The New Values of Luwian Signs L 319 and L 172.

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The Luwian hieroglyphic signs L 319 and L 172 are traditonally read as <ta₄> and <ta₅> . The combinatory and etymological analysis of the lexemes where these signs frequently occur leads us to suggest their new transliteration values <la/i> and <lá/í> for the Iron Age. Our conclusion is compatible with the implicit suggestion of J. David Hawkins that the antecedents of these signs had the readings <ali> and <ala> in the Bronze Age. The sporadic use of <la/i> and <lá/í> for the etymological sequences */rV/ and */da/ in late Luvian inscriptions reflects the merger of the postvocalic /l/, /d/, and /r/ into the flap [ɾ] in the Luvian dialects of the first millennium BC.

1. Introduction and Forschungsgeschichte. It has been assumed since the dawn of Luwian studies that the Luwian hieroglyphic signs assigned the numbers 319 and 172 in Laroche's catalog encode open syllables beginning with coronal sounds.[1] Laroche 1960 assigned to them basic values *té/tí* and *tì* respectively, while Meriggi 1962 offered essentially similar readings *tí* and *tì*. Hawkins and Morpurgo Davies (1975: 130-132) reexamined the attestation of these signs and presented abundant evidence for the -*a*-vocalism in both cases, arguing at the same time that the -*i*- vocalism is likewise possible, but not equally well attested. In their subsequent publications, Hawkins and Morpurgo Davies consistently transliterate L 319 and L 172 as <ta₄> and <ta₅> respectively. The majority of Anatolianists have accepted this provisional convention, although Melchert (2003: 181 fn. 12) insists that evidence for -*i*- vocalisation is sufficient to justify the more inclusive transliteration <ta/i₄> and <ta/i₅>.

The consonantal values of L 172 and L 319 have generated no less discussion, but the debate has not been conclusive and failed to bring about any changes in transliteration. Hawkins and Morpurgo Davies (1975: 132) formulate a legitimate question: why is it that some words ("name", "bad", "place", "servant") are regularly written with these two signs and are never written with the other dental signs? They observe, furthermore, that in the first two cases the likely Hittite cognates of the Luwian words in question, *laman* 'name' and *idalu*- 'evil, bad' contain laterals rather than dental stops. They state that in most of the clear cases the Luwian consonant involved was (etymologically) voiced and add that they could "speculate about possible lateral or retroflex phonemes but do not have sufficient data to proceed". Melchert (1994: 38) made one step further claiming that the respective signs denoted exclusively voiced or lenis sounds, but insisted that they were stops and did not comment on the lateral hypothesis. Later, however, he returned to the same issue and claimed that "there are indications that the change of intervocalic **d* to something other than a stop took place already in the prehistory of Luwian" (Melchert 2003: 180).

The theory that "<ta/i₄>" and "<ta/i₅>" differ from the rest of the *ta*-signs through their voiced/lenis character is no longer tenable. Rieken (forthcoming) has demonstrated that the sign <tà> (L 41) fulfills precisely this function, alternating with <ta> / <tá> in

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those positions where lenition is expected. Thus the Luwian ending of 3sg. pret. act. is regularly spelled <tà> when attached to verbal stems ending in a long vowel. By contrast, the number of alternations between <tà> and "<ta/i$_4$> / <ta/i$_5$>" is rather small and they all belong to the last two centuries of the Luwian hieroglyphic tradition (cf. section 3.3 below). This suggests that the prototypical function of the last two signs is to be sought elsewhere.

It was, however, David Hawkins, who has collected crucial evidence leading to the present reevaluation of the consonantal values of L 172 and L 319. He persuasively argues for the identification of L 319, attested exclusively in the Iron Age sources, and L 416, known from YALBURT, SÜDBURG, and several other hieroglyphic texts dating back to the Hittite Empire. With regard to the value of L 416, he observes that in all the lexemes that have parallels in cuneiform sources, it corresponds to the segment *li* (Hawkins 1995: 114-115). These ideas are developed further in the recent publication of the NIŞANTEPE seals, where Hawkins cautiously suggests that L 416 may have been used in the Empire Period to "write the element *ali*- with the initial *a*- either omitted or implicit". In addition, he shows that all the cuneiform parallels to the lexemes containing the sign L 172 in the Bronze Age texts speak for the identification of this sign with the sequence *a-la* (Hawkins 2005: 289-90). The comparisons provided by Hawkins are summarized below.

Table 1

416-LEO (NIŞANTEPE, # 644, Herbordt 2005: 227)	Ali-UR.MAH (Laroche 1966, #34)
416-mu-tá (NIŞANTEPE # 645-646, Herbordt 2005: 227)	Alimutta (Laroche 1981, #32b)
416-SARMA (NIŞANTEPE, #98, Herbordt 2005: 130)	Ali-Sarruma (Laroche 1966, #33)
416-VIR.*ZI/A* (TARSUS, #13, Laroche 1958: 257)	Aliziti (Laroche 1966, #36)
ká-416 (Cruciform Seal, Dinçol et al. 1993)	Kāli (Laroche 1966, #484)
pi-na-416 (YALBURT bl. 12+13, Poetto 1993: 80 and Hawkins 1995: 68-70)	Gk. Πίναρα, Lyc. Pinale (Zgusta 1984, § 1062-1
172-416-mi (NIŞANTEPE, # 3-10, Herbordt 2005: 114-16)	Alalimi (Laroche 1966, #22)
172-tara/i-ma (KÖYLÜTOLU YAYLA , Masson 1980: 107-118)	Alatarma (Del Monte and Tischler 1978: 6-7)
172-zu(wa) (YAZILIKAYA, #45)	Allanzu (Van Gessel 1998: 20-21)

The probative value of these comparisons is not uniform. The digraphic seal NIŞANTEPE, #3 prompts the direct equation between the hieroglyphic spelling *172-416-mi* and the cuneiform spelling of the same name *a-la$^!$-li-mi* (written *a-ad-li-mi*).[2] The name *ka-416* occurring on the cruciform seal next to the name of Mursili I virtually guarantees that it belongs to the Hittite queen Kali known from the offering lists. The goddess YAZILIKAYA, # 45 was independently identified by Laroche (1969: 85-89) as Allanzu, which was accepted by Güterbock (1975: 172, 187), while the writing of the first sign of the name as <ta$_5$> was only established by Hawkins in 1991 by collation

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[2] The Luwian male name *Alalimi*- can be analyzed as an etymological participle from the stem **alalī*- 'to wish', a direct cognate of Hitt. *ilaliya*- 'id'. This popular name is attested both in Hittite texts and in an Akkadian document from Ugarit (Laroche 1966, #22). The same root can be seen in the Iron Age Luwian forms (COR)*á-lu/a/i-na-za*- 'to be covetous' (KARATEPE § 66) and ("COR") *á-lu/a/i-na-ma*- 'covetousness' (KARATEPE § 71). These considerations are sufficient to refute the hypothesis of Melchert (2003: 181), according to which the form *Alalimi*- represents a specifically Hittite adaptation of Luwian **Dadimi*-.

(Hawkins 2006b: 62, 75 fig. 12c). The identification of *pi-na-416* with the Lycian toponym Πίναρα/*Pinale* finds strong support in the juxtaposition of *pi-na-416* and Awarna/Xanthos in the YALBURT inscription. To be sure, the final vowel of Luw. *Pinali-* (stem-form) is not identical to that of Lyc. *Pinale* (loc. pl.), but it is possible that the second form is derived from the plurale tantum *Pinali*. Gk. Πίναρα represents a very weak argument for the alternative reconstruction of nom.pl. *Pinala: cf. another Lycian town name nom.pl. *Zẽmuri*, loc.pl. *Zẽmure* rendered in Greek as Λίμυρα (Neumann 2007: 433).

In the rest of the cases, the readings of Hawkins are derived from the combinatory analysis alone. There are no positive reasons to believe that any of the personal names beginning with L 416 must refer to the same individual as its cuneiform counterpart beginning with *Ali-*, but the formal parallelism between the four matching cuneiform and hieroglyphic spellings is striking (none of these four names can be identified if we assume the reading **<da/i> for 416). *Ali-* as the first component of Luwian personal names is probably related to Luw. *ala/i-* 'high' (Melchert 1993: 6). It is noteworthy that *ali-* and *ura-* 'great' appear in onomastic compounds with the identical second component, e.g. *416*-SARMA vs. MAGNUS+*ra/i*-SARMA-*ma-sa-´* (KARKAMIŠ A4a §2) or *416*-LEO vs. MAGNUS.LEO (Laroche 1966, #1140). The weakest identification is the town name *172-tara/i-ma = Alatarma*: Alatarma known from cuneiform sources is to be sought in the area of Isuwa and Pahuwa in the eastern part of the Hittite Empire, while the inscription KÖYLÜTOLU YAYLA has been found *in situ* in central Anatolia.

On the other hand, there are virtually no examples to support the hypothesis that L 416 and L 172 encoded syllables beginning with dental stops in the Empire period. To be sure, Poetto (1993: 29, fn. 43) connected the Luwian stem *416-wa/i-ni-* with the Lycian title *tewinaza*. This suggestion, however, has a purely hypothetical status. On the one hand, the precise meaning of Luw. *416-wa/i-ni-*, occurring in the SÜDBURG and the YALBURT inscriptions, is a matter of much debate, and even its syntactic function has not been fully clarified. On the other hand, the precise function of the *tewinaza*-office in Lycia likewise remains unknown. Instead of deriving the value of L 416 from the comparison between two obscure words, one would fare better waiting till the reading of this sign can be established on independent grounds, and then using it for the elucidation of Luw. *416-wa/i-ni-*.[3]

Thus there are no real synchronic obstacles to assuming that the Bronze Age signs L 416 and L 172 encode phonetic sequences containing the lateral sound. One can, however, go a step further and transliterate these Empire Period signs as <ali> and <ala> respectively in all their occurrences, even when they appear in word-medial position. This is, of course, primarily an issue of scholarly convention, but doing otherwise would be inconsistent with the established practice of transliterating L 133/134 as <ara/i> even in those cases where the initial vowel is strictly redundant, e.g. *sa-ara/i-ri+i* 'above' (KARATEPE (Ho.) § 49), *á-pa-ara/i* 'afterwards' (MARAŞ 4 § 15), or *wa-ara/i* 'and them' (KARKAMIŠ A 6 § 26).

This brings us back to the original question about the values of L 319 and L 172 in the Iron Age. It is clear that it cannot be <ali> and <ala>, not only because the signs of such shape would have fewer parallels in the first millennium orthography, but, more importantly, because the two signs under discussion almost never occur word-initially in

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[3] For the further analysis of this formation, see Yakubovich, forthcoming.

the texts of this period (see 2.4. for an orthographic exception). In addition, they begin to alternate frequently in the same lexemes, which indicates that their phonetic values have become identical. Cf. LOCUS-*319-za* (KARKAMIŠ A11b+c §23) vs. LOCUS-*172-za* (SULTANHAN §43), [1]*á-sa-tú-wa/i-319-ma-za-si-i* (KARKAMIŠ A11a §1) vs. [1]*á-sa-tú-wa/i-172-ma-za-si* (KARKAMIŠ A11b+c §1), SERVUS-*319-sá* (KARATEPE (Hu) §1) vs. SERVUS-*172-sa* (BOYBEYPINARI 1 §4) etc.

    We propose that the signs L 319 and L 172 had the basic values <la/i> and <lá/í> in the post-Empire period. As mentioned above, these values were implicit as an option in the discussion of Hawkins and Morpurgo Davies 1975, but there were not enough arguments at the time to defend such a proposal. The progress in the understanding of the Empire period signs L 416 (the precursor of L 319) and L 172 has now tipped scales in favor of this alternative. In what follows, we are going to survey the lexemes containing the two Iron Age signs under consideration in order to see whether the lateral hypothesis complicates or facilitates their interpretation.

    2. It is appropriate to begin our analysis with those lexemes that occur in a variety of well-understood contexts. In all the seven cases discussed below, the basic meaning of the relevant forms can be established on synchronic grounds, and therefore their formal analysis does not involve circular reasoning.

    2.1. MALUS-*319/172*- 'evil'. The two Luwian words with the basic meaning 'evil, bad' attested in cuneiform texts are *adduwal(a/i)-* and *haniya-* (Melchert 1993: 41, 51)**.** The Hieroglyphic Luwian orthography uses the signs MALUS and MALUS$_2$ as logograms and determinatives for these forms*.* Although Laroche 1960 booked both signs under the same number 368, their shapes are clearly distinct, the second one representing the reduplicated form of the first one (Hawkins 2000: 27). In each and every case where a direct judgement is possible, *adduwal(a/i)-* and its derivatives are accompanied by MALUS, while the cognates of *haniya-* take MALUS$_2$. Thus (MALUS)*á-tu-wa/i-ri+i-zi* in the Hu. Version of KARATEPE 1 § 20 correponds to MALUS-*la/i-zí* in the Ho. version of the same passage. This pair can be contrasted with ("MALUS$_2$")*ha-ní-ia-ta* (Hu.) and ("MALUS$_2$")*há-ní-ia-ta* (Ho.) occurring in KARATEPE 1 § 12. Furthermore, KARATEPE 1 (Hu.) § 72 shows the contrast between MALUS-*la/i-sa-tara/i-ri+i* 'from evil' and (MALUS$_2$)*ha-ní-ia-ta-sa-tara/i-ti* 'from badness'.

    The sequences MALUS-*la/i-* and MALUS-*lá/í-* correspond to the stem /atuwal(a/i)-/ in a large number of cases. The instrumental form /atuwaladi/ can be seen in MALUS-*la/i-ti* (KARKAMIŠ A31+ § 10, ADIYAMAN § 3, ANCOZ 2 l. 2*, (TELL TAYINAT 2, frag. 1b*), MALUS-*la/i-a-ti* (ALEPPO 2 § 24), MALUS-*la/i-ti-i-´* (KARKAMIŠ A11b+c § 19, 20). In addition, one observes the same consistent use of L 319/L 172 in the instrumental forms of the abstract noun /atuwalastr-/ 'malice', e.g. MALUS-*lá/í-sa-tara/i-ti* (BOYBEYPINARI 1 § 5, BOYBEYPINARI 2 § 15, 19), MALUS-*la/i-sa-tara/i-ti* (BOYBEYPINARI 2 § 10), MALUS-*la/i-sa-tara/i-ri+i* (KARATEPE (Hu/Ho) § 72), ["]MALUS"-*la/i-tara/i-ti* (ANCOZ 7 § 9, the emendation belongs to Hawkins (pers. comm.)). One can also compare the stem /atuwalahi(t)-/ 'id.' fragmentarily attested as MALUS-*l*[*á/í*]-*hi-x*[...]-´ (TELL AHMAR 5 § 17).

The alternation in KARATEPE 1 § 20 mentioned above provides a crucial piece of support for the new transliteration. (MALUS)*á-tu-wa/i-ri+i-zi* reflects /atuwarinzi/, the "rhotacized" variant of the earlier *atuwalinzi*. Therefore MALUS-*lá/i-zí* in the Ho. version of the same passage yields the legitimate historical writing.[4] Hittite *idālu-* 'evil', a cognate of *adduwal(a/i)-*, shows that the final lateral consonant does not represent a recent development in Luwian. Thus the analysis of the Luwian words for 'bad, evil' clearly argues in favor of the lateral hypothesis. In addition, it vindicates the view that L 319 is compatible with both the *-a-* and the *-i-* vocalism.

2.2 *á-172/319-ma-* 'name'. The paradigm of the Luwian word for 'name' is represented by the nom./acc.sg. form *á-lá/í-ma-za* (KARKAMIŠ A14a § 5 etc.), *á-lá/í-ma-zi*[!] (KÖTÜKALE § 5), *á-lá/í-ma-zá*, (KARKAMIŠ A18e § 3), (KARATEPE Ho § 63), *á-lá/í-ma-za-´* (KARKAMIŠ A 6 § 29, ANCOZ 6 § 1, HAMA frag. 6, TELL AHMAR 6 § 10), *á-la/i-ma-za* (KARATEPE 7x, ANCOZ 2 l.1*) and the dat. sg. form *á-lá/í-ma-ni* (BOYBEYPINARI 2 § 19), *á-lá/í-ma-ni-i* (TELL TAYINAT 2 frag. 11). This fragmentary paradigm allows one to reconstruct the neuter *n*-stem, which is unfortunately not attested in Luwian cuneiform texts. Nevertheless, the obvious Anatolian comparanda, Hitt. *laman* and especially Lyc. *alãma* (TL 83.8) 'name',[5] clearly speak in favor of the lateral interpretation of L 172/319 in this word.[6] The preponderance of forms containing L 172 reflects the vestige of the stage when this sign still had the stable phonetic value *<la$_x$>.

There is also internal evidence to corroborate this conclusion. The Luwian lexeme under discussion is contained in the personal name attested in the spelling variants [1]*á-sa-tu-wa/i-la-ma-za-*, *á-sa-tu-⌈wa/i⌉+ra/i-ma-za-*, and [1]*á-sa-tú-wa/i-lá/í-ma-za-* showing the graphic alternation L 172 ~ *la* ~ *ra/i*. The first variant supports the etymological interpretation of this name as /astu-alamanza/, 'Let there be the name (to him)' while the second one shows that the rhotacized variant /astu-aramanza/ also existed in Late Luwian. The last spelling, which is the regular one in the royal inscriptions from Carchemish, strengthens the connection between this compound and *á-lá/í-ma-za* 'name'. Thus the new transliteration gains support from a synchronic alternation, which plainly contradicts its traditional counterpart *á-ta$_5$-ma-za*.

The earliest assured attestation of the Luwian word for 'name' is *á-lá/í-ma-zi*[!] (KÖTÜKALE § 5). Hawkins (2000: 299) tentatively dates the KÖTÜKALE inscription to the 12th century B.C.E, shortly after the collapse of the Hittite Empire. Therefore, we are forced to conclude that the new "Iron Age" value *<la$_x$> of L 172 was introduced as early as the last two centuries of the second millennium B.C.E. The denominative verb

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[4] The claim made by Melchert (2003: 179-80, fn. 10) that some of these forms may be instead derived from the stem /haniyada-/ runs afoul of the distribution between MALUS and MALUS$_2$ illustrated above and the spelling *ha-ní-ia-ta(-ia)* in KARATEPE 1, § 12 and (MALUS$_2$)*ha-ní-ia-ta-sa-tara/i-ti* in KARATEPE 1, § 72b (Hu.) with the sign <ta> for voiceless [ta]. MALUS-*tà-ti-i* 'with evil' (SULTANHAN § 21) can be read /atuwalahidadi/.

[5] Melchert (2004: 1) transliterates the Lycian word for 'name' as […]*adãma*, but admits that his reading is prompted by etymological considerations. The autograph of the relevant inscription (Kalinka 1901: 87) confirms the spelling with lambda, and therefore Melchert's reading amounts to an emendation.

[6] The Lydian noun *ẽtam(v)-* 'decree, designation (vel sim)' is sometimes adduced as a further cognate of this family of words. This suggestion, however, is both phonetically and semantically arbitrary, as per Kloekhorst 2004: 40 and Yakubovich 2006: 78, fn 17.

(LOQUI)*la-ma-ni-sa-* 'to proclaim' may represent not a borrowing from Hittite, as usually thought, but rather an outcome of /alamanisa-/ with either phonetic or graphic aphaeresis. The hypothesis that the alternation between /lamanisa-/ and /alama-/ reflects the Indo-European ablaut is, in our opinion, possible, but less likely.

2.3 *á-lá/í-* 'Ala (DN)'. The Luwian texts coming from the state of Kummuh make a frequent reference to the local deity that was transcribed as ATA Kubaba in Hawkins 2000. The element "ATA", invariably written with L 172 and preceding the name of the goddess Kubaba, has remained without explanation up to now. Its attested forms are nom. *á-lá/í-sá* (BOYBEYPINARI 1 § 10, 2 § 20), *á-lá/í-sa$^?$* (ANCOZ 5 l.1), acc. *á-lá/í-na* (BOYBEYPINARI 2 §1, 10) and dat. *á-lá/í* (BOYBEYPINARI 2 § 8, ANCOZ 1 § 2, ANCOZ 7 § 4, 9). The determinative FEMINA sometimes appearing in front of *á-lá/í(-)* implies that we are dealing here not with an adjectival epithet, but rather with a different local name of Kubaba.

We suggest that the mysterious *á-172-* can be identified with the name of the Anatolian goddess Ala, the consort of the tutelary deity, whose attestations in Hittite sources are discussed in detail in McMahon 1991: 11-14. The frequent co-occurrence of Ala and the tutelary deity ^{d}LAMMA (KUB 43.23 ii 42, KUB 55.12 ii 13-14, KUB 20.99 ii 7 etc.) is to be compared with the juxtaposition between Ala-Kubaba and the tutelary deity Runtiya (Stag-god) in ANCOZ 1 § 2, ANCOZ 7 § 4, and ANCOZ 5 l.1. The emphatic femininity of the goddess Ala, expressed in the unusual sequence of determinatives $^{DINGIR.MUNUS}$*A-la-a-aš* in KUB 6.45 ii 5 finds a counterpart in the determinative FEMINA preceding *á-lá/í(-)* in its three separate attestations (BOYBEYPINARI 2 § 10, ANCOZ 1 § 2, and ANCOZ 5 l.1).

Ala was apparently syncretized with the Syrian goddess Kubaba in the state cult of the principality of Kummuh, so that the hybrid deity Ala-Kubaba came into being, but this must have been a relatively recent phenomenon. The Bronze Age EMİRGAZİ inscription mentions several times the deity *á-*(FEMINA.DEUS.)*461*, in which Forlanini (1987: 78-79) recognized the same goddess Ala. Forlanini's tentative identification was largely based on the association between Ala and Mount Sarpa in both cuneiform and hieroglyphic texts. Today, it can be corroborated through additional observations. The goddess Ala is mentioned together with the Stag-god of the Open Country in EMİRGAZİ § 26, while the unusual determinative FEMINA.DEUS represents a close correspondence of DINGIR.MUNUS. It can be assumed that the sign L 461 is a logogram representing the name of the deity (cf. Hawkins 2004: 366, 2006b: 56f.)..

We find it significant that all the occurrences of Ala in Iron Age Luwian texts are spelled with <lá/í>, and never with <la/i>. The name of the goddess Ala possibly had the Luwian origin and its etymological meaning may have been "Her Highness", but unlike the base adjective *ala/i-* 'high', it shows no traces of the *i*-mutation. Therefore, neither the stem-form, nor the direct cases of her name contained the segment /li/. One must hypothesize that at the moment when the spelling *á-lá/í(-)* came into being, the signs L 172 = *<la$_x$> and L 319 = *<li$_x$> were still kept distinct from each other.

2.4. *(*a)-la/i-(lu/a/i)-ni-* 'enemy'. The Iron Age Luwian word for 'enemy' is attested in several contexts that are not always easy to reconcile with each other phonetically. These are:

(1)   KARKAMIŠ A23 § 4-5, cf. Hawkins 2000: 119
      wa/i-mu-´ mi-zi‖-´ **la/i-ni-zi-´** |pi-pa-sa-ta mu-pa-wa/i-´ **la/i-na-za-´** |NEG$_2$
      |pi-ia-ta
      'She gave my **enemies** to me but did not give me to my **enemies**'.

(2)   TELL AHMAR 6 § 5, cf. Hawkins 2006a: 12
      |mu-pa-wa/i-´ mi-[i]-zi-´ |tá-ti-zi **la/i-ní-zi-´** (DEUS.ORIENS)ki-sà-ta-ma-si-zi
      (DEUS.ORIENS)ki-sà-ta-ma-ti |ARHA |"DELERE"-nú-[sà]-ha
      'I eliminated my father's eastern **enemies** from the east'.

(3)   TELL AHMAR 6 § 21, cf. Hawkins 2006a: 14
      la/i-ni-zi-pa-wa/i-mi-i-´ |*ARHA* |("DELERE")mara$^{+ra/i}$(?)-nu-wa/i-ha
      'I destroyed my enemies'.

(4)   BABYLON 1 § 11-12, cf. Hawkins 2000: 392
      |ma-pa-wa/i-sa a-tá-ti-li-i-sa | **la/i-la/i/u-ní-sa-´** |ma-pa-wa/i-sa |ARHA-ti-i-li-sa
      la/i|-la/i/u-ní-sa-´
      (a curse formula) '…whether he is an internal **enemy**, or whether he is an external
      enemy…'

(5)   SULTANHAN § 9, cf. Hawkins 2000: 466
      |wa/i-tu-u |**á-ru-ni-i-zi** |á-pa-si-i-zi |("PES")pa+ra/i-za |SUB-na-na |tu-wa/i-ta
      'And he (Tarhunt) put his (Wasusarma's) **enemies** under his feet

      The presence of the initial vowel in (5), compared with its apparent absence in
(1-4), does not represent a serious difficulty. The first four examples feature the *a* sign (L
450) in word-final position, where it cannot reflect a real vowel and therefore is
transliterated as ´. This is no doubt a continuation of the phenomenon known as "initial-
a-final" in Bronze Age Luwian, where the initial *a*-vowel is sometimes placed at the end
of the verbal form (e.g. *pa-ti-li-a* for *Abd-ili*, see Hawkins 2003: 159-61 for further
details). Thus the spelling of (5) is phonologically more faithful, whereas the other cases
feature the graphic transposition of word-initial **a-* and can be alternatively transliterated
as **a-la/i-ni-zi*.
      The alternation between *-la/i-* and *-la/i-lu/a/i-* is hard to explain within the
traditional framework, and this is the reason why examples (1-3) and (4) have not been
considered as one lemma in the previous literature. The lateral hypothesis, however,
makes their interpretation much less problematic. The graphic variants **a-lá/i-ní-* in (2)
and **a-lá/i-la/i/u-ní-* in (4) can be interpreted as different renderings of the stem
/(a)lVni-/ and the latter may be transcribed as **a-lá/i$^{+la/i/u}$-ní-*, since there are, as Craig
Melchert reminds us, similar alternations involving redundant spellings in the case of *i-zi-
ia+ra/i-ru* (KARATEPE (Hu.) § 50) vs. *i-zi-ia-rú* (KARATEPE (Ho.) § 50) or *ka-
mara/i$^{+ra/i}$-zi* (ASSUR f+g § 28) vs. *ka-mara/i$^{+ra/i}$-ra+a-na* (ASSUR f+g § 31). The
subsequent rhotacism illustrated by example (5) has likewise several parallels in late
Luwian texts (cf. 2.1 and 2.2 above).

The most serious problem concerns the vowel following the disputed consonant. Example (5) indicates that it must be *-u-*, while the values of L 319 considered so far imply that it should be *-a-* or *-i-* in (1-3). One has to hypothesize that as the values of L 319 and L 172 were confused in the Iron Age, these signs came to be compatible with all the coda vowels, including /u/. The rare use of the original <lu> sign (L 445) with the *la* and *li* values in the Iron Age would provide a suitable parallel for such a development. This would remain, of course, a sheer speculation, if not for an independent instance of L 319 used for /ru/, which is discussed below in 3.2. Therefore, one might consider a shape /aluni-/ (and /aruni-/ with rhotacism) for the word in the Iron age period.[7] In any event, the hypothesis that **a-319-ni-*, **a-319-la/i/u-ní-*, and *á-ru-ni-* represent three unrelated words for 'enemy' is, in our opinion, beyond the limits of credibility. Thus the combinatory evidence provides a solid argument for the new interpretation of L 319 in this case.

2.5 SERVUS-*172/319-* 'servant'. The root of the word for 'servant, slave' and its derivatives is normally rendered by the Sumerogram ARAD in both Hittite and Luwian cuneiform texts. While the reading of the Hittite word for 'servant, slave' remains unknown (we only know that it ended in *-na-*), the Luwian possessive adjective ARAD-*ya-* 'belonging to a slave' (KUB 35.45 ii 3) corresponds to *hu-u-tar-li-i-ya-* in the parallel version of a Kuwatalla ritual (KUB 35.49 i 7). Therefore, one can reconstruct the Luwian word for 'slave' as */hudarla(/i)-/. The only direct attestation of this stem in cuneiform Luwian is the clause-initial form *hu-tar-la-a-an* appearing in a fragmentary context in the Songs of Istanuwa (KUB 35.136 iv 16). It is also attested in Old Assyrian transmission as the personal name *hu-da-ar-lá* (Laroche 1966, # 411) and as the derivational base of the personal name *hu-tar-lá-ni* (Carruba 1992: 251).

The lateral hypothesis advocated in this paper leads to the identification of the same stem in Luwian hieroglyphic inscriptions, which is written SERVUS-*172/319-*. SERVUS (formerly read as syllabic <mì>) is now clearly shown to represent a logogram (Hawkins 2000: 58f., Hawkins apud Herbordt 2005: 309). The meaning of SERVUS (graphically VIR$_2$+VIR$_2$, i.e. "man's man") is assured through KARATEPE 1 § 1, where SERVUS-*lá/í-sá* (Hu.) corresponds to *'bd* 'slave, servant' in the Phoenician version. Its attested paradigmatic forms are nom. sg. SERVUS-*la/i-sa* (TELL AHMAR 2 § 1 etc.), SERVUS-*lá/í-sa* (BOYBEYPINARI 1 § 4, SHEIZAR § 9, SULTANHAN § 1), SERVUS-*la/i-sá* (KARATEPE (Hu) § 1), SERVUS-*la/i-i-sa* (KARKAMIŠ A17b § 1, ALEPPO 2 § 1, TELL AHMAR frag. 10 1, ÇİFTLİK § 4, TELL AHMAR 6 § 1), acc. sg. SERVUS-*lá/í-na* (HİSARCIK 1 § 5), dat. sg. SERVUS-*lá/í-i* (SILTANHAN § 13), SERVUS-*la/i-ia* (MALPINAR § 5), nom./acc. pl. SERVUS-*la/i-zi-i* (ANCOZ 8 § 6), SERVUS-*lá/í-zi* (ANCOZ 5 l. 2), as well as the stem-forms SERVUS-*lá/í* (CEKKE § 1) and SERVUS-*la/i* (CEKKE § 6 etc.). The nominative singular forms ending in *-i-sa* indicate that we are dealing with the thematic stem that has undergone *i*-mutation, while the variant without *i*-mutation is preserved as the personal name SERVUS-*lá/í-a-sa* (BABYLON 2 § 1).

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[7] As opposed to unsyncopated /aliwanni-/ in Empire Luwian, for which a full treatment including all the relevant evidence be given by Yakubovich (forthcoming).

The comparison made above vindicates the transliterations SERVUS-*la/i*- and SERVUS-*lá/í*- corresponding to the phonological /hudarla/i-/. Note that both L 319 and L 172 appear at the end of the "mutation-stem" /hudarli-/ in nom./acc. sg./pl., thus supporting the optional reading of the respective signs with the embedded *i*-vowel. The derivatives of this lexeme attested in hieroglyphic texts are the possessive adjective SERVUS-*la/i-ia*- /hudarliya-/ (MALPINAR § 18) and the stem SERVUS-*la/i-ti*-, SERVUS-*lá/í-ti* /hudarlati/ having approximately the same meaning as the base noun (KARKAMIŠ A6 § 7, KÜRTÜL § 1).

2.6 PUGNUS.PUGNUS-*la/i* 'to serve; to subdue'. The forms containing the logogram PUGNUS.PUGNUS have been discussed in Hawkins 1995: 118-20, but without any definite conclusions. There is only one context, given immediately below, where the phonetic complement -*la/i*- is attached to this logogram. We have, however, grounds to believe that all the lexemes hidden under PUGNUS.PUGNUS are cognate with each other, and therefore we will use their cumulative evidence in our discussion.

(6)   KARATEPE 1 § 21, cf. Hawkins 2000: 51
Hu.   (Hu.) NEG$_2$-wá/í REL-zi |SUB-na-na **PUGNUS.PUGNUS-la/i -ta** |mu-ka-sa-
        sa-na |DOMUS-ní-i
Ho.   (Ho) NEG$_2$-wa/i REL-zi |SUB-na-na |**PUGNUSꞋ.PUGNUSꞋ-ta** mu-ka-sá-sá-na
        || DOMUS-ní-i
        '…who had not **served** under Muksa's house'.
Phoen. (Phoen.) *'š bl 'š 'bd kn l-bt mpš*
        '…none of whom had been servant to the house of MPŠ'

PUGNUS.PUGNUS-*la/i-ta* of the Hu. version of the KARATEPE inscription matches *'bd kn* 'was a servant' in its Phoenician version. The correspondent predicate of the Ho. version can be read as *tà-tà-ta*, which is frequently interpreted as the phonetic reading of PUGNUS.PUGNUS-*la/i-ta*. After Rieken (forthcoming) has established that *tà* is normally used with the phonetic value /da/ and does not alternate with *ta* / *tá*, this interpretation becomes less likely. The only Luwian verb beginning with this sign is *tà*-/CAPERE 'take', but it is rather difficult to find a common denominator between the semantics of taking and being a servant. Consequently, more credence accrues now to the cautious suggestion of Hawkins (1995: 119): "one may suspect that *tà-tà*- is simply a graphic error for the very similar PUGNUS.PUGNUS".

We would like to propose that PUGNUS.PUGNUS*(-la/i)*- represents a denominative formation based on SERVUS-*172/319*- = /hudarla/i-/ 'servant'. This identification, consistent with the lateral hypothesis, explains the meaning of (6) and can also account for the semantic and derivational peculiarities of several other verbal forms beginning with PUGNUS.PUGNUS. Thus, it helps to make sense of the suffix vocalism of PUGNUS.PUGNUS-*i-ta* in (7), which can hardly be reconciled with the reading *tà-tà-ta* in (6). Under our hypothesis, two alternative accounts are possible. One can either assume that both PUGNUS.PUGNUS-*i-ta* in (7) and PUGNUS.PUGNUS-*la/i-ta* in (6) stand for the phonological /hudarlita/, which shows variation between dative and accusative direct objects.

(7)   SULTANHAN § 43-45, cf. Hawkins 2000: 467
      |a-wa/i-´ |REL-sá |REL-sá |za |LOCUS-lá/í-za |**PUGNUS.PUGNUS-i-ta**||
      |wa/i-tà |NEG$_2$-´ |HWI-sa-ha |mu-wa/i-ta
      |a-wa/i-tà |á-pi-i |sa$_5$+ra/i-wa/i-ti-wa/i+ra/i-sá |á-tà |wa/i-su-SARMA-ma-sa-a-ri+i
      |wa/i+ra/i-ia-ri+i |sa-na-wa/i-sa-tara/i-ri+i-ha
      'Whoever **took care of** (lit. "served") this place, none could improve it (lit "make
      it strong"), (but) Sarwatiwaras has restored it, by Wasusarma's help and goodness'.

        The assumption of two denominative stems becomes a necessity once we take
into consideration the context listed below. It is obvious that the ruler Azatiwada, who
commissioned KARATEPE 2-4, could not boast of serving a particular city, and therefore
one has to look for a different meaning of PUGNUS.PUGNUS-*ta* in this context. The
derivation suggested above offers the straightforward solution: besides /hudarli-/ 'to
serve, to take care of' it is possible to assume the existence of /hudarlā-/ 'to make
subservient, to subdue, to conquer'. It is the latter stem that probably underlies the
aggressive iconography of the logogram PUGNUS.PUGNUS. The Hittite cognates of the
reconstructed stative and factitive suffixes are -*(i)ye*- and -*ahh*-, respectively. The
semantics of PUGNUS.PUGNUS in (8) may, in fact, be directly compared with that of
the parallel Hittite denominative ARAD-*(n)ahh*- 'to subdue'.

(8)   KARATEPE 4 § 1, cf. Hawkins 2000: 69
      REL-pa-wa/i "PORTA" ku-rú-pi-ia+ra/i(URBS) |PRAE-i |pi-ia-tà-na(URBS)
      PUGNUS.PUGNUS-ta
      'He has indeed **conquered** the city Piyada up to the gates of the city Kurupiyara'.

        The two occurrences of PUGNUS.PUGNUS in the SÜDBURG inscription of the
last known Hittite king Suppiluliyama II dramatically confirm the coexistence of the
stative and the factitive stems. The subject of (9) must be the king himself, while the
subject of (10) is his defeated and surrendered enemy. The assumption that we are dealing
with separate verbs in each of the two cases makes it possible to arrive for the first time at
the coherent understanding of the passage describing the campaign of Suppiluliyama II
against the country MONS.IUDEX$^?$.QUINQUE.

(9)   SÜDBURG, § 8, Hawkins 1995: 22
       MONS.IUDEX$^?$.QUINQUE 416-wa/i-ní INFRA á-ka **PUGNUS.PUGNUS**
      '(I) subjugated and **subdued** the enemy forces[8] of MONS.IUDEX$^?$.QUINQUE'.

(10) SÜDBURG, § 11, Hawkins 1995: 22
      CAPUT.VIR MONS.IUDEX$^?$.QUINQUE zi/a-la HATTI **PUGNUS.PUGNUS**
      'From now on, the prince of MONS.IUDEX$^?$.QUINQUE **will serve** Hatti'.

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[8] For /aliwanni(t)-/ 'enemy forces' as abstract noun of /aliwan(ni)-/ see Yakubovich (forthcoming).

The additional occurrences of PUGNUS.PUGNUS in Iron Age texts can be discussed only briefly. An indirect confirmation of relationship between stems hidden under SERVUS and PUGNUS.PUGNUS comes from the co-occurrence of both logograms in HİSARCIK 1 § 5. The approximate translation of this sentence may be "I assign[?] your superior[?] KURATIS servant (SERVUS-*172-na*) to scribal service (PUGNUS.PUGNUS-*la*)". ÇİFTLİK § 11 is not completely preserved, but one can suggest the translation "Let Tuwati … take care of (PUGNUS.PUGNUS-*tu-u*) all the gods" for the better understood fragment. The formula occurring at the beginning of the ASSUR letters (a § 2, b § 2, d § 2) must, in the light of ÇAYAĞZI § 3 where Muwatali greets his lord Tuwati, can be understood as a general way of greeting both superiors and inferiors (Hawkins, pers. comm.) and can now be translated: "You take care (PUGNUS.PUGNUS-si) well" (cf. typologically the English imperative greeting "take care"). The only sentence containing PUGNUS.PUGNUS that remains completely opaque is ASSUR f+g § 6. The large number of *hapax legomena* renders any attempt to interpret it hopeless, and one can only say that PUGNUS.PUGNUS-*nu* must represent 2sg.impv. of a causative verb.

2.7 LOCUS-*319/172-t*° '**place**'. KARATEPE 1 (Hu.) § 23 assures the meaning of dat. pl. *á-pa-ta-za* |LOCUS-*la/i-ta-za-´*, which corresponds to Phoen. *b-mqmm hmt* 'in those places'. The form "LOCUS"-*la/i-ta-za* also corresponds to Phoen. *b-mqmm* in KARATEPE 1 (Hu.) § 33. The logogram L 201 "LOCUS/TERRA" is used not only in the meaning 'place', but also for the frequent word **taskwira-* 'land'. Therefore, even in those cases when the context is not sufficient to determine the meaning of forms containing this logogram, it is normally assumed that their semantics is local.

The available data are compatible with the hypothesis that all the forms beginning with LOCUS-*319/172-* are etymologically related to each other, but their precise morphological relationship deserves some discussion. There is no doubt that dat. sg. LOCUS-*la/i-ti* (KARKAMIŠ A6 § 23, A15b § 29, A 27e § 4, BOYBEYPINARI 1 § 11), LOCUS-*la/i-ti-i* (KARKAMIŠ A6 § 9), "LOCUS"-*lá/í-ti* (MARAŞ 7, side a), and LOCUS-*lá/í-ti-i* (BOHÇA 13) belong to the same word-form meaning 'place'. Likewise one can be reasonably sure that acc. sg. LOCUS-*la/i-ta-li-i-na* (MARAŞ 14 § 2), instr. LOCUS-*la/i-ta-la-ti-i* (MARAŞ 14 § 12), and probably LOCUS-*la/i-[t]a?-li[-x]* (TELL TAYINAT 2, frag.5a-b) reflect the *-alla/i-* derivative of the same dental stem meaning something like 'precinct'. The possessive form "DOMUS.LOCUS"-*tà-ta-la-si-*[...] (KAYSERİ § 2a) is surely derived from the last noun, but shows the rare use of *tà* instead of L 319/172, which occurs in late inscriptions (cf. 3.5 below). More problematic is the group of contexts illustrated by (11).

(11) ADIYAMAN 1 § 3-5, Hawkins 2000: 345
    za-pa-[wa/i] CAELUM i+ra/i-ní-li-za-na (DEUS)TONITRUS-na REL-i-sa
    MALUS-319-ti ARHA+MALLEUS ni-pa-wa/i-na a-tá ||(OCCIDENS)[i-ma-ni-t]i
    ni-pa-wa/i-tá **LOCUS-la/i-za** (SA₄)sa-ni-ti
    'One who maliciously effaces this IRNILI-ean Tarhunt, or IMANI'es it, or
    SANI'es it with respect to (its) place...'

Other examples illustrating LOCUS-*319/172-za* (with minor graphic variations) occurring in curse formulae with the predicate *san(na)i-* are KARKAMIŠ A11b+c § 23, KARKAMIŠ A18e § 5, ANCOZ 7 § 12, BABYLON 1 §13, and MEHARDE § 7.[9] Hawkins (2000: 100) leans toward the hypothesis that these forms represent plural datives. In our opinion, this analysis is rather unlikely. In (19) and several other loci, LOCUS-*319/172-za* occurs in the same clause with a singular direct object, which is not expected to have multiple places. In addition, the dat. pl. interpretation forces one to assume the existence of two separate stems with very similar meanings, LOCUS-*319/172-* and LOCUS-*319/172-tᵒ-*. On the other hand, LOCUS-*319/172-za* must be taken on syntactic grounds as acc. sg. n. extended by the particle -*sa*/-*za* in a different group of contexts (KARKAMIŠ A31+ § 7, SULTANHAN § 43, AKSARAY § 7). We prefer, therefore, to follow Tischler (2004: 808), who takes all the forms of this shape as acc. sg. n. The translation of LOCUS-*319/172-za* as 'with respect to its place' is strictly provisional, since the exact function of this accusative complement cannot be determined without knowing the precise meaning of the predicate *san(na)i-*.[10]

Other forms confirming the analysis of LOCUS-*(319/172)* as a dental stem are the distributive adverb LOCUS-*tá* LOCUS-*tá* 'everywhere' (KARAHÖYÜK (ELBİSTAN) § 12) and the personal name ⁱLOCUS-*la/i-ti-mu-wa/i-sa* (BOYBEYPINARI 1 § 11). The first form is probably based on the nom. pl. n of the *t*-stem under discussion, while the second one can be interpreted as the exocentric compound "having might in his place (vel sim.)". The only form for which the existence of a different base without the *t*-extension needs to be postulated is LOCUS-*319/172-wa/i-za* (KARKAMIŠ A 2+3 § 12, TELL AHMAR 6 § 31). Unfortunately, this noun, occurring in a curse formula, remains semantically opaque (Hawkins 2006a: 30).

The most promisinig piece of evidence for the phonetic reconstruction of our stem is the collocation (LOCUS)*pa-tà-za za-ia* (ÇINEKÖY § 10, cf. Tekoğlu and Lemaire 2000: 970).[11] The corresponding passage of the Phoenician version of the ÇINEKÖY inscription is mutilated, but one can still read *BMQ*[M …] 'in the place(s)' (Tekoğlu and Lemaire 2000: 994, line 13). Since L 319/172 can occasionally alternate with *tà* in late inscriptions (as in "DOMUS.LOCUS"-*tà-ta-la-si*-[...] cited above), one can take *pa-tà-za* as an orthographic variant of **pa-319/172-za*. The ending of this form causes more difficulties. The syntax of ÇINEKÖY § 10 requires one to interpret *pa-tà-za* as nom. pl. n. agreeing with *za-ia* 'these', but one should rather expect that the reconstructed *t*-stem would form nom. pl. n. **pa-tà-ta*. In order to account for the form under consideration, it

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[9] Cf. also LOCUS-*za-´* occurring in the same context in KARKAMIŠ A11a § 23, 24.

[10] Pace Starke (1980: 80 with fn. 28), not all of the occurrences of Luw. *sann(a)i-* suggest the meaning 'to overturn', as opposed to 'to hide, remove'. Thus one can translate |**a-mu-pa-wa/i za-a-zi* |DEUS-*ní-zi-i* |(SA₄)*sá-na-i-ta* (KARKAMIŠ A1a § 4) as '(Hatanima smote Tarhunt of (I)smerga), but these gods concealed me', while |*za-wa/i-ta-a* ("STELE")*wa/i-ni*(A)-*za⁻ⁱ* |*z*[*i-i*]-*na* LOCUS-*lá/í-ta-la-ti-i* |("SA₄")*sa-ni-wa/i-i* (MARAŞ 14 § 12) can be understood as 'I will remove this stele from this location?'. Consequently, we would like to withhold the final judgement about the meaning of this lexeme before additional transparent contexts become available.

[11] The transliteration *piₓ-tà-za* adopted in the *editio princeps* of the ÇINEKÖY inscription appears to be based solely on etymological considerations, which are in addition not fully justified. Luw. **/padda-/* would represent the legitimate reflex of IE. **/pédo-/*, cf. Melchert 1994: 244. Pace Hawkins (2000: 105) and the sources he quotes, the verbal stem (LOCUS)*pi-ta-ha-li-ia-* (of uncertain meaning) cannot represent a compound with the reflex of IE. **/pédo-/* as its first component because the signs <ta> and <tà> never alternate in the same root.

is necessary to assume that the nominative singular form *pa-tà-za* was reinterpreted as a plural formation.[12] This reinterpretation would be particularly likely if the native language of the designer of the ÇİNEKÖY bilingual were Phoenician rather than Luwian. One must, however, recognize that the independent collation of the ÇİNEKÖY inscription is required in order to arrive at the definite reading of this passage.[13]

Since Luwian neuter stems ending in a simple dental/alveolar stop are extended with *-sa* and not *-za* in nom./acc. sg., the Luwian word for 'place' must represent an *-nt-* stem (the hieroglyphic orthography does not reflect the syllable-final *-n-*). The reconstruction of the Luwian stem **paddant-* 'place' finds confirmation in the existence of its cognate *pddãnt-* 'place' in the closely related Lycian language, as already seen in Hawkins and Morpurgo-Davies 1975: 130, fn. 21. Furthermore, Lyc. *pddẽn-* 'place, precinct', related to these forms at the root level, probably represent the lexical cognate of Luw. LOCUS-*319/172-wa/i-za* < **paddawan-za*. Both stems are formed from the cognate of the nominal base attested in Hittite as *pēda-* 'place', with the "individualizing" suffix *-ant-* and the possessive suffix *–wan(ni)-*, respectively. The lexical correspondence between two independent stems formed from the same root in Luwian and Lycian fully vindicates the tentative reading of this root emerging from the ÇİNEKÖY bilingual.

The suggested reading is obviously more compatible with the traditional values L 319 = *ta₄*; L 172 = *ta₅* than with their new lateral interpretation. If one accepts the lateral hypothesis on independent grounds, one might postulate the special phonetic development of Luw. /dd/ in **paddant-* and **paddawan-*, derived from the application of Čop's Law to the earlier **pedant-* and **pedawan-* (cf. Melchert 1994: 253). When the etymological plain voiceless stops were in process of being reinterpreted as *lenis* in Luwian, the voiced geminate /dd/, still preserved in a more archaic dialect, may have been borrowed as /l/ into its more innovative counterpart. For the possible adaptation of foreign *fortis* stops as /l/ in Luwian, cf. Luw. *La-tà-pa-nu* rendering the Akkadian personal name *Dādī-Bānu* (Melchert 2003: 181, fn. 13 with ref.). Unfortunately, we cannot say when the postulated dialectal borrowing has taken place because the transliteration LOCUS-*319/172-* came about relatively late. The KARAHÖYÜK inscription of the late second millennium B.C.E. shows the spelling LOCUS-*tá* LOCUS-*tá*, which may stand for /paddanta paddanta/ as well as /palanta palanta/. One of the earliest incriptions containing the sequence LOCUS-*319/172* is probably KARKAMIŠ A11b+c, carved about 900 B.C.E. This is the *terminus ante quem* for the proposed irregular sound change in the lexemes under discussion.

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[12] Starke (1990: 47) argued on the basis of a group of cuneiform passages that the Luwian nominal forms in *-anza* must be analyzed as nom./acc. pl. n. It is significant, however, that all of his examples feature forms in *-anza* attached to possessive adjectives. Consequently, they can be analyzed as the combination of the element *-(a)nz-* marking the plurality of the possessor (for which see Melchert 2000) and the regular nom./acc. pl. n. ending *-a*. On the other hand, Starke disregarded the overwhelming evidence of Luwian hieroglyphic texts that pleads for taking the nominal forms in *-a(n)za* as singular.

[13] Another piece of evidence that could be adduced in order to determine the phonetic shape of LOCUS-*319/172* is of dubious value. Example (11) above can be compared with the very similar formula BOYBEYPINARI 2, § 10-12, which contains *á-là/ì-za* instead of LOCUS-*là/ì-za*. In this case, however, one must suspect that *á-là/ì-za* represents a scribal error for the expected LOCUS-*là/ì-za*, because the graphic sequence *á-là/ì* occurs earlier in the same sentence, and several more times in the inscription under discussion.

2.8 Synthesis. The words for 'evil' and 'name' discussed in 2.1-2.2 support the lateral hypothesis both etymologically and through synchronic alternations. The analysis of the divine name Ala-Kubaba in 2.3 offers the etymological support for the new reading of L 172, while the new reading of L 319 allows to combine several words for 'enemy' into one lemma in 2.4. In all these instances, the new gains come at zero price. In 2.5 and 2.6, the application of the lateral hypothesis allows us to establish the readings of several related lexemes, which previously defied phonetic interpretation. In these two cases, however, one faces complications. In 2.5 one has to give up attempts to derive the syllabic value of L 387 from its known logographic value <mì> (KARATEPE (Ho.) § 51), while in 2.6 one has to accept that the sign PUGNUS.PUGNUS was misspelled as *tà-tà* in one of the versions of the KARATEPE inscription. Finally, in 2.7 the new readings bring no tangible benefits, but force us to accept an interdialectal borrowing that is not supported through independent evidence. The pros and cons of our analysis are summarized in the table below.

Table 2

MALUS-*319/172/la-* ~ CLuw. *adduwal(i)-*	
á-172/319/la-ma- ~ Lyc. *alãma*	
(FEMINA) *á-172-* ~ Hitt. [df]*Ala*	
*a-319-ní- = *a-319-lu/a/i-ni-	
SERVUS-*319/172-* ~ CLuw. *hutarla/i-*	Unreliable spelling L 387 = SERVUS = <mí> (1x)
PUGNUS.PUGNUS-*(319)-* = **/hutarli-/*	Aberrant spelling PUGNUS.PUGNUS = *tà-tà* (1x)
	LOCUS-*319/172-t°* ~ Lyc. *pddãnt-*

Thus the final score is 4:2:1 in favor of the lateral values. This result is positive in itself, but perhaps not inspiring full confidence. At this point, however, one should remember that the new readings of L 319 and L 172 came about as an attempt to make the value of these signs compatible with those of their antecedents in the Empire Period. In other words, as long as the comparisons of Hawkins summarized in Table 1 are valid, the lateral hypothesis remains the preferable solution also for the Iron Age period, and the burden of proof rests with those who would like to defend the traditional values <ta/i$_4$> and <ta/i$_5$>. The data in Table 2 certainly do not contribute to the proof of the traditional theory.

A significant distributional result emerging from Table 2 is that all the lexemes frequently written with L 319 / L 172 either begin with the *a*-vowel, or show the relevant signs after a logogram. These are precisely the forms where L 416 = <ali> and L 172 = <ala> would not be redundant in the Empire period. At the same time, the scenario for their reinterpretation is easily available. The position after a logogram is in principle compatible with both the Bronze Age and the Iron Age readings of our signs, which would simply yield longer or shorter phonetic complements. On the other hand, some words beginning with *a-* might have been spelled with word-initial L 416 / L 172 in the second millennium B.C.E (e.g. **172-ma-* 'name'). After the phonetic or graphic aphaeresis was implemented in Iron Age Luwian, such spellings could have been

anachronistically reanalyzed as instances of aphaeresis, and this possibly triggered the subsequent restoration of the initial *a-*.

3. Below we discuss rare words containing L 319 / L 172, as well as those cases where the relevant signs were secondarily introduced by the very end of the Luwian hieroglyphic tradition. The significance of these examples for establishing the prototypical values of L 319 and L 172 in Bronze Age Luwian and early Iron Age Luwian is relatively small. They are, however, important for tracing the development of Luwian phonology and the evolution of hieroglyphic conventions in the 9th and the 8th centuries B.C.E. In addition, the application of the new sign values established on independent grounds is conducive to new lexical recognitions in a number of cases.

3.1. Value */lV/. The most easily recognizable piece within this group is the personal name ${}^{\mathrm{I}}$*á-lá/í-*|FRATER.*LA-sá* (KARKAMIŠ A18j § 1).[14] The first component of this name may be read *ali-* 'high', in which case it is identical to the first components of Ali-mutta and similar Bronze Age names discussed in Section 1. Alternatively, its first component may be *ala-*, in which case it remains unclear whether it conveys a reference to the goddess Ala, or to the same adjective 'high' without *i*-mutation. In any event, the Luwian names beginning with *ala-* are well known (Laroche 1966, # 24, 28-30). Unfortunately, neither of the two elements is otherwise attested in a compound with the word for 'brother', and so one cannot make a choice between these two options at the present time.

Another very suggestive example is the divine name (DEUS)*462+ra/i-172* accompanying the image of the Stag-god on the archaic relief MALATYA 5. Although the basic value of L 462 was <ma$_x$>, the convergence between L 462 and L 463 in the Iron Age period appears to justify the hypothesis that in this case it serves as the logogram for the Stag-god of the Field, which is the normal function of L 463 in the Bronze Age period (cf. Hawkins 2004: 364, 367). If this is correct, then the theonym under consideration can be transcribed (DEUS)*IMRA$_2$+ra/i-lá/í* and read /imralli-/, a productive derivative of Luw. **im(ma)ra-* 'field' (Melchert 1993: 89).

Hawkins (2000: 453) takes *zi-sa$_6$-172* in TOPADA § 11 as a 3sg. pret. verbal form. This reading, however, appears to be epigraphically impossible, since *sa$_6$* is placed below and to left with respect to the sequence *zi-172*. We suggest that the sentence in question must be read *a-wa-sa$_6$ II-sú zi-lá/í* 'And then he (appeared) twice (again)', where *zi-172* represents a variant of *zi-la* 'subsequently'. This interpretation yields a natural, though not the most straightforward order of signs, and fits well the general context of the passage. Presumably, TOPADA § 11 refers to the repeated attacks of the Parz*u*tean forces against the army of Great King Wasusarma.

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[14] The sign LA (L 175) always accompanies the logogram L 45 used in the meaning FRATER 'brother'. Contrary to current practice, we suggest interpreting it not as a part of the phonetic complement, but rather as a phonetic indicator. This allows us to reconstruct the standard thematic declension with *i*-mutation on the basis of various inflectional forms of the word for brother cited in Hawkins 2000: 237 (e.g. nom. sg. FRATER-*LA-is*, dat. sg. FRATER-*LA-ni*, nom.pl. FRATER-*LA-i-zi*). Under the traditional interpretation, these forms resisted unification into a single paradigm. The functional reason for using the phonetic indicator in this case was the necessity of disambiguating between words for 'brother' and 'son / child'.

Beyond this, our examples become more conjectural, since their meaning cannot be synchronically proven and they lack assured lexical cognates. Thus we take the sequence *á-lá/í-mí-sa-sa* as the free-standing genitive of the neuter noun *alamis* 'haughtiness, arrogance' derived from *ala/i-* 'high'. For its derivational model, one can compare Luw. *sarlamis* 'exaltation' related to *sarla/i-* 'superior' (Melchert 1993: 191). While the noun *alamis* is not independently attested, the suggested analysis yields an excellent sense in the following passage.

(12)　ASSUR c § 2-4, Hawkins 2000: 535
　　　 |á-pi-wa/i-za |ha-tu-ra+a |**á-lá/í-mí-sa-sa**-ha-wa/i+ra/i |u-zuˀ-za||-wa/i-ma-za
　　　 |ha-tu-ra+a
　　　 'Is it for us again to write? You (sg.) are **arrogant**! It is for you (pl.) to write!'

Although the logogram in [TERRA]-*la/i-lá/í* (KARKAMIŠ A 31+ § 6) is now lost, it is clearly visible on the hand copy of KARKAMIŠ A 31 made by George Smith in March 1876 (Hawkins 2000: 142). The likely collective form */walila/ hidden behind this sequence should be considered together the reflexes of Luw. *ulili-* / *walila/i-* / *walilita-* 'land, field' discussed in Hawkins 2000: 59 (sub § 5, 23). Although the other occurrences of this family of words in hieroglypic texts are accomanied by the complex logogram TERRA+*LA*+*LA*, a simplified spelling need not be excluded in our case.

The stem *á-ia-lá/í-* occurs in three passages, TELL AHMAR 1 § 2, TELL AHMAR 2 § 2, and TELL AHMAR 6 § 2, all emanating from the same principality. The position of the *ia* sign in this lexeme, somewhat unclear in the first two texts, has been confirmed through the recent discovery of TELL AHMAR 6. The contexts in which *á-ia-lá/í-* appears are all very similar to each other and can be illustrated through (13).

(13)　TELL AHMAR 1 § 2-4, Hawkins 2000: 240
　　　 wa/i-mu-´ |**á-ia-lá/í-na** |INFANS(-)ni-wa/i-ra+a-282 |"CAELUM"-si-i-sa ||
　　　 (DEUS)TONITRUS-hu-sa … (LITUUS)á-za-ta wa/i-mu-´ |á-ma-za |tá-ti-ia-za
　　　 |("LIGNUM<">)||s[à-la-h]a-za |pi-ia-t[a]
　　　 'Celestial Tarhunt (*and the other gods*) loved me, the **first-born** child, and they
　　　 gave me my paternal powerˀ'.

In each of the three contexts, the rulers appear to stress the legitimacy of their succession. The meaning 'first-born', compatible with these contexts, is tentatively assigned to *á-ia-lá/í-* primarily on etymological grounds. Its likely cognates are Luw. *ayawala* 'equal', Hitt. /aˀant-/ (*a-a-an-t°*) 'equal, identical', and, most significantly, Hitt. *ānki* 'once' (Goedegebuure 2002: 67, 2006: 165). All these forms, in our opinion, are ultimately derived from IE. **oi-* 'one'. Although Rieken (2005) argued that *-y-* disappears in the history of Luwian between the identical vowels, this sound law is sometimes violated at the morpheme boundary. In our case, the development /ayalli-/ > /aˀalli-/ > **/ālli/ would have led to the complete obliteration of the root morpheme. Therefore, one can hypothesize that the vocalic contraction in these forms was not implemented.

　　　3.2. Value */rV/. The significance of the alternation between "LONGUS"-*lá/í-ia* 'long' (KARATEPE (Hu) § 51) and ("LONGUS")*a+ra/i-ia* in the Ho. version of the

same passage has been already noted (Melchert 2003: 179, fn. 10). Although CLuw. *ārray(a)-* 'long' strongly suggests the reconstruction of the sequence */rra/ in this lexeme, as long as this remains the only example illustrating the use of L 172/L 319 for etymological */rV/, one can speculate that "LONGUS"-*lá/í-ia* stands for a derived formation (cf. Hawkins 2000: 65). In what follows, however, we are going to adduce additional examples that illustrate original **r* spelled with L 172/L 319.

The TOPADA inscription offers combinatory evidence for the use of L 319 for etymological */ru/. The two examples quoted below receive a satisfactory interpretation if we assume that they feature focalized adverbial forms derived from the adjective *aru-* 'high'. The cognate adverb occurs in Hittite as a part of the irreversible collocation *aru-suwaru* 'highly and mightily (vel sim.)' (KUB 33.106 iii 33), while the similar adjectival collocation *arus suwaru*[s] is attested in Palaic (KBo 19.155 5).

(14)   TELL TAYINAT 2 frag. 2a § iv, Hawkins 2000: 370
        |**á-lá/í**-ha-wa/i-mu |wa/i+ra/i-la-za |(BONUS)sa-na-wa/i-sa i-zi-i-tà
        (DEUS)PES$_2$-sa REX-ti-i-sa
        'And Ea the King manifested his own goodness to me **in high measure**[?]'.

(15)   TOPADA § 32, Hawkins 2000: 454.
        á-la/i-ha-wa/i-mu wa/i+ra/i-lí-na MAGNUS+ra/i-zi/a-na *273+RA/I.*200-na
        […]-ti
        'And he (Tarhunt) will [manifest] his own greatest power[?] to me **in high measure**[?]'

The reading /aru/ in (14) and (15) would remain very conjectural were it not for the direct alternation between *á-ru* and *á-la/i* in the parallel contexts (16) and (17). This variation is reminiscent of the similar variation in the word for 'enemy': *la/i-ní-zi-´* in TELL AHMAR 6 § 5 vs. *á-ru-ni-i-zi* in SULTANHAN § 9 (cf. the discussion in 2.4). The full meaning of (16) and (17) unfortunately cannot be reconstructed, but since clause (15) comes immediately after (16) and immediately before (17) in the TOPADA inscription, in all likelihood we are dealing with the same adverb *aru* 'in high measure' in all the three clauses. Perhaps, (16) and (17) contain the reciprocal vows of Great King Wasusarma to the gods, whose favorable disposition toward him is predicted in (15).

(16)   TOPADA § 31, Hawkins 2000: 454
        wa/i$_5$-mí-i **á-ru**ꞌ (DEUS)TONITRUS-hu-na (DEUS)SARMA-ma-na
        (DEUS)*198-na (DEUS)BOS.*206.PANIS-na á-ru-na POST+ra/i-ta$_x$
        CAPERE.ARGENTUM-‹x›-sà-wa/i$_5$
        'I will … Tarhunt, Sarma, god X, and god Y **in high measure**'.

(17)   TOPADA § 33, Hawkins 2000: 454
        wa/i-mí **á-la/i** (DEUS)TONITRUS-hu-na (DEUS)SARMA-ma-na [... ||
        'I will … Tarhunt, Sarma, [god X, and god Y] **in high measure**'.

Another piece of combinatory evidence supports the use of L 319 for the etymological */ri/*. PUGNUS-*ri+i-172-wa/i* 'I will raise' (KARKAMIŠ A6 § 20)

contrasts with the usual spelling of the same stem as PUGNUS-*ri+i-*. The underlying Luwian verb *ari(ya)-* 'to raise' is well attested in cuneiform transmission. Hawkins (1981: 155) circumvents this issue by assigning the sign L 172 to the preceding prefix SUPER+*ra/i-a* 'up'. This deviation from the most natural order of signs does not seem necessary. We have seen in 2.4. that the redundant spellings of the /r/ sound are attested elsewhere in Luwian, and so one can hypothesize that the scribe of KARKAMIŠ A6 decided to resort to two alternative ways of rendering the syllable -*ri*- and wrote PUGNUS-*ri+i*^{-*lá/í*}-*wa/i* for /ariwi/.

The passages quoted below address the favors bestowed by Yarri, regent of Carchemish, upon Kamani, a young ruler under his protection (18), and his brothers (19). The sequence INFANS.*NI* is normally used as the logogram for 'son' or 'child', but in this context we must be dealing with something else than a kinship term, because Yarri refers to Kamani as 'my lord's son' (KARKAMIŠ A6 § 8).[15] We suggest that *ara/i-la-l á-172-la-* is to be read *aralla/i-* and that its original meaning was 'companion' (cf. Hitt. *ara-* 'colleague, associate' and *aral(l)ai-* 'to associate, join'). At the court of Carchemish, *aralla/i-* may have become an official rank reserved for the ruler's closest associates (one can think of Macedonian *hetairoi* or Late Roman *comites* as semantic parallels). As a speculation, we would like to suggest that Hitt./Luw. *aralla/i-* could be hidden behind the Sumerographic title for palace attendants DUMU.É.GAL and its hieroglyphic equivalent MAGNUS.DOMUS.INFANS (lit. "child of the palace") in the Empire period, hence the use of the determinative INFANS.*NI* in (19).

(18) KARKAMIŠ A6 § 19, Hawkins 2000: 125
      |*wa/i-ná* **ara/i-la-´** ("3")*tara/i-su-u* "4"-*su-u* |("MANUS")*pa+ra/i-si* ("CRUS")*ta-nu-wa/i-wa/i-i*
      'I will promote (lit. "establish") him to **aralla/i-** three times, four times'.

(19) KARKAMIŠ A15b §§ 15-16, Hawkins 2000: 131
      POST+*ra/i-zi-pa-wa/i-tú* |FRATER.*LA*-*zi-i* MAGNUS+*ra/i-nu-ha* |*wa/i-ta* |(**"INFANS.*NI*"**)**á-lá/í-la-za** |*a-ta sa-sa-ha*
      'I elevated his younger brothers. I admitted (lit. "threw") them to **aralla/i-'s**'.

The sequence *á-lá/í* in the ASSUR letters (e §§ 15, 17; f § 14) can be formally compared with Hitt. *āra* 'right'. This identification yields a good sense for sentences where it occurs (cf. the example below), but is not conducive to their pragmatic interpretation. This is not necessarily the problem of our analysis, since the immediate context of the relevant passages remains largely obscure. Nevertheless, pending further

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[15] Pursuing the hypothesis suggested as an alternative in Hawkins 2000: 148, we advocate the existence of the optional phonetic indicator *NI* (rarely *NÌ*), accompanying the sign L 45 used in the meaning 'son' or 'child'. The origin of this indicator is the first syllable of words *nimuwizza-* 'son' and *niwaran(n)i-* 'child' attested in the phonetic spelling in the Iron Age Luwian corpus. The functional reason for using this phonetic indicator in abbreviated spellings was the disambiguation between the words for 'brother' and 'child/son' expressed by the identical logograms. Besides explaining forms like INFANS.*NI-za-sa* as a graphic, and not phonetic abbreviation, this new reading eliminates the necessity of positing the extra stem INFANS-*nini-*, whose existence was tentatively proposed in Hawkins 2000: 128. KARKAMIŠ A6 § 30 instr. INFANS.*NI-na-ti-i* and similar spellings may simply reflect the familiar word *niwarann(i)-* 'child'.

progress in the interpretation of the ASSUR letters, our suggestion must remain provisional.

(20)   ASSUR e §§ 15-17, Hawkins 2000: 536
   | **á-lá/í**-wa/i-za |REL-sà-ha |a-sa-ti |NEG₂-wa/i-ma-za-´ [|ˀ]u-zuˀ-za
   | **á-lá/í**-ha-wa/i-ma-za |u-zuˀ-za
   'One who is right for us, is (he/she) not also (right) for you? (He/she) is also right for you!'

   3.3. Value */da/. There are seven instances of the sporadic use of L 172 for rendering syllables beginning with etymological dental stops (it is remarkable that L 319 is never used in a parallel fashion). Most of the examples cited below are already listed in Hawkins and Morpurgo-Davies 1975: 130-131 and it is fair to say that they constituted the principal justification for the transliteration <ta₄>/<ta₅> adopted in their subsequent publications.

Table 3

A	KARKAMIŠ A6 § 4	wa/i-ma-lá/í	(clitic complex)
B	KARKAMIŠ A6 § 11	("PES₂+PES")tara/i-pa-lá/í	'he tramped?'
C	KARKAMIŠ A 15b § 12	("PES")pa-lá/í- ´	'at (her) foot'
D	KARKAMIŠ A 15b § 21	("VIA")ha+ra/i-wa/i-ta-hi-lá/í-ti-i	'through travel'
E	KARATEPE (Hu.) § 49	sa-pi-sá-lá/í-ri+i	'with health'
F	KARATEPE (Hu.) § 67	i-zi-lá/í	'he made'
G	MARAŞ 3 § 4	EDEREˀ -lá/í-ti-wa/i-li-na	'fat (acc. sg.)'

   Example (A) contains the clitic pronoun */=ada/ 'it', which is spelled in the next sentence as -(w)a/i+ra/i. In (B) and (F), we are dealing with the lenited forms of 3sg. pret. ending */-ta/ ~ */-da/, otherwise always spelled with <tà> (Rieken, forthcoming). The usual hieroglyphic spelling of the Luwian stem for 'foot' (C) is *pa-tà-*, and the etymological **d* in this word is further vindicated through CLuw. *pāda-* 'id.' (Melchert 1993: 173) and the rhotacism in ("PES")pa+ra/i- (SULTANHAN § 9). The stem of (D) must be analysed as an abstract form in /-ahid-/ ultimately derived from *harwa-* 'path'. The spelling *sa-pi-sá-lá/í-ri+i* in (E) contrasts with the variant *sá-pi-sa-ara/i-ri+i* in the Ho. version of the same passage, while the form /sapisura/ occurring in the greeting formula of the ASSUR letters must represent a cognate of this noun. Hawkins (2000: 65) is no doubt correct in his analysis of the two formations as derivatives in */-ada-/ and */-u(wa)r/ from the basic stem *sapis-*. The adjective (G) is used as an epithet of sheep and its variant *ara/i-ti-wa/i-li-na* appears in a parallel context in MARAŞ 5 § 1. Hawkins (2000: 270) plausibly reconstructs this stem as */adantiwali/, a derivative of Luw. *ad-* 'eat' (Melchert 1993: 39).
   What appears to have been ignored in previous scholarship is the late character of the forms under consideration. The inscriptions KARKAMIŠ A6 and KARKAMIŠ A15b belong to the regent Yarri, whose activity must be dated to the late 9th or the early 8th century B.C.E (Hawkins 2000: 78). As for the KARATEPE bilingual, individual scholars determine the date of its execution slightly differently, but it appears to fall in the interval between the mid-8th century (Lipinski 2004: 116-119) and the early 7th century (Hawkins

2000: 45). There are no historical clues to the date of MARAŞ 3, but (Hawkins (2000: 268) tentatively assigns it to the 8th century. In those cases where we have enough data to judge, the sign <tà> was used instead of L 172 for the same morphemes in the earlier period. Futhermore, none of the lexemes discussed above is spelled with L 172 more than once. It follows that the spellings addressed in this section reflect the experiments of scribes that were active in individual Luwian principalities toward the end of their existence. As such, they should be distinguished from the use of LOCUS-*319/172-* for */paddant-/ and */paddawan-/, which represented a common practice in the Luwian epigraphic community in the first millennium B.C.E.

3.4. Unclear value. The etymology of the items listed below is unknown, and consequently they are useless for our analysis. We are listing them merely for the sake of the complete representation of data and in hope that some of them may be explained in the future. Thus, the connection of the toponym *wa/i-319-sà-ti-ni-* and *pa-319-sà-ti-ni-* with the Philistines of the Biblical tradition is explored by D. Hawkins.

    a) Complete words:

Table 4

(X) á-172 (KARKAMIŠ A15b §5)	Unclear
nom. á-lá/í-ia-za-sá (MALPINAR §1) nom. ⌜á⌝-lá/í-ia-za-sa (MALPINAR §18) dat. sg. poss. adj. ˡá-lá/í-ia-za-sa-na (MALPINAR §5, 26)	Personal name
(CAPUT) á-lá/í-ti-na	Unclear; order of signs uncertain
acc. sg. sá-pa-la/i-li-na (KARKAMIŠ A11b+c §5) dat. sg. sá-pa-la/i-li-ia (KARKAMIŠ A11b+c §5)	Adjective modifying 'city'
wa/i-la/i-sà-ti-ni-za-sa(REGIO) (MEHARDE §2) wa/i-la/i-sà-ti-[ni-s]i(REGIO) (SHEIZAR §1) wa/i-la/i-sà-ti-ni-⌜za-sa⌝ (REGIO) (TELL TAYINAT 1, frag 3-5, l. 1) pa-lá/í-sà-ti-ni-za-sa (ALEPPO temple inscription)	Possessive forms derived from a Syrian toponym
x-la/i-za-sa(URBS) (BOYBEYPINARI 2 §5) ⌜x⌝-la/i-za-sa(URBS) (MALPINAR §1)	Adjective derived from a city name

    b) (Possibly) fragmentary forms:
    [...]ha-li(-)la/i[…] (JISR EL HADID frag. 2 l.3), "FRONS"-su[?]-lá/í[?][…], (KARKAMIŠ A15b §28), [...]wa/i-lá/í-zi-sa (KULULU 8 §1), [...]zi-lá/í (KARKAMIŠ A24a2+3 §12).

3.5. Phonetic interpretation. We have seen that, in addition to the expected */lV/, the signs L 319/L 172 can be also used for original */rV/ and */da/ in Iron Age Luwian. The forms that provide the relevant evidence form into two main groups: those belonging to lexemes with low textual frequency, the orthography of which was probably never fixed, and those representing deviations from the earlier scribal tradition. What unites these two groups is the observation that in none of them we are likely to be dealing with the pressure of historical spelling. It follows that these forms are particularly

relevant for discussing the phonetic and phonological changes in Luwian in the first millennium B.C.E.

Morpurgo-Davies (1982/1983) described the phenomenon that she labeled "rhotacism", namely the change of voiced/lenis dental stop into a rhotic sound in Iron Age Luwian. Although she tentatively viewed this development as very late, subsequent philological work has revealed its traces in the texts written before 950 B.C.E. (Melchert 2003: 172). A related, although less studied phenomenon is the development /l/>/r/, which can be illustrated through such examples as *wa-la-* (KARKAMIŠ A23 §9) vs. *wa/i+ra/i-* (KULULU 2 §3) 'to die', *pa-la-sa-* (KARKAMIŠ A2+3 §22) vs. *pa+ra/i-si* (KARKAMIŠ A6 §19) 'way', *ka-la/i/u-na-* (MARAŞ 8 §7) vs. *ka-ru-na-* (KARATEPE §7) 'granary'), MALLEUS-*la/i/u-* (KARKAMIŠ A14b §3) vs. MALLEUS-*x+ra/i-* (MARAŞ 8 §12) 'to erase', or *tu-ni-ka-la-* (KARKAMIŠ A2+3 §22) vs. *tu-ni-ka-ra+a-* (ASSUR f+g §45) 'baker'. In rare cases, the development /n/>/r/ can likewise be observed (Melchert 2003: 180).

From the phonetic point of view, it is easier to assume that the sounds /d/, /l/, (rarely) /n/, and /r/ collide into the flap [ɾ] rather than the trill [r]. Therefore, "flapping" would be a more specific descriptive term than "rhotacism" for this type of sound change. Phonologically speaking, this change was a merger in some cases and a primary split in others. Thus there is no graphic indication that either /l/ or /n/ ever changed its articulation in word-initial position. Accordingly, the signs such as <la> or <na> preserved their etymological phonetic values, and this explains the lack of hypercorrect spellings <la>, or <na> for syllables beginning with other etymological consonants. By contrast, the phoneme /d/ either never occurred or was extremely rare in word-initial position in Luwian, and so the original syllabic value /da/ of the <tà> sign was probably no longer recoverable after the merger of /d/ and /r/. Consequently, we encounter cases where <tà> was hypercorrectly spelled for the etymological */la/, e.g. *zi-tà* (KARATEPE §31) and *za/i-tà* (TOPADA §23) written for /zila/ 'thereupon'.

The case of the signs L 319 and L 172 is similar to that of <tà>. If we recognize the cases of non-spelled /a-/ (see Melchert, this volume), L 319 and L 172 always occur in intervocalic position. This implies that all the lateral consonants hidden under these signs may have undergone flapping without exception, and so their original phonetic value <la/i> and <lá/í> was no longer synchronically retrievable. In those cases where the etymological spelling <la/i>/<lá/í> was preserved, it was due to the established graphic convention. By contrast, the instances where these signs were introduced secondarily show a nearly haphazard distribution between the original */lV/, */rV/, and */da/.What unites these three cases is that phonetically they were all realized as syllables beginning with the flap [ɾ] in late Luwian.

3.6. Practical implications. How should one render signs such as L 319/L 172 in transliteration? As argued in the previous section, the secondary etymological values of <la/i> and <lá/í> came into being as a result of sound changes that were gradually implemented in the first millennium Luwian. A close typological parallel to this development is the evolution of the syllabic *m*-series in the dialects of Akkadian. At some point in the second millennium B.C.E. the Akkadian intervocalic *-m-* changed into *-w-*, while the word-initial *w-* disappeared. As a result, *m-* and *-w-* became allophones of the same phoneme, for the rendering of which Middle and Neo-Babylonian and Neo-

Assyrian adopted the syllabic *m*-series with no regard to the etymology of particular lexemes (cf. von Soden 1995 § 21d and especially Miltarev and Kogan 2000: LXXI-LXXII). For example, Old Babylonian *a-wi-lu-* 'man' came to be spelled *a-me/i-lu-* in Middle Babylonian, even though its pronunciation did not change.

It is significant for our purposes that the Assyriologists do not use a special transliteration for the *m*-series signs reflecting the synchronic and etymological /w/. Likewise, there is no reason for the scholars of Luwian to shy away from occasionally using <lá/í> for the syllable [ɾa] going back to etymological */da/. It is probably less clear how one should treat the secondary values for the origin of which we cannot fully account at the present time, such as the use of <la/i>/<lá/í> for synchronic [ɾu]. Yet, given the small number of the relevant examples, we prefer not to use them as a pretext for further complicating the transliteration. We hope that the refinement of Luwian historical phonology will eventually enable scholars to find a linguistic explanation for this orthographic development.[16]

The transition from the Bronze Age values <ali> and <ala> to the Iron Age values <la/i> and <lá/í> is another matter. Here the change is abrupt, its historical correlates are well definable, and reasons for it were apparently not linguistic. One can speculate that the political events of the twelfth century B.C.E. complicated the uninterrupted transmission of the scribal lore in Anatolia. A partial break in scribal tradition could be conducive both to the confusion between individual signs and to conscientious attemps at re-specifying their readings. This would explain both the interchangeable character of L 319 and L 172 in the Iron Age period and their new values, consistent with the CV structure of the majority of the other syllabic signs. The development of the hieroglyphic script in the period after the collapse of the Hittite Empire is marked by a number of other formal innovations. These include new syllabic signs (notably L 210 = *ia* and L 277 = *za*), new shapes of the existing signs (e.g. L 416 > L 319), and a large number of new determinatives (Hawkins 2003: 163). Therefore, differences in the transliteration of genetically related signs in the Empire and post-Empire periods appear to be justified.

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[16] C. Melchert (pers. comm.) turns our attention to the parallel case of the sign <tara/i> (L 389) apparently used for the synchronic value [taɾu] in *tara/i-sà* (İVRİZ 1 § 3) and *tara/i-sa* (NİĞDE 1), which both reflect the phonological /taru-sa/ 'statue' (cf. Hawkins 2000: 518).

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