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The Preservation of **h₁* in Hieroglyphic Luwian: Two Separate *a*-Signs*

Introduction

The hieroglyphic script in which the Hieroglyphic Luwian (HL) inscriptions were written uses many allographs. This means that different signs can have the same sound value. Within the transliterations of texts using such writing systems, it is common practice to accurately indicate the different signs found in the text. For example, in the HL inscriptions at least eight different signs are used to write the syllable [sa]. The most common one is transliterated as *sa* proper, while the other signs are given a number: *sá* (= *sa*₂), *sà* (= *sa*₃), *sa*₄, *sa*₅, *sa*₆, *sa*₇ and *sa*₈. The best evidence for allography is random interchangeability in spelling: if different signs are interchanged in spelling, they consequently represent exactly the same phonetic value, and therefore are allographs.

Sometimes, however, we notice that certain signs that are transliterated as though they represent the same phonetic value, i.e. are regarded as allographs, do not show random interchange in the texts. For instance, within HL, we find five different signs that are transliterated as [ta], viz. *ta*, *tá*, *tà*, *ta*₄ and *ta*₅. Although this implies allography, it has been observed that these signs fall into two groups: the three signs *ta*, *tá* and *tà* interchange freely with each other, and the same goes for the pair *ta*₄ and *ta*₅, but the two groups are always kept clearly distinct. We see for instance that the word for 'in(side)' is always written *a-ta*, *a-tá* or *a-tà*, but never **a-ta*₄ or **a-ta*₅. The word for 'name' is always written as *á-ta*₄-*ma-za* or *á-ta*₅-*ma-za* but never **á-ta-ma-za*, **á-tá-ma-za* or **á-tà-ma-za*.

Such a clear distribution within the inscriptions can only mean that the phonetic value of the signs *ta*, *tá* and *tà* must have been different from that of the signs *ta*₄ and *ta*₅. Whereas *ta*, *tá* and *tà* clearly render

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[ta], Hawkins (1995: 114⁹) suggests that *ta*₅ perhaps has the sound value [la]¹, primarily because of the rendering of the Cuneiform Luwian (CL) name ¹*a-la-li-me-es* as HL *ta*₅-*416-*mi*². It is therefore unfortunate that the transliterations *ta*₄ and *ta*₅ are still standard in the editions of these texts, blurring the phonetic picture of the HL language.

A similar case that will be treated here, concerns the phonetic interpretation of the alleged allographs for [a].

A distribution?

In HL we find two signs that are regarded as rendering the vowel [a], transliterated as *a* and *á* (*HH* no. 450 and no. 19 respectively³). Although these two signs are generally considered allographs, Hawkins (2000: 28) makes a few remarks about these signs that indicate that the phonetic surroundings in which the two signs *a* and *á* usually occur show a distribution. He states that “Cun[eiform Luwian]. *a* corresponds to both Hier. *a* and *á*, [...] though the latter sign [...] is used only initially (or internally for the glottal stop ʔ, as in the rendering of Baʔal as *pa-á-li*”. As to *a*, he states that “it is found in *plene* writings *Ca-a* parallel to *Ci-i*, *Cu-u*”.

In other words: although both signs *a* and *á* correspond to the CL vowel *a*, word-internally there is a distribution: the sign *á* is found only to render a glottal stop (*pa-á-li* ~ Baʔal), while the sign *a* is used to denote a long vowel (*Ca-a* = [Cā], like *Ci-i* = [Cī] and *Cu-u* = [Cū]).

When we check the HL texts for this distribution, we find that Hawkins is right. The sign *á* occurs word-internally only a few times. It is attested three times in the writing of the personal name *pa-á-li-ma-li*⁴, which is the Hieroglyphic rendering of cuneiform

¹ If *ta*₅ indeed denotes the value [la], this must go for *ta*₄ as well, as both signs clearly are allographs.

² Cf. also Herbordt 2002: 59.

³ At the time of Laroche's syllabary (1960), three signs for *a* were distinguished: *HH* no. 209 was transliterated as *a*, no. 450 as *à* and no. 19 as *á*. Even after the identification of *HH* no. 209 as *i*, the other two *a*-signs kept being transliterated as *á* and *à*. This practice has been changed by Hawkins (2000) who now transliterates Laroche's *à* as *a* (*HH* no. 450). I will follow Hawkins' transliteration here.

⁴ Cf. Singer apud Goodnick Westenholz (2000: 83), seal 3: cun. EN-*ma-lik*

¹EN-*ma-lik*, ‘Ba’al(ī)-malik’⁵. Another personal name, REGIO.DOMINUS *za-za-á*, is attested thus only once on a seal, which Güterbock (1973: 143, seal 12) suggests to read *Zaza’a*. Whether this is the same name as the dat.sg.-form ¹*za-za-ia* we find in CEKKE § 9 is unclear⁶. Besides these personal names, we only find the sign *á* word-internally once, viz. in RESTAN § 3 CRUS-*nu-ha-á* ‘I set up’ = [tanuha]. This spelling with *-á* must be a mistake, as can be seen in QAL’AT EL MUDIQ, which text is an exact copy of the text of RESTAN. Although it is an exact copy, in this text we find the same word spelled CRUS-*nu-ha*, without an *-á*. Perhaps, in RESTAN the sign *á* is used as a space filler, for which usually the sign *a* is used.

So, besides this one (clearly aberrant) attestation of internal *á*, we only find the sign *á* used word-internally to write a glottal stop (in *pa-á-li-ma-li* = Ba’al(ī)-malik; the phonetic interpretation of the name *za-za-á* is not ascertainable), which is in clear contrast with the use of the sign *a* that is often found word-internally in plene writing to denote a long vowel.

As the two signs *a* and *á* are not randomly interchangeable word-internally, we may ask the question as to whether the same is the case in initial position. I therefore have looked through Hawkins’ entire Corpus (2000), which contains all HL texts of the Late Period that were found up to 1995. I will treat the texts of the Empire Period separately below.

The material

When we look through all the texts in search for a possible distribution between *a* and *á*, we see that spellings with either *a*- or with *á*- are virtually consistent throughout the texts, for instance⁷:

DUMU [*ša-al*]-*mi*, hier. *pa-á-li-ma-li* BONUS VIR; Gonnet apud Arnaud (1991: 199), seal 21d: cun. ¹EN-*ma-lik*, hier. *pa-á-li-ma-li*; Beyer (2001: 121), seal B2: hier. *pa-á-li-ma-li*.

⁵ Although the name ¹EN-*ma-lik* usually is read as Ba’al-malik, Gonnet apud Arnaud (1991: 199) wonders whether the spelling *pa-á-li* may indicate that the name was Ba’alī-malik (compare the name ^DEN-*li-ma-lik* in Beckman 1996: 91, text RE 71:26).

⁶ Cf. Hawkins – Morpurgo Davies – Neumann (1973: 189).

⁷ Sign variants other than *a* vs. *á*, are mostly not indicated. I have counted the double occurrences in the text KARATEPE I (which was written in two almost identical versions, Ho. and Hu.) only once. In this text, the two versions differ

Words spelled with *a* :

<i>a-ta</i>	'in(side)'	(63×: 1× <i>á</i> , see below)
<i>a-ta-na</i>	'into'	(1×)
<i>a-tá-ti-li-</i>	'internal'	(1×)
LONGUS <i>a + ra/i-</i>	'long'	(2×)
<i>a-sú + ra/i</i> ^{REGIO} <i>-ia-</i> ^{URBS}	'Assur'	(1×)
<i>a-sú + ra/i</i> ^{REGIO} <i>-wa/i-</i>	'Assyrian'	(3×)
<i>na/i-</i> ^{URBS}		
<i>a-wa/i</i>	sent.part.	(168×: 1× <i>á</i> , see below)

Words spelled with *á* :

<i>á-</i>	'to make'	(6×)
<i>á-ma/i-</i>	'my'	(109×: 7× <i>a</i> , see below)
<i>á-mu</i>	'I'	(36×)
<i>á-pa/i-</i>	'he, she, it, this'	(89×: 5× <i>a</i> , see below)
<i>á-sa-</i>	'to be'	(27×: 10× <i>a</i> , see below)
<i>á-sa-ha-na-ti-sa-za</i>	'blood-offering'	(1×)
^{***350} <i>á-sa-ha + ra/i-mi-sa</i>	'sacrifice'	(3×)
(MENSA.)SOLIUM <i>á-sa-</i>	'seat'	(4×)
<i>á-sa</i> ₅ - <i>za-</i>	'to speak'	(13×)
EQUUS.ANIMAL <i>á-sú-</i>	'horse'	(3×)
<i>á-ta-, á-za-</i>	'to eat'	(9×: 1× <i>a</i> , see below)
(FEMINA) <i>á-ta</i> _{4/5} -	epithet (of Kubaba)	(13×)
<i>á-ta</i> _{4/5} - <i>ma-za</i>	'name'	(41×)
<i>á-wa/i-</i>	'to come'	(7×)
LITUUS <i>á-za-</i>	'to love'	(21×)

only twice regarding the writing of *a* or *á*, viz. in § 31 (word 156): Hu. has *á-pa-ti-i*, while Ho. has *a-pa-ri + í*. Perhaps the spelling in Ho. is a mistake, since another mistake occurs in the Ho.-version in the same sentence: the sentence particles *-pa-wa/i* are written twice and the word *INFRA-ta* is omitted: REL-*pa-wa/i* | *á-TANA-wa/i-ní-zi*^{URBS} - <<*pa-wa/i*>> | *zi-tà* | *a-pa-ri + í* < INFRA-*ta* > ^{SOLIUM} *i-sà-nu-há* 'and so I settled Adanaweans down ... there'. Another inconsistency between the two versions is found in § 20 (word 106), for which Hu. has '*á-sa-ta*', and Ho. *a-sa₄-ta*. Compared to the other spellings of the verb *ás-* 'to be', we again find that the Ho.-version has the wrong spelling. The other inconsistent spelling in KARATEPE 1, cited by Laroche (1960: 233), viz. Hu. 183 *a-mi-ia-za* besides Hu. 189 *á-mi-ia-za*, has been removed by Hawkins (2000: 53), who now reads § 35 (182-187) as REL-*pa-wa/i-* *mi-ia-za* ^{"DIES"} *há-li-ia-za* 'so in my days'.

¹ <i>á-za-mi-</i>	'Azami'	(6x)
LITUUS/OCULUS <i>á-za-ti-</i>	'Azatiwada'	(10x)
<i>wa/i-ta-</i>		

The numbers indicate a clear distinction between the spelling of *a* and *á*. We see that e.g. *a-ta* 'in(side)' is spelled 63 times with *a*- whereas the one spelling with *á*- is of dubious interpretation, as we will see below. This spelling of *a-ta* 'in(side)' exclusively with *a*- is clearly distinct from the spelling of the word *á-ta*_{4/5}-, epithet (of Kubaba), which is exclusively found with *á*- (13 times)⁸, and from the spelling of *á-ta*-, *á-za*- 'to eat', spelled nine times with *á*- (the one aberrant spelling will be explained below). Furthermore, the words *a-ta-na* 'into' and *a-tá-ti-li*- 'internal' (both attested once), which are derivatives from *a-ta* 'in(side)', show spellings with *a*- as well.

The sentence particle *a-wa/i(-)* is found 168 times written with *a*-, while the one spelling with *á*- is of dubious interpretation (see below). The spelling *a-wa/i(-)* is in complementary distribution with the spelling of the verb *á-wa/i*- 'to come', spelled 7 times with *á*- and never with *a*-.

Another strong case is the word *á-mu* 'I', which is spelled exclusively (36 times) with *á*-, just like its derivative *á-ma/i*- 'my', viz. 109 times with *á*- (the 7 aberrant spellings *a-ma/i*- are treated below).

The stem *á-pa/i*- 'he, she, it, this' is written 89 times with *á*-, whereas the 5 aberrant spellings with *a*- can be explained (see below).

Finally, the verb ^{LITUUS}*á-za*- 'to love', which is written 21 times with *á*-, shows the same spelling as the names that are derived from this verb: ¹*á-za-mi*- 'Azami' (lit. 'the beloved one') and ^{LITUUS/OCULUS}*á-za-ti-wa/i-ta*- 'Azatiwada' (lit. 'beloved of the sun') are spelled exclusively with *á*- as well (6 and 10 times respectively).

The only stem that has both *á*- and *a*- in considerable numbers is the verb *á-sa*- 'to be', viz. 27 times with *á*- and 10 times with *a*-. After the treatment of aberrant spellings, we will see that the 'original' spelling is with *á*- and that the aberrant spellings with *a*- can be explained away.

⁸ Although in the latter word the use of the signs *ta*₄ and *ta*₅ (probably denoting [la]) contrasts with the use of *ta*, *tá* and *tà* (which denote [ta]) in the writing of *a-ta* 'in(side)' as well.

Aberrant spellings

As we saw above, a complementary distribution between *a*- and *á*-, although the statistics speak in favour of it, cannot be established for the full 100 percent. We still encounter ‘aberrant’ spellings, i.e. spellings with the other sign than usually found in the texts.

Some of the aberrant spellings appear in unclear contexts and perhaps are wrongly interpreted. The word *á-wá/í* (KAYSERI § 2) is taken by Hawkins (2002: 473) as a spelling of the sentence particle that is usually written *a-wa/i*. As we can see on the photograph of the inscription, however, the context is severely damaged, so we cannot draw any firm conclusions on this text. The form *á-wá/í* cannot therefore be used as a solid argument regarding the spelling of *a-wa/i*.

Another aberrant form is *a-mi(-)* in TELL TAYINAT 2 fr. 5a.⁹ Hawkins (2002: 370) interprets it as ‘my’, but when we look at the photograph and the copy of the actual inscription, we see that the context is severely broken. On this fragment we can only read ...] | [x[?]] *a mi pa wa/i REGIO ni* [...], which is interpreted by Hawkins as ...] *ami=pa=wa/i REGIO-ni* [... ‘in my country ...’, disregarding the possibility that one or even two signs could have been lost between the word-divider and the sign *a*. This makes clear that any conclusion based on an interpretation of this text must be regarded as useless.

In KARAHÖYÜK § 11 we find *á-tá*, which Hawkins (2002: 290) interprets as [anta] ‘in(to)’, although this word is written with *a*- all other 63 times it occurs. The sentence in which *á-tá* is found, however, is not quite clear: *wa/i-mi-tá-* DEUS-*ní-i(a) á-tá i(a)-*515-ha* ‘and myself to the god I ...(?)’-ed’ (transliteration and translation by Hawkins). In his commentary, Hawkins (2002: 293) states: “The grounds for separating *á-tá*, identified as *anta*, “in”, are that there is no reason to suppose that this inscription, any more than others, would employ *á*- in any position other than initial. Thus the verb is reduced to the signs *i(a)-*515-ha*, ...”. This, of course, is false reasoning. I agree that the use of *á*- indicates that a new word begins with it, but it is not obligatory to interpret *á-ta* as [anta]. It is equally possible to assume that the verb actually is *á-tá-i(a)-*515-ha* ‘?’, which is equally unknown as a verb *i(a)-*515-ha*. It is clear that this sentence cannot be used in the argumentation about the spelling of [anta].

In KULULU 5 § 11 we find *a+ra/i-tu* [arantu] ‘let them eat up’

⁹ The other 6 aberrant spellings *a-ma/i*- ‘my’ will be treated below.

(with rhotacisation from **adantu*), while all other 9 attestations of the verb *á-ta-* / *á-za-* ‘to eat’ are written with *á-*, including the rhotacised infinitive *á-ru-na* (e.g. TOPADA § 31). Perhaps the aberrant spelling *a+ra/i-tu* has to do with the unclear situation in regard to the spelling of [ara/i-]. In the whole corpus I used for this research, we only once find the spelling *á+ra/i-*, viz. EĞREK § 3 *á+ra/i*? ‘he did(?)’, but this spelling is not totally assured. All other words that phonetically begin with [ara/i-] either use the spelling *a+ra/i* or the separate sign *ara/i*¹⁰. The consistent absence of a spelling with *á+ra/i*, which perhaps is significant to the historical phonology of HL, explains why this form is spelled with *a-* whereas all other attestations of the verb ‘to eat’ are written with the sign *á*.

The aberrant spelling CRUS-*nu-ha-á* ‘I set up’ (RESTAN § 3) was treated above.

The other aberrant spellings concern the words *á-ma/i-* ‘my’ and *á-pa/i-* ‘he, she, it, this’. Although aberrant, all these spellings are rather clear in their interpretation and context. They cannot be interpreted otherwise and do show spellings that use another [a]-sign than usual. These aberrant forms are: *a-mi-zi* ‘my’ (2×: KARAHÖYÜK § 13, JISR EL HADID fr. 1 l.2), *a-mi-i(a)* ‘my’ (KARAHÖYÜK § 22), *a-mi-sa* ‘my’ (2×: JISR EL HADID fr. 1 l.2, TOPADA § 19), *a-mi-i* ‘me’ (JISR EL HADID fr. 2 l.2), *a-pa-sa-na* ‘his’ (TOPADA § 36), *a-pa-sa-* ‘he’ (TOPADA § 38), *a-pa-* ‘him’ (ASSUR letter *a* § 6), *a-pa-zi* ‘those’ (2×: ASSUR letter *b* § 8, ASSUR letter *f+g* § 21).

We see, however, that these aberrant spellings occur in four of the ca. 240 texts of our corpus only, viz. KARAHÖYÜK, JISR EL HADID, TOPADA and the ASSUR letters. Moreover, it is remarkable that when we look at the attestations of the verb *ás-* ‘to be’, we see that all instances of *ás-* written with the sign *a-* are only found in these texts as well: *a-sa-ti* ‘he is’ (7×: KARAHÖYÜK § 20, § 21, ASSUR letter *f+g* § 14, § 20, § 22, § 33, § 48), *a-sa-tu* ‘let be’ (KARAHÖYÜK § 24), *a-sa-ti* ‘they are’ (ASSUR letter *b* § 8), *a-sa-ta-ni* ‘you are’ (ASSUR letter *e* § 6). In my view, this indicates that the normal spelling of *ás-* ‘to be’ is with the sign *á-*.

Within the corpus of HL inscriptions, these four texts take a special position not only regarding the aberrant spelling they use, but on other points as well.

¹⁰ The two signs *a+ra/i* and *ara/i* appear to be used in complementary distribution as well, but I will not go into that here.

The dating of the KARAHÖYÜK inscription is difficult. Hawkins (2000: 290) states that it “has the appearance of being ... one of the most archaic inscriptions of the post-Empire Period ...”. “Its archaism is recognizable in two areas, sign forms and graphic usage, in which it is closer to the Empire Period inscriptions of Tudhaliyas IV, ... than the Late Period corpus as a whole”. However, “it cannot in fact belong to the Empire Period itself, principally on the historical grounds that the named Great King ... Ir-Tešub, cannot be identified with any of the members of the Hittite dynasty of Hattusa, and must therefore be later”. Therefore the text “may not be so far removed in date from the other earliest inscriptions of the Late Period”.

So KARAHÖYÜK that uses many unattested and unrecognized signs, looks more archaic than it can be, which may have caused the large number of spelling aberrances.

The text JISR EL HADID consists of three fragments that are from the 9th-8th century B.C. One of the clearest pieces is Fr.1 L.2 ...] |FORTIS(-)[*m*]u'-*ta tá-ti-sa a-mi-sa* |FRATER-*la-i-zi-ha a-mi-zi* ‘they were strong, my father and my brothers’. Hawkins (2000: 380) comments on this sentence: “comparatively rare to find possess. adj. following qualified noun, as clearly here”. So not only the spellings of *a-mi-* ‘my’ are aberrant, also their place in the sentence. This text therefore may not be suitable to draw any conclusions from regarding the general picture of the HL language.

The text TOPADA is notorious for its “large number of rare and unparalleled sign forms” (Hawkins 2000: 452), many of which are only found in this text. Hawkins (l.c.) suggests that “the stylistic differences are better explained as local, and as conscious archaism”. The text even uses a sign *a*_x (§ 8), which is unparalleled in all other texts. It is clear that TOPADA cannot bear witness to a ‘normal’ HL spelling practice.

The ASSUR letters consist of 7 strips of lead, containing the correspondence of a merchant Taksalas with various addressees. They probably date from the late 8th century B.C. and are therefore very late. Because of their character (these letters were probably meant to be read only once) and their late date, we should not be surprised that they contain many spelling mistakes.

Having looked at all deviant spellings in the texts of the Late Period, we may conclude that aberrantly spelled words either are misinterpreted (because of a context that is damaged or unclear), or appear in texts that are peculiar in other respects as well.

The Empire Period texts

The texts of the Empire Period, which are not included in Hawkins' Corpus, are treated separately, as these show a spelling that had not yet totally been settled. We find for instance in SÜDBURG that no verb-endings or sentence connectives are written. Here I present the material concerning the word-initial use of the signs *a* and *á*.

In the SÜDBURG-text¹¹, the following words with initial [a] are found: INFRA *á-ka* 'to subject' (§ 1, 4, 8, 9, 12, 14, 15) and *a-tá* 'them(?)' (§ 4).

The verb INFRA *á-ka*¹² is never written with endings. From the context, it is clear that the verb must mean 'to subject', although the verb has not been attested elsewhere¹³. The consistent spelling with *á-* fits the established lack of interchangeability of *a* and *á*. Hawkins (1995: 35) sees *a-tá* as the 3rd person enclitic pronoun *-ata* 'it/they/them', which normally is attached to the sentence particle. As no sentence particles are written in this text, Hawkins suggests that here the enclitic pronoun appears as unattached, so stands for *awa=(a)ta*. It therefore is not surprising that it is written with the sign *a-*.

The YALBURT-text¹⁴ contains the following words with initial [a]¹⁵: *a-sa-tá* 'it was / they were' (bl.3 § 1) *a+ra/i-[ha]* 'I arrived(?)' (bl.3 § 2) *a-[wa/i]* (bl.3 § 3) *a-mi-zi* 'my' (bl.4 § 2) *á-zi/a-tá* 'he loved' (bl.4 § 3) *a-wa/i* (bl.4 § 4; bl.5 § 2; bl.6 § 2; bl.6 § 3; bl.7 § 1; bl.7 § 2; bl.8; bl.9 § 2; bl.10 § 2; bl.11 § 1; bl.11 § 2; bl.11 § 4; bl.12 § 2; bl.12 § 3; bl.12 § 4; bl.13 § 1; bl.13 § 3; bl.13 § 4; bl.14 § 2; bl.14 § 3; bl.14 § 4; bl.14 § 5; bl.15 § 2; bl.16 § 2; bl.17 § 2) *a-ta'-pa-x*^{URBS} 'Atpa-x' (bl.11 § 2) *á-wa/i+ra/i-na-*^{REGIO} 'Awarna' (bl.13 § 3).

We see that the sentence-initial particle *a-wa/i* is consistently (26 times) written with *a-*, as expected. The word *á-zi/a-tá* 'he loved' is also spelled with the same sign as usual. The form *a+ra/i-[ha]* 'I arrived(?)' is indecisive¹⁶. Both toponyms *á-wa/i+ra/i-*

¹¹ For text edition, see Hawkins 1995.

¹² But compare Melchert 2002: 138–9, who reads *Á+INFRA-ka* and denies the word is to be interpreted as a verb.

¹³ Hawkins (1995: 28) says that in NIŞANTAŞ we are perhaps able to read *á-ka-ha* 'I subjected' twice.

¹⁴ For a text edition, see Hawkins 1995: 66–85 and Poetto 1993.

¹⁵ Numbering according to Hawkins 1995, bl. = block.

¹⁶ See above on the treatment of *a+ra/i-tu* 'let them eat'. The only other attestations of this verb, ^{PES2}*a+ra/i-ta-* 'he went' (ASSUR letter *a* § 6) and

na-^{REGIO} and *a*-*ta*²-*pa*-*x*^{URBS} are unattested elsewhere. The forms *a*-*sa*-*tá* 'it was / they were' and *a*-*mi*-*zi* 'my' are attested with *a*- instead of *á*-.

On the EMIRGAZI-altars¹⁷ the following words beginning with [a] are attested: *a*-*wa*/*i* (§ 2, § 17; § 21; § 23), *á* 'to make' (§ 25, § 27), *á*-*na*+*ra*/*i*-*sù*-*ha*-*ti* '?' (§ 37). The sentence particle *a*-*wa*/*i* is written with *a*- only (4x). The verb *á* 'to make' is attested twice with *á* (the verb endings are missing), as is usual. The form *á*-*na*+*ra*/*i*-*sù*-*ha*-*ti* is unparalleled.

In the FRAKTIN-text¹⁸, the only real phonetically written word is *á*-*za*-*mi* 'beloved', written with the sign *á* as always.

In KÖYLÜTOLU¹⁹ we find the word *á*-*ta*₅-*ma*- 'name' (nom.-acc.pl.)²⁰, written with the usual *á*. Masson also reads *a*-*pá* which she takes as "une forme incomplète du nominatif singulier du pronom démonstratif *apas*" (1980: 110). This would mean that *apa*- is here written with the wrong sign, *a*. However, the interpretation of the sign *pá* (HH no. 462) is doubtful (cf. Melchert 1988: 36–8 who proposes to read the sign as *ma*_x, and Hawkins 2000: 36–7). This form cannot therefore be used in an argumentation regarding the spelling of *ápa*-.

Having looked at all texts in our corpus (ca. 240 of the Late Period and 5 texts of the Empire Period), we have to conclude that the distribution in the writing of the sign *a* and *á* is real. Of the Late Period-texts, only four show deviant spellings, which is probably caused by the peculiar nature of these texts. Of the Empire Period-texts, only two aberrant spellings are found, viz. *a*-*mi*-*zi* 'my' and *a*-*sa*-*tá* 'it was / they were' in the YALBURT-text, for which I do not have a sound explanation, as all other words with initial [a] in the YALBURT-text show the regular [a]-sign.

As the distribution between *a* and *á* is real word-internally as well as word-initially, I conclude this distribution must originate in a phonetic difference between the sign *a* and the sign *á*.

PES₂ *a*+*ra*/*i*-*wa*/*i* 'I shall go' (ASSUR letter *f*+*g* § 24) are both written with *a*+*ra*/*i*- as well, but are attested in the unreliable ASSUR letters.

¹⁷ See Hawkins 1995: 88 f.

¹⁸ See Güterbock 1978.

¹⁹ See for edition Masson 1980.

²⁰ See for this interpretation Starke 1990: 289.

Phonetic interpretation

For an interpretation of a phonetic difference between the signs *a* and *á* we have to use synchronic as well as diachronic (etymological) evidence. As the distribution between *a* and *á* is found in word-initial as well as in word-internal position, and as the distribution in these positions must originate from a sole phonetic difference, we also should try to find evidence for the phonetics in both positions of the word as well. Furthermore, we must try to unify possible synchronic evidence with possible diachronic (etymological) evidence.

Synchronic evidence

The synchronic evidence regarding a possible phonetic interpretation of the difference between the signs *a* and *á* is largely confined to the word-internal position. We saw that the sign *á* never occurs word-internally, unless it is used to write a glottal stop [ʔ], as in the rendering *pa-á-li-ma-li* for Baʿal(ī)-malik. This name, however, is not the only attested form in HL that is derived from the name Baʿal. In the inscriptions HAMA 4 (§ 6, 7, 8, 10), HAMA 8 (§ 2), RESTAN (§ 3) and QALʿAT EL MUDIQ (§ 3) we find the name of the god Baʿalatis, written in hieroglyphs as ^{DEUS}*pa-ha-la-ti*-, with the sign *ha*. This seems to contradict the rendering of the name Baʿal(ī)-malik as *pa-á-li-ma-li*. The texts that mention Baʿalatis, however, are all from one small area around Hama (modern-day Hamath in Syria), an area that at that time (9–8th century B.C.) was under the influence of the Phoenician language. I therefore assume that the name Baʿalatis was taken from the Phoenician language and that this Phoenician ʿain was written in HL with the sign *ha*.

The name *pa-á-li-ma-li*, however, is found on seals of the Empire Period only, and is glossed with cuneiform ¹EN-*ma-lik*. At the time of these seals, 13th century B.C., the Akkadian rendering of the Sumerian logogram EN was *bēlu*, a form which does not fit HL *pa-á-li-ma-li*. In Ugarit, however, texts from the 13th century render the Sum. logogram EN as *ba-a-lu(-ma)*²¹, which must stand for *baʿal(-)*, having an ʾaleph instead of an ʿain. Therefore we should read *pa-á-li-ma-li* as Baʿal(ī)-malik with an ʾaleph that must have developed

²¹ See Huehnergard 1987: 114.

out of the original 'ain. In Phoenician, the difference between 'ain and 'aleph was preserved, so here Ba'al(atis) still had its 'ain, which was written in hieroglyphic as *ha*. This may indicate that the consonant transliterated as *h* in HL, in fact was closest in sound to 'ain [ʕ] (HL *h* from PIE **h*₂, which phonetically probably was [ʕ]²²).

Since we can equate *pa-á-li-* with Ba'al(ī)-, phonetically [paʔali], we must conclude that the sign *á* does not merely denote the vowel [a] here, but must be interpreted as having the value of a syllable [ʔa]. This interpretation contrasts with the interpretation of *a* in forms like HL *za-a-sa* [zās] 'this' (Hitt. *kās*), where the sign only denotes the mere vowel [a]. This contrast lies in the fact that the sign *a* is used as a *V*-sign, whereas the sign *á* is used as a *CV*-sign, in which the glottal stop [ʔ] is to be interpreted as a consonant.

So the synchronic evidence from word-internal positions suggests that the sign *a* merely denotes a vowel [a], while the sign *á* is used to render the syllable [ʔa].

In word-initial position we find only scanty synchronic evidence on the phonetic contrast between the two signs.

One piece of synchronic evidence might be the spelling of the name of the city Assur, viz. *a-sú+ra/i*^{REGIO}-*ia*-^{URBS} and of the adjective 'Assyrian', viz. *a-sú+ra/i*^{REGIO}-*wa/i-na/i*-^{URBS}. We know that Akkadian, from which the name Assur must have been taken, at the time of the HL texts had lost (word-initial) laryngeals and pharyngeals, a development that started in the 3rd millennium already. In Akkadian, the name Assur began with a plain vowel *a*-. This clearly corresponds to the remarkable HL spelling with initial *a*-, which sign, based on word-internal evidence, probably denoted a plain vowel *a*.

Other clues might perhaps be found in the HL – Phoenician bilingual, KARATEPE 1. In this inscription, a few HL names are written in the Phoenician script as well. We find for instance: ^{LITUUS}*á-za-ti-wa/i-ta-* = Phoen. ʔztwd (Azatiwada); *á-wa/i+ra/i-ku-* = Phoen. ʔwrk (Awariku); *á-TANA-wa/i*-^{URBS} = Phoen. ʔdn (Adana(wa)). It looks as if the sound represented by the HL sign *á* is consistently rendered with a glottal stop ʔ in Phoenician. Unfortunately, no HL names with *a*- are found in this text, so we do not know how these would have been rendered in Phoenician. A priori it is not unlikely that a word-initial *a*- would be written with ʔ in Phoenician as well,

²² Cf. Beekes 1994: 449f.

as this language automatically has a glottal stop before word-initial vowels. The equation of the sign *á* with Phoen. ʾ is therefore indecisive regarding a phonetic contrast between the two signs.

Etymological evidence

Since the synchronic phonetic evidence points to a phonetic value [a] for the sign *a*, and a value [ʔa] for the sign *á*, we must now investigate whether these phonetic values can be supported by the etymological evidence. First I will look at the words spelled with *á*-.

In a few words, the sign *á*- is used to write etymological **h₁e-*:
 “*350” *á-sa-ha + ra/i-mi-sa* and *á-sa-ha-na-ti-sa-za* ‘blood-offering’ belong with Hitt. *e-es-har*, gen. *is-ha-na-a-as*, CL *a-as-ha-ar* ‘blood’ from PIE **h₁ésh₂r*, **h₁sh₂nós* (~ Gk. ἔαρ, TochA *ysār*, TochB *ya-sar*, Skt. *ásrk-* ‘blood’);

EQUUS.ANIMAL *á-sú-* ‘horse’ is cognate with CL nom.sg. ANŠE.KUR. RA-US ‘horse’ (which could stand for *azzu-* as the form *az-zu-ya-an-za* is perhaps to be interpreted as dat.-loc.pl. ‘horses’) from PIE **h₁ék₂uo-* (Skt. *ásva-*, Gk. ἵππος, Lat. *equus* ‘horse’);
á-sa- ‘to be’ belongs with Hitt. 3sg.pres. *e-es-zi*, 3pl.pres. *a-sa-an-zi* ‘to be’ and CL 3sg.pres. *a-as-ti*, 3pl.imp. *a-sa-an-du* ‘to be’ from PIE **h₁es-*;

á-ta- / *á-za-*²³ ‘to eat’ belongs with Hitt. 1sg.pres. *e-it-mi*, 3pl.pres. *a-ta-a-an-zi* ‘to eat’, CL 3sg.pret. *az-za-as-da* (*at^sta* < **h₁éd-to*), 3pl.imp. *a-da-an-du* ‘to eat’ from PIE **h₁ed-*.

If we read the sign *á* in these words as [ʔa], as indicated by the synchronic phonetic evidence, we see that the glottal stop [ʔ] seems to be a direct reflex of **h₁*: *ásharmis* [ʔasharmis] < **h₁ésh₂r*+; *ásh-natis* [ʔashnatis] < **h₁esh₂n*²⁴; *ásu-* [ʔasu-] < **h₁ék₂uo-*; *ás-* [ʔas-] < **h₁es-*; *át-*, *áz-* [ʔat^(s)-] < **h₁ed-*.

In HL, all *Ca*-signs can be used to write the sole consonant in consonant clusters or at the end of a word: *á-sa-ha + ra/i-mi-sa* denotes [ʔasharmis], so the signs *sa* and *ra/i* have to be read without a vowel: *á-s(a)-ha + r(a/i)-mi-s(a)*. If the sign *á* = [ʔa] really is a *Ca*-

²³ The forms with *á-za-* are the result of **TT* > *t^st*, like in Hitt. *ezzazzi* [et^s-t^si] ‘eats’ < **h₁ed-ti*.

²⁴ Or perhaps from **h₁sh₂n-*, in which case *áshnatis* is to be interpreted [ʔshnatis].

sign like all the others, we would *a priori* expect it to behave in the same way, viz. that it sometimes is used to denote the sole consonant [ʔ] as well. This seems to be the case in some HL forms. Important are the words *á-mu* ‘I’ and *á-ma/i-* ‘my’. The only comprehensible interpretation of these words is to regard them as the reflexes of the oblique form of the 1sg. personal pronoun, **h₁me-* ‘me’ (cf. Gk *ἐμέ* ‘me’)²⁵. This preform **h₁me-* ‘me’ in PIE was probably [ʔme-] phonetically. If the HL forms *á-ma/i-* and *á-mu* can be interpreted as *ʔ(a)-ma/i-* = [ʔma/i-] and *ʔ(a)-mu* = [ʔmu] respectively, we can directly equate **h₁me/o-* ‘my’ [ʔme/o-] with HL [ʔma/i-] and virtual **h₁m-u* [ʔmu] with HL [ʔmu] ‘I’ (*-u* from 2sg.pers.pron. **tu(H)*). We see that a word-initial preconsonantal **h₁* has been preserved in HL and is still reflected as a preconsonantal glottal stop.

In the same way, we can account for the word for ‘name’. When we apply the new interpretations for the signs *á* = [ʔ(a)] and *ta_{4/5}* = [la], we see that the spelling *á-ta_{4/5}-ma-za* possibly stands for [ʔlaman-za]²⁶, a form, which in my view, cannot be separated from Hitt. *lāman* ‘name’, and then is the direct reflex of **h₁neh₃mṇ₃*.²⁷

²⁵ The PAnat. preform **emu* which Melchert (1994: 236) uses to explain HL *á-mu* as well as Hitt. *ammuk* ‘me’ (1994: 74), is an unparalleled construct within the IE languages. Unfortunately, no 1sg. personal pronouns are attested in CL. In Hittite we find a quite different pronominal system than in HL. Hitt. nom. *ú-uk* ‘I’ must be a remodelling of PIE **h₁eǵ* with the *u* from 2sg.pers.pron. **tu*. Acc. *am-mu-uk* ‘me’ in my view is made up of the oblique form **h₁m-* followed by *ú-uk* < virtual **h₁uǵ* (compare Goth. acc. *mik* ‘me’ from *m+ik*), and goes back to virtual **(h₁)mḥ₁uǵ* (with **mh₁* > Hitt. *-mm-*).

²⁶ An important argument in favour of an interpretation [ʔlaman-za] is the one attestation of the name *á-sa-tu-wa/i-la-ma-za-* (KARKAMIŠ A27u 1.2) besides normal ⁽¹⁾*á-sa-tu_{1/2}-wa/i-ta_{4/5}-ma-za-* (KARKAMIŠ A14b § 1, KELEKLİ § 1, KARKAMIŠ A11a § 1, KARKAMIŠ A11b § 1). This name, which is to be analysed as *ás-tu+áta_{4/5}-manza-* (lit. ‘let it be (his) name’), shows a genuine allography between *ta_{4/5}* and *la* in the word for ‘name’. The one attestation *á-sa-tu-wa/i¹+ra/i-ma-za-* (MARAŞ 8 § 1), however, would be an argument in favour of an interpretation [adamanza] as it seems to show rhotacism from intervocalic *-d-*. Nevertheless, the occurrence of rhotacism in such an early inscription is problematic (cf. Hawkins 2002: 253). In my view, we have to compare this problematic *-r-* with the unexpected occurrence of *-r-* in another word in the same inscription, viz. *MALLEUS-x+ra/i-i* ‘he erases’ (§ 12). This word, occurring in the frequent formula ‘he who shall erase my name...’, is normally written *MALLEUS(-*71)-la-i* (e.g. KARKAMIŠ A6 § 29, KARKAMIŠ A14a § 8, TELL AHMAR 2 § 12). So here, in MARAŞ 8, we find an *-r-* instead of normal *-l-*. This ‘mixing up’ of liquids would be parallel to the spelling *ástuwaramanza-* instead of normal *ástuwalamanza-* (as we now have to interpret this name). The advantage of this interpretation is

Another instructive example is the verb for ‘to sit’. Besides the cited 3pl.pret.act. ^{SOLIUM} *á-sa-ta* ‘they dwell’, we find the following logographic attestations of this verb: 3sg.pres.midd. ^{SOLIUM} *MI*, ^{SOLIUM} *MI-sa-i* ‘he sits’, 3pl.pres.act. ^{SOLIUM} *MI-ti* ‘they sit’, 3pl.pret.act. ^{SOLIUM} *MI-ta* ‘they sat’. Based on the caus. ^{SOLIUM} *isnuwa-* ‘to cause to dwell, to seat’²⁸ and the noun ^{THRONUS} *i-sà-tara/i-ta/i-listarta/i-]*²⁹ ‘throne’, Hawkins and Morpurgo-Davies (1978: 107–11) assume that behind the logogram ^{SOLIUM} *MI*- a stem *is-* is hidden. Starke (1990: 418) compellingly compares ^{SOLIUM} *MI-sa-i* = *isai* to Hitt. *e-sa(-ri)* ‘he sits’ which both reflect **ēsa(-)* from **h₁éh₁s-o*³⁰. Nevertheless, we have to equate 3pl.pret.act. ^{SOLIUM} *á-sa-ta* ‘they sat’ (KARKAMIŠ A11b § 10) with 3pl.pret.act. ^{SOLIUM} *MI-ta* (KARATEPE 1 § 37). This points to ablaut within the verb, which is paralleled in the Hittite paradigm of *e-sa(-ri)* (unfortunately, the verb is not attested in CL). In Hitt., we find full grade in the stem throughout the middle paradigm (3sg.pres.midd. *e-sa(-ri)*, 3pl.pres.midd. *e-sa-an-ta(-ri)*), whereas the active paradigm shows ablaut

that both deviant spellings, with *-la-* and with *-ra/i-*, are explicable besides normal *ástuwata_{4/5}manza-* (containing [ʔlaman-za]), and that it now is unnecessary to assume that in MARAŞ 8 rhotacism of intervocalic *-d-* occurs earlier than usual.

²⁷ Pre-Anat. **h₁neh₃mn* from PIE **h₃neh₃mn* (comp. Gk. ὄνομα < **h₃nh₃mn*) with neutralisation of **h₃* to **h₁* before **n* in Anatolian (cf. Hitt. *an-ia-* ‘to work, to carry out’ < **h₃n-īé/-ó-* (~ Lat. *onus*, Skt. *ānas-* ‘load, burden’ < **h₃en-os-*) and the further lack of Hitt. words beginning with *#hn-* from **h₃n-*). The interpretation of *á-ta_{4/5}-ma-za* [ʔlaman-za] as reflecting **h₁neh₃mñ* (thus also Starke 1990: 288–91) is far more satisfying than the usual explanation (e.g. Melchert 1994: 83), which supposes the zero grade form **h₁nh₃mñ* to have become **ñmñ* > **ánman*. The assumption that this **ánman* developed an anaptyctic vowel in the *-nm*-cluster in order to explain the outcome *adaman-za* (and Lyc. *adāma* and Lyd. *ētam-*) is rather ad hoc. Furthermore, the Lyc. and Lyd. forms that Melchert cites in favour of this interpretation must be interpreted otherwise: the Lyc. cognate is cited in Melchert 1993 as nom.-acc.pl. *a[d]āma* ‘names’, whereas Kalinka (1901: 67, text 83, 8) cites the form as *alāma* (in the copy of the text, the *l* (Λ instead of Δ) is clearly visible). This *alāma* must be cognate with Hitt. *lāman* and HL [ʔlaman-za], implying a development of **h₁C* > Lyc. *aC*. The Lyd. form *ētam-* does not mean ‘name’ (Gusmani 1964: 108) and is to be separated from the other words.

²⁸ For attestations see Meriggi 1962: 37–8.

²⁹ Compare the CL adj. *istardalli-* ‘looking like a throne’, an adj. in *-alli-* from the noun *istarta-* ‘throne’. See for attestations of HL ^{THRONUS} *i-sà-tara/i-ta-* Starke 1990: 416–7.

³⁰ Note that **h₁éh₁s-o* gave PANat. **?ēsa*, of which the **?ē* yielded HL *(?)i*, instead of **h₁e-* > PANat. **?ě-* > HL *?a-*.

(3sg.pres.act. *e-es-zi*, 3pl.pres.act. *a-sa-an-zi*). We therefore can safely assume 3sg.pres.midd. SOLIUM + *MI(-sa)-i* = *isai* (~ Hitt. *e-sa*) < **h₁éh₁s-o*, while 3pl.pret.act. SOLIUM + *MI-ta* = ^{SOLIUM} *á-sa-ta* = *ásanta* < **h₁sénto*³¹ with initial degemination from **h₁h₁s-ént(o)*, and 3pl.pres.act. SOLIUM + *MI-ti* = *ásanti* (~ Hitt. *a-sa-an-zi*) < **h₁sénti* < **h₁h₁s-énti*. Since the HL ablaut *is-* / *ás-* must go back on **h₁eh₁s-* / **(h₁)h₁s-*, the sign *á* in the form ^{SOLIUM} *á-sa-ta* cannot denote anything else than a reflex of **h₁*. I therefore propose that ^{SOLIUM} *á-sa-ta* stands for [?santa] < **(h₁)h₁sent(o)*. The same must be valid for the word for 'seat', ^{MENSA.SOLIUM} *á-sa-*, which must reflect **(h₁)h₁s-ó-* (a full grade form **h₁eh₁so-* would have given HL ***isa-*).

Since the HL verb *is-* / *?s-* 'to sit' shows the same ablaut as Hitt. *es-/as-* 'to sit', we can assume that HL had ablaut in other verbs as well. For instance, the Hittite verb *es-/as-* 'to be' and CL *ās-/as-* 'to be' have ablauting paradigms, and it is *a priori* likely that HL preserved ablaut in this verb, too.

For 'to be' the attested forms in HL are: 3sg.pres. *á-sa-ti* 'he is', 1sg.pret. *á-sa-ha* 'I was', 3sg.pret. *á-sa-ta* 'he was', 3pl.pret. *á-sa-ta* 'they were', 3sg.imp. *á-sa-tu* 'he must be'. Although these forms usually are regarded as containing the stem *as-*, the new interpretation of the sign *á* makes it possible to interpret the forms more subtle, viz. as a strong stem [?as-] alternating with a weak stem [?s-]. Just as Hitt. 3sg.pres. *e-es-zi*, 3sg.pret. *e-es-ta* and CL 3sg.pres. *a-as-ti*, 3sg.pret. *a-as-ta* from **h₁ésti* and **h₁ést(o)*³² show a strong stem, I regard HL 3sg.pres. *á-sa-ti* and 3sg.pret. *á-sa-ta* to show a strong stem [?as-] as well, viz. *?a-s(a)-ti* = [?asti] and *?a-s(a)-ta* = [?asta] respectively. The weak stems of the Hitt. and CL paradigms are found in Hitt. 3pl.pres. *a-sa-an-zi* < **h₁sénti* and CL 3pl.imp. *a-sa-an-du* < **h₁séntu*, which forms suggest that HL 3pl.pret.act. *á-sa-ta* is to be analysed *?(a)-sa"-ta* = [?santa], showing the HL weak stem [?s-].

We saw that the etymological evidence of the words written with

³¹ The proto-form 3pl.pret.act. **h₁h₁sént* regularly lost its final *t* in Hitt. as well as Luw. and got supplanted in both languages. In Hitt., the 3pl.pret.-ending from the perfect (**-ēr*) was introduced, whereas in Luw. the 3pl.pret. ending of the middle (**-nto*) was taken over, yielding **h₁sénto* > [?santa] (cf. Yoshida 2002).

³² The PIE 3sg.pret. ending **-t* is preserved in Hittite as such: Hitt. *e-es-ta* = [ést]. In Luwian, however, the ending got supplanted by **-to*, so CL *a-as-ta*, HL *á-sa-ta* = [?asta] (cf. Yoshida 2002).

the sign *á-* strongly confirms a syllabic reading [ʔa] for this sign. This syllable [ʔa] seems to behave like all other *Ca*-signs and can be used to write the single consonant [ʔ] as well.

The etymological evidence that can be distracted from the words spelled with *a-* is not as clear and abundant as we saw above in the treatment of the etymological evidence for *á-*. Although the material is scanty, we may assume that the sign *a-* merely denotes a vowel [a] in initial position, too.

The sentence particle *a-wa/i(-)* does not have a clear etymology. It is often analysed as *a=wa/i(=)*, i. e. a sentence-initial particle *a-* followed by the sentence-particle *-wa/i-*, which is frequently found within particle chains and is considered to be related to the Hitt. particle of direct speech *-uḫ(r)-*. The alleged particle *a-*, however, never occurs without being followed by *-wa/i-*. I therefore see no reason to analyse *awa/i(-)* as consisting of two particles. I take it to be one particle that has nothing to do with the particle *-wa/i-*, which can occur as a single, loose element within the particle chains. Taking *awa/i(-)* as a sole sentence-initial particle that cannot be further divided, I would suggest that it reflects **nṽ-V ~ Hitt. nu*³³. If this suggestion is justified, we should read *awa/i(-)* as [anwa/i(-)], where the vowel *a* derives from syllabic **n*.

The words *a-ta* ‘in(side)’, *a-ta-na* ‘into’ and *a-tá-ti-li-* ‘internal’ have many Anatolian cognates: Hitt. *an-da* ‘(with)in, inside, into’, *an-da-an* ‘inside, in(to)’, CL *a-an-ta* ‘in(to)’, Lyc. *ñte* ‘inside’.³⁴ The outer-Anatolian cognates are Gk. ἔνδον ‘inside’, OLat. *endo* ‘into’ and OIr. *and* ‘in it’. All these words are usually reconstructed as **h₁endo(n)*, but this reconstruction is contradicted by OIr. *and*, which points to a zero-grade form **h₁ndon*³⁵. This latter preform is possible for Gk. ἔνδον and OLat. *endo* as well³⁶. Also within Anatolian, a reconstruction **h₁ndo(n)* is strongly indicated by Lyc. *ñte*³⁷.

³³ Hitt. sentence particle *n=as* etc. must also come from **nṽ-os* where the **n* disappeared before **o*, like e.g. *tān* ‘twice, second’ < **dujoim*.

³⁴ Lyd. *ēt* (prev.) often is cited as a cognate as well, but it has an unclear meaning (Gusmani 1964: 108).

³⁵ See McCone (1992: 26).

³⁶ See Schrijver (1991: 58–9).

³⁷ Melchert’s “syncope due to frequent proclisis” (1994: 135) in order to explain this form from its assumed pre-form **éndo* seems rather ad hoc. The sequence **én-* yields Lyc. *ē-*, as in Lyc. *ēne/i-* ‘mother’ from PAnat. **éno-* (Hitt. *anna-*) or *ēke* ‘when’ < **én-Ho* (cf. Melchert 1994: 285). A preform **éndo* would have yielded Lyc. ***ēte*. The alleged cognate Lyd. *ēt* (prev.) synchroni-

I therefore conclude that all other Anatolian forms as well must go back to a zero-grade **h₁ndo(n)*.

We see that **h₁ndo(n)* must be the preform of HL *a-ta(-na)* = [anda(n)]. The question arises why this word shows no trace of the laryngeal, while e.g. **h₁neh₃mn* gave *á-ta_{4/5}-ma-za* = [ʔlaman-za]. An answer may be provided by the glottalic theory. In PIE, the voiced consonants probably were glottalised (*d* = [ʔd], *g* = [ʔg], etc.), so that the word **h₁ndo(n)* phonetically was [ʔnʔdo(n)], which may have yielded PANat. [nʔdon] through dissimilation. This **nʔdo(n)* gave HL *a-ta(-na)* [anda(n)] without the initial glottal stop.

The adjective ^{LONGUS}*a+ra/i-* ‘long’ is cognate with CL *ārraja-* ‘long’. Perhaps we have to connect these words to the root **h₃r-* ‘to arise’. Since **h₃* has disappeared before *r* in all Anatolian languages³⁸, a preform **h₃r-ei-e/o-* would also lose its laryngeal, perhaps yielding an anlaut [#_or-], written *a+ra/i*. Cf. note 10 for the observation that a spelling *á+ra/i* is virtually absent in HL, whereas the distribution between spellings with *a+ra/i* and the separate sign *ara/i* is still unclear.

The consistent writing of the name Assur as *a-sú+ra/i-*^{REGIO} has been treated above and confirms our hypothesis that the sign *a* denotes the vowel *a* only.

Aphaeresis

Although aphaeresis, i.e. loss of initial vowel, is frequently found in HL³⁹, its precise conditions are still unclear. It occurs with a few words only, viz. *á-mu* ‘I’ (also attested *mu*), *á-ma/i-* ‘my’ (besides *ma/i-*), *á-pa-* ‘he, she, it’ (besides *pa-*), *á-sa-* ‘to be’ (besides *sa-*) and, if Van den Hout (2002)⁴⁰ is right, ^{VAS}*á-tara/i-* ‘person, soul’

cally had accent on *ē*, but this form maybe does not belong to these words (cf. also note 33).

³⁸ Compare Hitt. *arnumi* ‘to move along, to make go’ < **h₃r-nu-* (~ Gk. ὄρ-νῦμι ‘to make (someone) move’). The disappearance of **h₃* before *r* is perhaps paralleled in the disappearance of **h₁* before *r*, which could explain the absence of HL *á+ra/i*.

³⁹ Already found in texts of the Empire Period, e.g. SÜDBURG § 18: *zi/a+a-ti* DEUS.*202 *pa-ti-* ANNUS *i(a)-zi/a* ‘here a Divine Earth-Road in that year (I) construct(ed)’ (transliteration and translation by Hawkins 1995: 22–3), with *pa-ti-* instead of normal *á-pa-ti*.

⁴⁰ Note that the form ^{VAS}*a-tara/i-i-na* (KARKAMIŠ A15b § 11), cited in Van

(besides ^{VAS}*tara/i-*⁴¹). The observation that aphaeresis only occurs in words that are normally written with the sign *á*⁴², becomes significant as we have established a distribution between *á* and *a*. Although the phenomenon of aphaeresis in HL remains obscure, I would like to give some remarks that might shed some light on it.

For *á-mu*, *á-ma/i-* and ^{VAS}*á-tara/i-*, aphaeresis is quite understandable if we interpret it as occasional loss of the preconsonantal glottal stop. So, *á-mu* ‘I’ and *á-ma/i-* ‘my’, which are to be interpreted as [ʔmu] and [ʔma/i-] respectively, sometimes are attested as *mu* and *ma/i-* due to weak pronunciation of the [ʔ]. The word ^{VAS}*á-tara/i-* ‘person, soul’ is connected with Skt. *ātmán-* ‘breath, soul, self’⁴³. This implies a reconstruction **h₁h₁t-ro*⁴⁴, which indicates that we should interpret ^{VAS}*á-tara/i-* phonologically as [ʔtra/i-]. In this word as well, we see that occasionally the preconsonantal glottal stop is lost, yielding the aphaeresis.

In these three words the so-called aphaeresis seems to be due to loss of the preconsonantal glottal stop, but in the forms of *á-pa-* ‘he, she, it’ and *á-sa-* ‘to be’ the origin of aphaeresis is less clear.

If the HL verb *á-sa-* ‘to be’ indeed displays ablaut as its CL and Hitt. cognates do (the position I argued for above), the spelling *á-sa-* could either denote the strong stem [ʔas-] or the weak stem [ʔs-]. Following the lines of thought on the aphaeresis in *á-mu*, *á-ma/i-* and ^{VAS}*á-tara/i-* as given above, we would expect the aphaeresis in the verb *á-sa-* to be found in weak-stem forms, because of the loss of glottal stop in preconsonantal position: [ʔs-] > [s-]. As a matter of fact, we do find aphaeresised forms of *á-sa-* that reflect the weak stem: 3pl.pret. ‘they were’: *sá-ta* (KARATEPE 1 § 36,⁴⁵ *ibid.* § 40), *sa-*

den Hout 2002, is transliterated wrongly already in Hawkins (2000: 131). The photograph and drawing of the inscription clearly show the word is “^{VAS}” *á-tara/i-i-na*, and therefore consistent with the established distribution.

⁴¹ Although generally interpreted as *VAS-tara/i-*, Van den Hout (2002) convincingly argues such attestations should be read as the aphaeresised form ^{VAS}*tara/i-*.

⁴² The attestations of *wa/i-* instead of normal *a-wa/i* is not to be interpreted as aphaeresis, but as a “curious inversion” (Hawkins 2002: 419, with attestation places).

⁴³ See Hajnal 1995: 244–5.

⁴⁴ With zero grade **h₁h₁t-* as in Skt. acc.sg. *tmánam* (**h₁h₁t-mén-m*). A full grade **h₁eh₁t-* (as in Skt. nom.sg. *ātmā* < **h₁eh₁t-mōn*) would give HL ***it-*, as *is-* ‘to sit’ from **h₁eh₁s-*.

⁴⁵ This sentence, *a-wa/i á-mi-ia-za* || ^{DIES} *há-li-ia-za* ^{CORNU+RA/I} *su+ra/i-sá* |LINGERE(-)*há-sá-sá-ha sa-na-wa/i-za-sa-ha* |SOLIUM+MI-ia-sa |*sá-ta*, is trans-

tá- (KARKAMIŠ A11a § 17), *sa-ta*_x (TOPADA § 3, *ibid.* § 21)⁴⁶, *sa-ta* (BOHÇA § 6), which are to be interpreted as denoting [santa] for more usual [ʔsanta]. Nevertheless, there are also aphaeresised forms of the verb ‘to be’ that have the strong stem [ʔas-]. Some of these forms do not belong to the verb *á-sa-* ‘to be’, however, but rather to the verb (*⁶⁹)*sa-* ‘to let, to allow’. For instance, the form *sá-a-ha* (MARAŞ 4 § 10), which in Meriggi’s Glossar (1962) is still cited as an aphaeresised 1sg.pret. ‘I was’, nowadays⁴⁷ is translated as ‘I allowed (for myself)’. Hawkins (2002: 396) now also states that the form *sa-há* (BABYLON 2 § 2) perhaps should be interpreted similarly, instead of its usual translation ‘I was’.

There are apparent cases of aphaeresised forms that ought to reflect the strong stem, although the interpretation of the occurrences is often difficult and an alternative interpretation is possible: 3sg.pret. *sa-tá-* ‘was’ (KARKAMIŠ A11b § 2)⁴⁸; 3sg.pres. *sa-ti-* ‘is’ (KARKAMIŠ A3 § 22)⁴⁹, *sa-tá-* ‘was’ (TELL AHMAR 1 § 8)⁵⁰, *sa-tá* ‘was’ (KARAHÖYÜK § 12)⁵¹. All these forms might be explained in a differ-

lated by Hawkins (2002: 53) as ‘In my days there was *plenty* and *luxury* and good living’, which would imply that he interprets *sá-ta* as 3sg.pret. The sentence is, however, parallel to KARATEPE 1 § 6: *lá-mi-ia-za-há-wa/i* “DIES<”> *ha-li-za* *lá-TANA-WÁ/i-ia*^{URBS} | OMNIS+MI-*ma* | “BONUS” *sa-na-wa/i-ia* | “CORNU+RA/R” *su+ra/i-sa* | LINGERE(-)*ha-sa-sa-ha* *lá-sá-ta*, which Hawkins (2002: 49) translates ‘and in my days there were to Adanawa all good things, *plenty* and *luxury*’, so taking *á-sá-ta* as 3pl.pret. I therefore interpret *sá-ta* in § 36 as 3pl.pret. as well.

⁴⁶ The meaning of this sentence is not quite clear, so the interpretation of *sa-ta*_x as a separate word is not assured.

⁴⁷ See Hawkins 2002: 256, with commentary.

⁴⁸ *a-wa/i za-a-sa* URBS+MI-ni-i-sa *mí-sá-* | *tá-tà-li-sa* AVUS-*ha-tà-li-sa* || ¹*447-*nu-wa/i-ia-si sa-tá-* ‘this city of my father and grandfather was Ninuwis(?)’s, on which Hawkins (2002: 104) remarks: “easier to translate than understand”.

⁴⁹ *wa/i-sa-* | *ku-ma-na sa-ti-* | *pa-la-sa-ti-i* ‘when he shall be “out of the way”’, on which Hawkins (2002: 112) remarks: “still not fully established, though we may follow Meriggi’s provisional identification ...”. Especially the place of the alleged verb *sa-ti-* is strange, as normally the verb stands at the end of a sentence. In my view, *pa-la-sa-ti-i*, although further unattested, is a better candidate for being the verb in this sentence.

⁵⁰ [*wa/i-sa-*]’ *pa-[sa]-na-*’ | *²⁷⁴*u-pa-ti-ti* | DOMINUS-*na-ni-i-sa sa-tá-* ‘he was lord to/for his *demesne*’. This sentence occurs in a damaged part of the inscription, although Hawkins’ completions seem to give a meaningful text.

⁵¹ *a-wa/i-mu* ^{DEUS}TONITRUS POCULUM.PES.*67 LOCUS-*tá* LOCUS-*tá* REL-*i(a)-mí-sa* *135-*ti sa-tá* ‘For me the Stormgod of the land Poculum was revered in every place with ...(?)’. In my view, we must rather take *135-*ti-sa-tá* as one

ent fashion (see their respective notes), but we are left with one clear example of an aphaeresised form with strong stem [ʔas-], viz. *sa-ta* ‘was’ (MARAŞ 4 § 8): |*mi-pa-wa/i-tà* |*tá-ti-i* AVUS-*ha-ha* |*LEPUS-pa+ra/i-hi* |*sa-ta* ‘to my father and grandfather there was authority’. Here, the nom.-acc.sg. LEPUS-*pa+ra/i-hi* [taprāhi] (see Starke 1990: 162) must be the subject of *sa-ta*, which therefore has to be 3sg.pret. ‘was’. As the cognates of HL (*á*)-*sa-ta* ‘was’, viz. Hitt. *e-es-ta* and CL *a-as-ta*, seem to point to a preform **h₁ést(o)*, it is problematic why in this word the accented **é* was lost. This form, however, is also problematic when the HL aphaeresis is interpreted as loss of initial unstressed vowel *a-*. Melchert (1994: 276) hasitatingly suggests that the aphaeresis could originate in enclitic use of the verb.

The aphaeresis in the word *á-pa-* ‘he, she, it’ also implies loss of a real vowel, albeit unstressed. The word is cognate with Hitt. *apā-* ‘he, she, it’ (nom.sg. *a-pa-(a-)as*, acc.sg. *a-pu-u-un*), CL *apā-* ‘he, she, it’ (nom.sg.c. *a-pa-(a-)as*, acc.sg.n. *(a-)a-pa-an*), Pal. *apa-* ‘that one’, Lyd. *bi-* ‘he’ (nom.sg.c. *bis*) and Lyc. *ebe-* ‘this’ (nom.sg.c. *ebe*, acc.sg. *ebē*), which point to a PANat. paradigm **Hobós*, **Hobóm*,⁵² probably from PIE **h₁o-* ‘he, she, it’ + **-b^h-o-*. Perhaps the pretonic vowel was syncopated in HL (**h₁obó-* > [ʔbá-]) and the preconsonantal glottal stop was occasionally dropped like in *á-mu*, *á-ma/i-* and ^{VAS}*á-tara/i-*, which resulted in the spelling *á-pa-* versus *pa-*.

The disappearance of preconsonantal glottal stop is, however, never attested for *á-ta_{4/5}-ma-za* [ʔlaman-za] ‘name’. This must be due to the fact that this word mostly occurs in (archaic) formulae, of which *á-ma-za-pa-wa/i-ta á-ta_{4/5}-ma-za REL-i-sa* MALLEUS-*la-i* ‘but he, who shall erase my name ...’ is the most frequent one. It is remarkable that in these formulae the word *á-ma-za(-)* ‘my’ never occurs aphaeresised either. A possible aphaeresised form of *á-ta_{4/5}-ma-za* could be found in ^{LOQU}*la-ma-ní-sà-ti* ‘they proclaim(?)’ (KARKAMIŞ A31+ § 9). This verb, often considered a borrowing from Hittite, can now, with the new interpretation of *á-ta_{4/5}-ma-za* as [ʔlaman-za], be explained as a real HL derivative of the latter word. The verb thus shows aphaeresis (cf. Starke 1990: 291), which in reality presents the loss of a preconsonantal glottal stop.

Yet another case of aphaeresis is possibly (MENSA.)SOLIUM *á-sa-*

word, and translate ‘the Stormgod of the land Poculum, revered in every place, *135-*tisa*-ed for me’.

⁵² Except Lyd. *bi-*, which may show a similar aphaeresis.

'seat'. In HAMA 4 § 5, 6 we find "SOLIUM"-*sa-na*⁵³ (acc.sg.) 'seat', which may be read "SOLIUM" *sa-na*, with [san] for [ʔsan] < **h₁h₁s-ó-m*.

Although a full study of the phenomenon of aphaeresis in HL remains necessary⁵⁴, we may interpret the aphaeresis (= unexpected absence of initial sign *á*) as occasional loss of a preconsonantal glottal stop. As this loss does not occur in formulaic language, we may deal with a phonetic development that was taking place synchronically.

Conclusions

Although the HL signs *a* and *á* used to be considered as mere allographs of a single phoneme [a], they have to be carefully separated. A complementary distribution between the two signs has been established for the entire corpus (Empire Period and Late Period texts). Aberrant forms (words that are written with the "wrong" [a]-sign) are limited to four texts only (KARAHÖYÜK, JISR EL HADID, TOPADA and the ASSUR letters) and two words in the YALBURT-text.

The sign *a* denotes the vowel [a], whereas the sign *á* denotes the syllable [ʔa]. Like all other *Ca*-signs, the sign *á* = [ʔa] could also be used to write the sole consonant [ʔ], e.g. in *á-ma/i-* = [ʔma/i-] < **h₁me/o-* 'my'. Preconsonantal glottal stops were gradually disappearing in the period of the HL inscriptions (the so-called aphaeresis). This newly discovered phoneme [ʔ] is the direct reflex of PIE **h₁*.⁵⁵ If the sign *ha* can be regarded to denote [ʕ] (because of Ba'a-

⁵³ Transliterated thus by Hawkins 2000: 425.

⁵⁴ Such a study should include a detailed research on the occurrence of the sign *a* after words that seem to be complete already, where the sign is transliterated '. This sign occurs so often after aphaeresised forms that the two phenomena must have a connection. Is it comparable to the "inversion" spelling of *a-wa/i* as *wa/i-*' (cf. note 41)?

⁵⁵ Since **h₁* is preserved in HL as a separate phoneme, **h₁* must still have been phonemic in PAnatolian. This implies that direct traces of **h₁* could be found in the other Anatolian languages as well.

In my view, the preservation of **h₁* in the Anatolian branch upto a much later stage than generally expected could account for some unresolved Hittite phenomena. I tentatively assume that **h₁* was preserved word-initially before **e* in Hittite as well, whereas it was regularly lost preconsonantly (e.g. *link-* 'to swear' ~ Gk. ἐλέγχω 'to accuse' < **h₁leng^h*- (cf. Melchert 1994: 66-7)). Whenever this preconsonantal **h₁* paradigmatically alternated with a preserved pre-

latis written as *pa-ha-la-ti*), we find that the PIE laryngeals $*h_1$ and $*h_2$ (= [ʔ] and [ʕ]) have been preserved as such in HL.

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vocalic $*h_1$, however, it was analogically restored and preserved in Hittite. This assumption makes the much discussed *e/a*-ablauting *mi*-verbs understandable. In the same way as the ablauting pair 3sg. *se-e-es-zi* : 3pl. *sa-sa-an-zi* 'to sleep' phonologically has to be interpreted as [séʃʰi] : [s₃sántʰi] (< $*sésti$: $*ssénti$) (for [s₃s-] cf. Oettinger 1979: 98; Melchert 1994: 66), I interpret pairs like *e-es-zi* : *a-sa-an-zi* 'to be', *e-za-az-zi* : *a-ta-a-an-zi* 'to eat' and *e-ku-zi* : *a-ku-an-zi* 'to drink' phonologically as [ʔéstʰi] : [ʔ₃sántʰi] 'to be' (< $*h_1ésti$: $*h_1sénti$), [ʔédʰi] : [ʔ₃dántʰi] 'to eat' (< $*h_1édti$: $*h_1dénti$) and [ʔégʷtʰi] : [ʔ₃gʷántʰi] 'to drink' (< $*h_1égʷhti$: $*h_1gʷhénti$) respectively. Cf. Kloekhorst fthc. as well.

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