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: sâ (= sa₂), sà (= sa₃), sa₄, sa₅, sa₆, sa₇ and sa₈. 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, tâ, tâ, ta₄ and ta₅. Although this implies allography, it has been observed that these signs fall into two groups: the three signs ta, tâ and tâ interchange freely with each other, and the same goes for the pair ta₄ and ta₅, 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-tâ or a-tâ, but never *a-ta₄ or *a-ta₅. The word for ‘name’ is always written a-ta₄-ma-za or a-ta₅-ma-za but never *a-ta₄-ma-za, *a-ta₅-ma-za or *a-ta₅-ma-za.

Such a clear distribution within the inscriptions can only mean that the phonetic value of the signs ta, tâ and tâ must have been different from that of the signs ta₄ and ta₅. Whereas ta, tâ and tâ clearly render

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1 I am indebted to J.J.S. Weitenberg, A.M. Lubotsky, R.S.P. Beekes, E.H.H. Kortlandt and Th. P. J. van den Hout for their useful comments on earlier drafts of this paper.

2 Cf. also Herboinski 2002: 59.

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

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Words spelled with a-

a-ta
‘in(side)’
(63x: 1× ái, see below)
a-ta-na
‘into’
(1x)
a-ta-ti-li-
‘internal’
(1x)
LON-GUS a + ra/i-
‘long’
(2x)
a-sú + ra/i-
‘Assur’
(1x)
REGIO-URBS
a-sú + ra/i-
‘Assyrian’
(3x)
na/i-

a-wa/i
sent.cert.
(168x: 1× á, see below)

Words spelled with á-

á-
‘to make’
(6x)
á-ma/i-
‘my’
(109x: 7x a, see below)
á-mu
‘I’
(36x)
á-pa/i-
‘he, she, it, this’
(89x: 5x a, see below)
á-sa-
‘to be’
(27x: 10x a, see below)
á-sa-ha-na-ti-sa-za
‘blood-offering’
(1x)
*a-sa-ha+ra/i-mi-sa-
‘sacrifice’
(3x)
MENSA/SOLIUM á-sa-
‘seat’
(4x)
á-sa-sa-
‘to speak’
(13x)
EQUUS ANIMAL(1) á-sú-
‘horse’
(3x)
á-ta,-á-za-
epithet (of Kubaba)
(13x)
(FEMININ) á-ta 4/5-
á-ta 4/5-ma-za
‘name’
(41x)
á-wa/i-
‘to come’
(7x)
LITUUS á-zá-
‘to love’
(21x)

only twice regarding the writing of a or ái, viz in §31 (word 156): Hu. has á-pa-
i, while Ho. has a-pa-ri-i. 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-ta-ta-ta-ta/ná-ta/i- mi-ha ‘and so I settled Adana weans down . . . there’. Another inconsistency between the two versions is found in §20 (word 106), for which Hu. has ‘á-sa-ta’, and Ho. a-sa-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 I, cited by Laroche (1960: 233), viz. Hu. 183 a-mi-i-za besides Hu. 189 á-mi-i-za, has been removed by Hawkins (2000: 53), who now reads §35 (182-187) as REL-pa-wa/i’ mi-i-za “THUS” há-I-I-za ‘so in my days’.

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:

⁵ Although the name en-ma-lik is not attested as Ba‘al-malik, the personal name, REGNO 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 za-za-ja we find in CEKE 9 is unclear⁶. Besides these personal names, we only find the sign á word-internally once, viz. in RESTAN §3 CRUS-MA-ha-d ‘I set up’ = [tanuka]. This spelling with -á must be a mistake, as can be seen in QALAT EL MUHDÆ, 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-MA/
ha, without an -d. 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(f)-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.


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
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-as, epithet (of Kubaba), which is exclusively found with á (13 times), and from the spelling of á-ta-as, ‘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(-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(-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 LITIUS á-za- ‘to love’, which is written 21 times with á, shows the same spelling as the names that are derived from this verb: 1á-za-mi- ‘Azami’ (lit. ‘the beloved one’) and LITIUS 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.

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/i (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/i cannot therefore be used as a solid argument regarding the spelling of a-wa/i.

Another aberrant form is a-mi(-i) in TELL TAYINAT 2 fr. 5a. 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 1 a mi pa wa/i REGIO ni [...] is interpreted by Hawkins as a mi 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 KARAHOVUK § 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-mí-tá- DEUS ni-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 [aranu] ‘let them eat up’

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8 Although in the latter word the use of the signs na and ta (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.

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. ENEG § 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.  

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 ‘1 set up’ (REISTAN § 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’ (2x: KARAHÖYÜK § 13, JISR EL HADDI Fr. 1 L.2, a-mi-i(a) ‘my’ (KARAHÖYÜK § 22), a-mi-sa ‘my’ (2x: JISR EL HADDI Fr. 1 L.2, TOPADA § 19), a-mi-i ‘me’ (JISR EL HADDI 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’ (2x: 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 HADDI, 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’ (7x: KARAHÖYÜK § 20, § 21, ASSUR letter f+g § 14, § 20, § 22, § 33, § 48), a-sa-tu ‘let be’ (KARAHÖYUK § 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.

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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.
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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 text, 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 is never written with endings. From the context, it is clear that the verb must be 'to subject', although the verb has not been attested elsewhere. 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 YALBURG-text contains the following words with initial [a]:

- 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 '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-xURBS '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 indecisive. Both toponyms á-wa/i+ra/i-

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11 For text edition, see Hawkins 1995.
12 But compare Melchert 2002: 138–9, who reads a+INFRA-ka and denies the word to be interpreted as a verb.
13 Hawkins (1995: 28) says that in NİŞANTAŞ we are perhaps able to read á-ka-ha 'I subjected twice'.
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, PERS a+ra/i-ta-'he went' (ASSUR letter a § 6) and...
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 these 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 Ba’al(ī)-malik. This name, however, is not the only attested form in HL that is derived from the name Ba’al. In the inscriptions HAM 4 (§ 6, 7, 8, 10), HAM 5 (§ 2), RESTAN (§ 3) and QAL‘AT EL MUDIQ (§ 3) we find the name of the god Ba’alatīs, written in hieroglyphs as \( DEUS \) pa-ha-la-li, with the sign \( ha \). This seems to contradict the rendering of the name Ba’al(ī)-malik as \( pa-á-li-ma-li \). The texts that mention Ba’alatīs, 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 Ba’alatīs was taken from the Phoenician language and that this Phoenician ‘ain 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 \( 1-en-ma-līk \). At the time of these seals, 13th century B.C., the Akkadian rendering of the Sumerian logogram \( EN \) was \( bētu \), 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 \( ba-a-lu(-ma) \), which must stand for Ba’al(ī), having an ‘aleph instead of an ‘ain. Therefore we should read \( pa-á-li-ma-li \) as Ba’al(ī)-malik with an ‘aleph that must have developed 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 \( *h₂ \), which phonetically probably was [ʕ] \(^{22}\)).

Since we can equate \( pa-á-li \) with Ba’al(ī)-. phonetically \( [pa’al ū] \), 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 \( [2a] \). 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 \( [2a] \).

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. \( a-sti+ra/i/REGIO ’ia-URBS \) and of the adjective ‘Assyrian’, viz. \( a-sti+ra/i/REGIO -wa/i-na/i-URBS \). 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 I. In this inscription, a few HL names are written in the Phoenician script as well. We find for instance, \( LITUUS á-zá-ti-wa/i-ta- = Phoen. ’ztwd (Azatiwada); á-wa/i+ra/i-ku- = Phoen. ’wrk (Awariku); á-TANA-wa/i-URBS = Phoen. ’dn (Adana(awa)). It looks as if the sound represented by the HL sign \( á \) is consistently rendered with a glottal stop ’ 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 ’ in Phoenician as well.

\(^{21}\) See Huehnergard 1987: 114.

as this language automatically has a glottal stop before word-initial vowels. The equation of the sign ȧ with Phoen. ȧ 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 ȧ, and a value [a] for the sign ā, we must now investigate whether these phonetic values can be supported by the etymological evidence. First I will look at the words spelled with ā-.

In a few words, the sign ā- is used to write etymological *h₁eːː-

"āsa:haː-ra/i-mi-sa and āsa:ha-na-ti-sa:sa ‘blood-offering’ belong with Hitt. e-es-har, gen. is:ha-na-a-as, CL a-as-ha-ar ‘blood’ from PIE *h₁es₁ʰ-š₂, *h₁es₂n̥n̥os (≈ Gk ἐγκόν, TochA yśr, TochB yś-r, Skt. अग्नि ‘blood’);

EQUUS ANIMAL  ā-sū ‘horse’ is cognate with CL nom.sg. anśekur, ra-as ‘horse’ (which could stand for azzu- as the form az-za-ya-anza is perhaps to be interpreted as dat.-loc.pl. ‘horses’) from PIE *h₁eke₂j-o (Skt. ásuv-, Gk. ἀγαλ-, Lat. equus ‘horse’);

āsa- ‘to be’ belongs with Hitt. 3sg.pres. e-es-zi, 3pl.pres. a-sa-an-zi ‘to be’ and CL 3sg.pres. a-as-ii, 3pl.imp. a-as-a-an-du ‘to be’ from PIE *h₁es₁-

āta- / ā-za-23 ‘to eat’ belongs with Hitt. 1sg.pres. e-it-mi, 3pl.pres. a-ta-an-zi ‘to eat’, CL 3sg.pres. az-za-as-da (at’iša < *h₁e₂t-iš-), 3pl.imp. a-da-an-du ‘to eat’ from PIE *h₁ed-

If we read the sign ā in these words as [a], as indicated by the synchronic phonetic evidence, we see that the glottal stop [ʔ] seems to be a direct reflex of *h₁; āsharmis [Pharsamis] < *h₁es₁ʰ-š₂; āshnatis [Pharsnatis] < *h₁es₂n̥ñ̥-; āsuv- [< basu-] < *h₁e₂k-o; ās- [Pas-] < *h₁e₁s; āt-; āz- [Pαt] < *h₁ed-

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

23 The PAnat. preform *emu which Melchert (1994: 236) uses to explain HL ā-mu as well as Hitt. amnuk ‘me’ (1994: 74), is an unparalleled construct within the IE languages. Unfortunately, no sg. personal pronouns are attested in CL. In Hittite we find a quite different nominal system than in HL. Hitt. nom. ú-uk ‘i’ must be a remodelling of PIE *h₁ẹg with the u from 3sg.pres.person. *tv. Acc. am-mu-uk ‘me’ in my view is made up of the oblique form *h₁ẹm-, followed by ú-uk < virtual *h₁em- (compare Goth. acc. mēk ‘me’ from mē-iik) and goes back to virtual *h₁ẹm- (with *mēh₁ > Hitt. -mēn).

24 An important argument in favour of an interpretation [θamāna]-za is the one attestation of the name ʿātha-um-i-tha-za- (karkamiš A27u:2) besides normal (29) ʿātha-um-i-tha-za- (karkamiš A17u:1, karkamiš A11u:1, karkamiš A11b:1). This name, which is to be analysed as ʿāthu+āth₁̣u-θama (lit. ‘let it be (his) name’), shows a genuine alliteration between ʿāth₁̣u and la in the word for ‘name’. The one attestation ʿātha-um-i-tha-za- (masaš 8 § 1), however, would be an argument in favour of an interpretation [adamanzä] as it seems to show rootnation from intervocalic -ā-. Nevertheless, the occurrence of rootnation 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. mallu:is-+ra/i/-i/-he ‘erases’ (§ 12). This word, occurring in the frequent formula ‘he who shall erase my name...’, is normally written mallu:is-(*θ₁̣)-la/-i (e.g. karkamiš A6 § 29, karkamiš A14a § 8, tell ammar 2 § 12). So here, in masaš 8, we find an -r- instead of normal -l-. This ‘mixing up’ of liquids would be parallel to the spelling āšu:ōramana- instead of normal āšu:ōlanana- (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-ta ‘he sits’, 3pl.pret.act. SOLiUM + MI-ti ‘they sit’, 3pl.pret.act. SOLiUM + MI-ta ‘they sat’. Based on the caus. SOLiUM ismuwa- ‘to cause to dwell, to seat’ and the noun THRONE ı-sa-tara/i-ta/i-ta [i-starta/i/i]28 ‘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-ta = ÍSaT to Hitt. e-sa-ri ‘he sits’ which both reflect *iša(–) from *h₁esh₃-o.30 Nevertheless, we have to equate 3pl.pret.act. SOLiUM á-sa-ta ‘they sit’ (KARAKAMI A11b §10) with 3pl.pret.act. SOLiUM + MI-ta (KARATEPE 1 §37). This points to ablaut within the verb, which is paralleled in the Hitite paradigm of e-sa(-ri) (unfortunately, the verb is not attested in CL). In Hit., 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 -ta- and with -ra/i-, are explicable besides normal á-suwaat-aššmansu- (containing [laman-za]), and that it is now unnecessary to assume that in MARAQ 8 rhhoticism of intervocalic -d- occurs earlier than usual. 27 Pre-Anat. *h₁esh₃-onm from PIE *h₁esh₃-omn (comp. Gk. ὕπνος < *h₁esh₃-omn) with neutralisation of *h₁ to *h₁ before *n in Anatolian (cf. Hitt. ant-ja- ‘to work, to carry out’ < *h₁em-je/-â (~ Lat. omis, Skt. ánas- ‘load, burden’ < *h₁en-os-) and the further lack of Hit. words beginning with *h₁m- from *h₁m-). The interpretation of á-ta-aššma-so [laman-za] as reflecting *h₁es₁m₃m₉ (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 *h₁esh₃m₉ to have become *im₉ > *am₉. The assumption that this *am₉ man developed an analytic vowel in the -mm-cluster in order to explain the outcome adaman-za (and Lyc. adem₃ and Lyd. étam₉) 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. á-[d]éma ‘names’, whereas Kalinka (1901: 67, text 83, 8) cites the form as álāma (in the copy of the text, the l (λ of Adama) is clearly visible). This álāma must be cognate with Hit. laman and HL [laman-za], implying a development of *h₁C > Lyc. aC. The Lyd. form étam₉ does not mean ‘name’ (Gusmani 1968: 108) and is to be separated from the other words. 28 For attestations see Meriggi 1962: 37–8. 29 Compare the CL adj. ístardali- ‘looking like a throne’, an adj. in -ali- from the noun ístara- ‘throne’. See for attestations of HL THRONE ı-sa-tara/i-ta/-ta Starke 1990: 416–7. 30 Note that *h₁eš₃-o gave PANAT. *ʔeš₃a, of which the *ʔe yielded HL (ʔ)i, instead of *h₁e > PANAT. *ʔe > HL ʔa.

The Preservation of *h₁ in Hieroglyphic Luwian: Two Separate a-Signs 41 (3sg.pres.act. e-es-zi, 3pl.pres.act. a-sa-an-zi). We therefore can safely assume 3sg.pres.midd. SOLiUM + MI-sa-ta = ÍSaT (~ Hitt. e-sa-za) < *h₁eš₃-o, while 3pl.pret.act. SOLiUM + MI-ta = SOLiUM á-sa-ta = ásant < *h₁sénto31 with initial degeneration from *h₁eš₃-énti(â), and 3pl.pret.act. SOLiUM + MI-ti = ásant (~ Hitt. a-sa-an-zi) < *h₁sénti < *h₁eš₃-énti. Since the HL ablaut is- /â- must go back on *h₁eš₃-sâ- /*h₁eš₃-sâ- the sign â 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 [l’asanta] < *h₁eš₃-énti(â). The same must be valid for the word for ‘seat’, MÉNSA.SOLiUM á-sa-zi, which must reflect *h₁eš₃-sâ- (a full grade form *h₁eš₃-sâ- would have given HL *έ̂̄sâ-).

Since the HL verb is- /â- ‘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 Hitite verb es-/as- ‘to be’ and CL âs-/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.pres. á-sa-ha ‘I was’, 3sg.pres. á-sa-ta ‘he was’, 3pl.pres. á-sa-ta ‘they were’, 3sg.imp. á-sa-ú ‘he must be’. Although these forms usually are regarded as containing the stem as-, the new interpretation of the sign â makes it possible to interpret the forms more subtly, viz. as a strong stem [âas-] alternating with a weak stem [âas-]. Just as Hitt. 3sg.pres. e-es-zi, 3sg.pres. e-es-ta and CL 3sg.pres. a-as-iti, 3sg.pres. a-as-ta from *h₁éstiti and *h₁éstiti(â)32 show a strong stem, I regard HL 3sg.pres. á-as-ti and 3pl.pres. á-as-ta to show a strong stem [âas-] as well, viz. âa(a)-ti = [âasti] and âa(a)-ta = [âasta] respectively. The weak stems of the Hit. 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.pres. á-as-ta is to be analysed *(a)-sa-^[âa]-ta = [âasta], showing the HL weak stem [âas-].

We saw that the etymological evidence 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 (*-êr) was introduced, whereas in Luw. the 3pl.pret. ending of the middle (*-nto) was taken over, yielding *h₁sénto > [âasta] (cf. Yoshida 2002).

32 The PIE 3sg.pres. ending *-t is preserved in Hitite as such: Hitt. e-es-ta = [êst]. In Luwian, however, the ending got supplanted by *-to, so CL a-as-ta, HL á-sa-ta = [êsta] (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 -ya(r)-. The alleged particle a-, however, never occurs without being followed by -wa/-i-. I therefore see no reason to analyse a-wa/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 particle chains. Taking a-wa/i(-) as a sole sentence-initial particle that cannot be further divided, I would suggest that it reflects *ny-V ~ Hitt. na33. If this suggestion is justified, we should read a-wa/i(-) as [anwa/i(-)], where the vowel a derives from syllabic *y.

The words a-ta ‘in(side)’, a-ta-na ‘into’ and a-tá-tí-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. nité ‘inside’.34 The outer-Anatolian cognates are Gk. ἐνδο ‘inside’, OLat. endo ‘into’ and Ofr. and ‘in it’. All these words are usually reconstructed as *h₁endo(n), but this reconstruction is contradicted by Ofr. and, which points to a zero-grade form *h₁ndo(n)35. This latter preform is possible for Gk. ἐνδο and OLat. endo as well36. Also within Anatolian, a reconstruction *h₁ndo(n) is strongly indicated by Lyc. nité37.

33 Hitt. sentence particle n-as etc. must also come from *ny-os etc. with the *y disappeared before *o, like e.g. tām ‘twice, second’ < *dygojam.
34 Lyd. ét (prev.) often is cited as a cognate as well, but it has an unclear meaning (Gusmani 1964: 106).
35 See McConkie (1992: 26).
37 Melchert’s “syncop 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. ét, as in Lyc. cèri ‘mother’ from PAnat. *ēno- (Hitt. ana-) or cēh ‘when’ < *ēnh-o (cf. Melchert 1994: 285). A preform *éndo would have yielded Lyd. ét (prev.) synchronically.

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. *h₁neh:mm gave á-ta;l-s-ma:za = [laman:za]. An answer may be provided by the glottalic theory. In PIE, the voiced consonants probably were glottalised (d = [ʔd], g = [ʔɡ], etc.), so that the word *h₁ndo(n) phonetically was [tʰdn(ο)], which may have yielded PAnat. [n’d(o)] through dissimilation. This *ndo(n) gave HL a-ta(-na) [anda(n)] without the initial glottal stop.

The adjective LONGUS a-ra/i- ‘long’ is cognate with CL arraj-a ‘long’. Perhaps we have to connect these words to the root *h₁r- ‘to arise’. Since *h₁ has disappeared before r in all Anatolian languages38, a preform *h₁r-ei-e/o- would also lose its laryngeal, perhaps yielding an anlaut [ʔh₁r-], 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-sti+r-a/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’

33 Compare Hitt. armum ‘to move along, to make go’ < *h₁rm-ru (~ Gk. ἀγηυθή ‘to make (someone) move’). The disappearance of *h₁ before r is perhaps paralleled in the disappearance of *h₁ before r, which could explain the absence of HL á-ra/i.
34 Already found in texts of the Empire Period, e.g. SÜMBURG §18: zi/a+a-tí $202 pa-ti’ ANNUS (a)zi/a ‘here a Divine Earth-Road in that year (I) constructed’ (transliteration and translation by Hawkins 1995: 22-3), with pa-ti’ instead of normal á-pa-ti.
35 Note that the form *VAS a-tara/i-i-na (KARKAMİS A15b §11), cited in Van...
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besides VAS \tara/i-\textsuperscript{41}. The observation that aphaeresis only occurs in words that are normally written with the sign \(\text{ā}\)\textsuperscript{16}, becomes significant as we have established a distribution between \(\text{ā}\) 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 \(\text{ā-mu}, \text{ā-ma/i-} \) and VAS \(\text{ā-tara/i-}\), aphaeresis is quite understandable if we interpret it as occasional loss of the preconsonantal glottal stop. So, \(\text{ā-mu} \) ‘I’ and \(\text{ā-ma/i-} \) ‘my’, which are to be interpreted as [ʔmu] and [ʔma/i-] respectively, sometimes are attested as \(\text{mu} \) and \(\text{ma/i-} \) due to weak pronunciation of the [ʔ]. The word VAS \(\text{ā-tara/i-} \) ‘person, soul’ is connected with Skt. \(\text{ātman-} \) ‘breath, soul, self\textsuperscript{63}. This implies a reconstruction \(\text{*h₁}h₁t₁r₀\textsuperscript{-} \), which indicates that we should interpret VAS \(\text{ā-tara/i-} \) phonologically as [ʔtara/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 \(\text{ā-pa-} \) ‘he, she, it’ and \(\text{ā-sa-} \) ‘to be’ the origin of aphaeresis is less clear.

If the HL verb \(\text{ā-sa-} \) ‘to be’ indeed displays ablaut as its CL and Hitt. cognates do (the position I argued for above), the spelling \(\text{ā-sa-} \) could either denote the strong stem [ʔas-] or the weak stem [ʔs-]. Following the lines of thought on the aphaeresis in \(\text{ā-mu}, \text{ā-ma/i-} \) and VAS \(\text{ā-tara/i-} \) as given above, we would expect the aphaeresis in the verb \(\text{ā-sa-} \) 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 aphaeresed forms of \(\text{ā-sa-} \) that reflect the weak stem: 3pl.pret. ‘they were’: sā-ta (Karatepe 1 § 36,\textsuperscript{45} ibid. § 40), sa-

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\textsuperscript{41} Den Hout 2002, is transliterated wrongly already in Hawkins (2000: 131). The photograph and drawing of the inscription clearly show the word is "VAS\textsuperscript{2} \tara/i-\textsuperscript{41} i-na, and therefore consistent with the established distribution.

\textsuperscript{42} Although generally interpreted as VAS \tara/i-, Van den Hout (2002) convincingly argues such attestations should be read as the aphaeresed form VAS\textsuperscript{2} \tara/i-\textsuperscript{41}.

\textsuperscript{43} The attestations of wa/i instead of normal \(\text{wa/i} \) is not to be interpreted as aphaeresis, but as a "curious inversion" (Hawkins 2002: 419, with attestation places).

\textsuperscript{44} See Hajnal 1995: 244-5.

\textsuperscript{44} With zero grade \(\text{*h₁h₁t₁-} \) as in Skt. acc.sg. \(\text{imānām} \) (*\(\text{h₁h₁t₁-mōn-} \)). A full grade \(\text{*h₁h₁t₁-} \) (as in Skt. nom.sg. \text{ātīm} \langle *\(\text{h₁h₁t₁-mōn-} \)\rangle would give HL **t₁r₀, as it ‘to sit’ from *\(\text{h₁h₁t₁-} \).

\textsuperscript{45} This sentence, \(\text{a-wa/i-}\text{ā-mi-ia-za} \| \text{DISh₁-h₁i-ia-za} \text{SOLU} \text{NUMAS+MÍ-IA-} \text{SÍS-ta, is trans-
ent fashion (see their respective notes), but we are left with one clear example of an aphaeresis form with strong stem [zas-], viz. sa-ta ‘was’ (MARAS 4 §8): mi-pa-wa/i-ta ti-ti-ii AVUS-ha-ha LEPUS-PA+RA/i-hi LASA-ta ‘to my father and grandfather there was authority’. Here, the nom.-acc.sg. LEPUS-PA+RA/i-hi [taprahi] (see Starke 1990: 162) must be the subject of sa-ta, which therefore has to be 3sg.pret. ‘was’. As the cognates of HL (ā)-sa-ta ‘was’, viz. Hitt. e-es-ta and CL a-as-ta, seem to point to a preform *h₁es(t)(o), it is problematic why in this word the accented *e was lost. This form, however, is also problematic when the HL aphaeresis is interpreted as loss of initial unstressed vowel a-. Melchert (1994: 276) hesitatingly suggests that the aphaeresis could originate in enclitic use of the verb.

The aphaeresis in the word ā-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. ebe), which point to a PANat. paradigm *Hobōs, *Hobōm, probably from PIE *h₁o-’he, she, it’ *-h₂-’o-. Perhaps the pretonic vowel was syncopated in HL (*h₁obo- > [وبا]-) and the preconsonantal glottal stop was occasionally dropped like in ā-mu, ā-ma/i- and YAS ā-tara/i-’, which resulted in the spelling ā-pa- versus pa-.

The disappearance of preconsonantal glottal stop is, however, never attested for ā-ta₄/₅-ma-za [lamanza] ‘name’. This must be due to the fact that this word mostly occurs in (archaic) formulae, of which ā-ma-za-pa-wa/i-ta ā-ta₄/₅-ma-za REL-i-ša MALLEUS-la-i ‘but he, who shall erase my name ...’ is the most frequent one. It is remarkable that in these formulae the word ā-ma-za-(‘) ‘my’ never occurs aphaeresed either. A possible aphaeresed form of ā-ta₄/₅-ma-za could be found in LQOQTU-la-ma-ni-sá-ti ‘they proclaim(?)’ (KARKAMISH A31 §9). This verb, often considered a borrowing from Hittite, can now, with the new interpretation of ā-ta₄/₅-ma-za as [lamanza], 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 ā-sa-

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

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

‘seat’. In HAMA 4 §5, 6 we find “SOLIUM”-sa-na53 (acc.sg.) ‘seat’, which may be read “SOLIUM” sa-na, with [san] for [sən] < *h₁is-ō-m.

Although a full study of the phenomenon of aphaeresis in HL remains necessary,54 we may interpret the aphaeresis (= an unexpected absence of initial sign ā) 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 ā 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 (KARAHOYUK, JISR EL HADDID, TAPA and the assur letters) and two words in the YALBURTTEXT.

The sign a denotes the vowel [a], whereas the sign ā denotes the syllable [a]. Like all other Ca-signs, the sign ā = [a] could also be used to write the sole consonant (?), e.g. in ā-ma/i- = [ma/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 (?) is the direct reflex of PIE *h₁. If the sign ha can be regarded to denote [h] (because of Ba’ā-
Iliu, written as *pa-ha-la-ti-*, we find that the PIE laryngeals *h₁* and *h₂* (= [ʔ] and [ʕ]) have been preserved as such in HL.

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