337b) points to \*t<sub>r</sub>je- < \*t<sub>r</sub>h<sub>2</sub>-je-<sup>34</sup>, which elsewhere turned to *tarre-* (Eichner, *LuE* n. 64 p. 142; MSS XXVII, p. 30sq.), with [R] before accent.

4.6.2.4. The root of *m[a-al-l]a-a-i* KBo XV 35 + XV 33 I 11 (OH/MS), 3Pl *ma-al-la-an-zi* IBoT I 29 rev. 19 (OH/MS or NS) ‘grind’ is mostly aniṭ (ahd. *malan* without Lühr’s law, Av. *mruta-* ‘weak’ and not \**maruta-*, Gr. βλαδύς), but attests some forms which look set (μαλακός). So Melchert’s analysis (KZ CI, 1988, p. 215sq.) \*melh<sub>2</sub>- > *malla-* seems possible. But the *ai*-flexion of *m[a-al-l]a-a-i* (the oldest attestation of the verb), absence of *scriptiones plenae* on the first syllable and as a rule on the second syllable (≠ *pád-da-a-an-zi* § 3.3), and rare New Hittite writings *ma-la-* (*ma-la-an-zi* KBo XXVI 182 I 6; part. *ma-la-an* KUB XLVI 39 III 15, KBo XIII 231 obv. /, 12 rev. 9, abl. *ma-la-an-da-za* KUB XLVI 42 IV 3) point to a stem [mƏL-] (sporadic shortening to *schwa quiescens* [m<sup>l</sup>l-]) with a nil-grade in the root (a context where \*mlh<sub>2</sub>- should remain as Hitt. \**malh-* according to Melchert as well) and a preform \*m<sub>l</sub>(±h<sub>2</sub>)-jenti > IE \*m<sub>l</sub>je-.

5. The ways cuneiform resorts to in order to transcribe the phonetics of a language – associating signs following various orthographies rather than possessing enough signs, so that the features of each phoneme are rendered as much through the graphemes of surrounding phonemes as through its own grapheme – are not transparent to us. Yet this difficulty is overcome by the fact that Hittite is a *Großcorpus-sprache*; the orthographical invariances, if met often enough, cannot be due to chance and reduce the part of uncertainty in interpretation and etymologization of a single word. Melchert has not taken full advantage thereof, so that some of his results are arbitrary, argued upon merely possible etymologies: despite all its merits and ingenuity, *Anatolian Historical Phonology* is not a true handbook which resumes all that can be said at its time about the facts it handles and is always useful even to those that do not have the same interests as the author. Indeed, the primacy of etymology makes it a “closed” book, designed for Indo-Europeanists already aware of Hittite, and with a good knowledge of the bibliography.

Nevertheless, we have to rejoice in such a giant book: Melchert’s compendium courageously tackles all Anatolian languages; completeness and coherence alleviate some methodological shortcomings. The problems of Anatolian historical phonetics for which the right solution seems feasible now predominate, and wild etymologies are no longer permissible. Anatolian becomes a normal Indo-European language, for which history and chronology can be reconstructed, and whose testimony makes only sense through laws and comparison. The pioneering times are over.

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<sup>34</sup>) A laryngeal falls before yod: AIG I § 75a; Eichner, *Laryngalthorie* p. 141sq., Melchert p. 65.

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## Ein altbabylonischer Brief aus Privatbesitz

Von Michaela Weszeli (Wien)

Der hier gebotene altbabylonische Brief stammt aus einer Wiener Privatsammlung und wurde der Autorin von ihrem Besitzer freundlicherweise zur Publikation überlassen. Der Herkunftsort des Briefes ist unbekannt.

- Vs. 1. *a-na a-hi-ia* <<DIŠ>>  
 2. *qi-bi-ma*  
 3. *um-ma lugal-ezen-ma*  
 4. *utu li-ba-al-li-ir-ka*  
 5. 5 sila še.giš.i  
 6. *hu-pu-du-um nu.šir<sub>6</sub>kiri<sub>6</sub>*  
 7. *il-qé-e*  
 8. *šü-ha-ru-ú-a mu-ša-ar li-bi-ta-ir<sub>1</sub>am<sub>1</sub>*  
 9. *i-na šir<sub>6</sub>kiri<sub>6</sub> ú-ba-a-a-tum*  
 Rs. 10. *li-ir<sub>1</sub>il-bi-nu*  
 11. *qi-bi-ma*  
 12. *la i-ka-lu-ni-im*

„Zu Ahija sprich, folgendermaßen (sagt) Lugal-ezen: Šamaš möge dich am Leben erhalten. Fünf qa Sesam hat Huppudum, der Gärtner, genommen. Meine Diener sollen ein *mūšarum* Ziegel im Garten vor Ubajätum streichen. Sprich: 'Sie dürfen nicht aufgehalten werden!'“

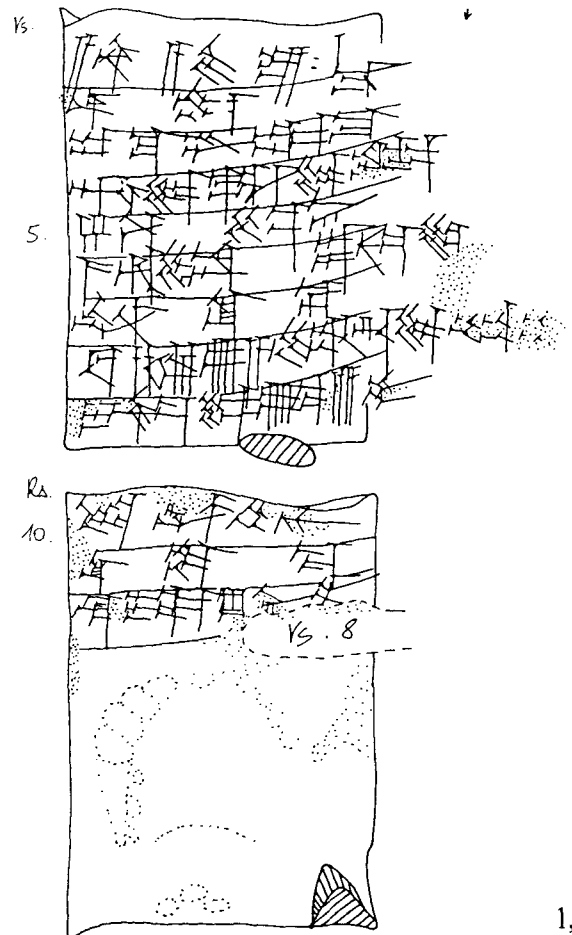
### Bemerkungen:

Z. 3: Der Personennamen Lugal-ezen ist nicht sehr oft belegt; s. Limet, *L'Anthroponymie Sumerienne dans les documents de la 3<sup>e</sup> dynastie d'Ur*, p. 461. In der altbabylonischen Zeit gibt es ebenfalls Personennamen, die sich mit lugal zusammensetzen; doch nur in Ur ist ein Lugal-ezen öfters belegt (s. UET 5, S. 49).

Z. 6: Einen Gärtner namens Huppudum kann ich an anderer Stelle nicht nachweisen.

Z. 9: Den Garten von Ubajätum, sei es, daß es sich um einen Eigennamen, sei es, daß es sich um den Namen des Besitzers handelt, kann ich sonst nicht nachweisen. Der Personennamen Ubajätum ist aber gut belegt. Da Gärten die landwirtschaftlichen Grundstücke mit dem besten Zugang zu Wasser sind, ist es nicht erstaunlich, daß hier ein Garten als Herstellungsort für die Ziegel genannt wird.

Bezüglich der Herstellung von Ziegeln denkt man natürlich an das von M. Weitemeyer bearbeitete Ziegel-



1,2 : 1

archiv aus Sippar bzw. Tell ed-Dēr (*Some Aspects of the Hiring of Workers in the Sippar Region at the Time of Hammurabi*. Copenhagen 1962), in dem auch tatsächlich des öfteren eine Person namens Ubajätum belegt ist (immer mit *-ia-* geschrieben). In den Arbeiterlisten werden sowohl ein Huppudum als auch ein Ubajätum genannt (s. für beide Namen den Index *ibid.*, S. 79 und 82). Es ist aber mehr als zweifelhaft, ob sie mit unseren Personen in Verbindung zu bringen sind. Absender und Adressat unseres Briefes sind im Archiv nicht belegt.

Der Personennamen Lugal-ezen weist vielleicht eher in den Süden als den Norden Babyloniens als Herkunftsort unseres Briefes, jedoch fehlen mir die notwendigen prosopographischen Sammlungen, um eine definitive Aussage zu machen. Die prosopographischen und geographischen Hinweise des Briefes als auch die Orthographie sind für eine Lokalisierung zu vage.