Hittite-Luwian Bilingualism
and the Origin of Anatolian Hieroglyphs

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The origin of the Anatolian hieroglyphic script represents a point of contention among Hittitologists. Several leading specialists in Anatolian hieroglyphics expressed an opinion that this writing system had been invented in the Luwian milieu, on the periphery of the Hittite Kingdom or even outside its borders. Recent research on Hittite-Luwian bilingualism in Hattusa is, however, conducive to revising these conclusions. The analysis of acrophonically derived syllabic signs allows me to suggest that they acquired phonetic values in the mixed Hittite and Luwian speaking environment, such as must have existed in the Hittite capital in the New Kingdom period. This is precisely the place where the earliest non-logographic hieroglyphic signs have been detected.

The first hieroglyphic Anatolian inscriptions were incised on official seals and consisted entirely of personal names and logographic titles. Therefore they could have been read in Hittite as well as in Luwian. The purpose of inventing the new script was not asserting the status of Luwian at the expense of Hittite but rather creating a nationalistic alternative to the Mesopotamian cuneiform. The association between the Anatolian hieroglyphic script and the Luwian language probably came about in a later period, after hieroglyphic inscriptions spread beyond the public domain.

1. The Anatolian hieroglyphic script represents a mixed syllabic and logographic system, which received a detailed synchronic treatment in Hawkins 2003.[1] It was used for monumental inscriptions in the Hittite Empire of the Late Bronze Age and the Neo-Hittite states of the Early Iron Age, and also for letters and administrative records in the latter period. Accordingly, the term "Hittite hieroglyphs" was widely used in the late nineteenth /early twentieth century and still enjoys limited currency in the modern scholarly literature. But as the understanding of the script improved, it gradually became clear that it was mostly used not for writing Hittite / Nesite, the main language of the cuneiform archives of the Hittite capital Hattusa, but for writing Luwian, a related Anatolian language that is otherwise attested through magic incantations and isolated words embedded in Hittite cuneiform texts. For those scholars who regarded Luwian as a provincial vernacular spoken in certain peripheral areas of the Hittite state, the hieroglyphic script must likewise have been imported to Hattusa from elsewhere. Thus, Güterbock (1956: 518) answered the question "von wem und für welche Spache wurde die Bilderschrift entwickelt" with "von den Luwiern, für das Luwische, in Luwischen Landen".

Other scholars of Luwian have produced more specific, albeit mutually inconsistent hypotheses regarding the Urheimat of the Anatolian hieroglyphs. Thus Hawkins (1986: 374) wrote: "Aegean links of the Anatolian Hieroglyphic Script strongly indicate a West Anatolian origin, rather than central-eastern Anatolia where the influence of the Cuneiform Script had been felt since the beginning of the second millennium

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B.C.", while Neumann (1992: 26 fn. 1) speculated: "Als Entstehungsort kommt am ehesten eine Stadt in Frage, die sowohl ein Handelszentrum (Hafen?) wie als politischer Mittelpunkt Bedeutung hatte. Meist gilt Kilikien als der geographische Raum, in dem diese Schrift geschaffen wurde".

This issue, however, can be revisited in light of recent advances made in the understanding of the sociolinguistic situation in the Hittite capital. Rieken's (2006) discussion of structural interference between Hittire and Luwian, Melchert's (2005) analysis of Luwian lexical borrowings in Hittite, and van den Hout's (2006) scrutiny of Luwian foreign words in the Hittite texts composed in Hattusa converge in the implication that Luwian was a spoken language alongside Hittite in the heart of the Hittite Empire. This opens the possibility that the Anatolian hieroglyphic script evolved in Hattusa, in the mixed Hittite and Luwian environment. In what follows, I will elaborate on this hypothesis by adducing both external evidence, namely information regarding the genres and dating of the first hieroglyphic inscriptions, and internal evidence, namely the analysis of acrophonic derivation yielding the syllabic values of individual Anatolian characters.

Section 2 of the present paper introduces the stadial approach to the development of the hieroglyphic script, stressing its continuity in the central part of Anatolia. Section 3 contains the analysis of syllabograms with transparent "etymologies", showing that both Hittite-based and Luwian-based acrophony played part in their phonetization. The concluding Section 4 discusses the likely reasons for the simultaneous use of the hieroglyphic script and the cuneiform in the Hittite Empire and provides a tentative scenario of how this writing system came to be secondarily associated with the Luwian language.

2. The development of the Anatolian hieroglyphic script represented a long process. Stage I of this development features pictographic representations on the Anatolian cylinder seals of the Colony period (twentieth through eighteenth centuries B.C.), some of which formally resemble the later Anatolian signs. Thus Mouton 2002 has cogently argued for the association of the stag and the thunderbolt with the Protective God and the Storm-god, as depicted on the "Cappadocian" glyptics. Later, both signs evolved to become the logographic representations of the respective deities. One can also posit a formal link between certain elements of the glyptic iconography, which have uncertain associations, and the later hieroglyphic signs. For example, Mouton discussed the connection between the "rod with balls" appearing as an attribute of gods and humans on the early second millennium cylinder seals in both Anatolia and Mesopotamia and the hieroglyphic sign L 153 <nu>, even though the iconographic significance of this motif remains a matter of conjectures.[2] Yet it does not seem possible to treat the pictographic inventory of the "Cappadocian" glyptics as a semiotic system because no direct

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[2] For the previous appraisal of signs on "Cappadocian" glyptics, see Börker-Klähn 1995. Unfortunately, the author's conclusion that "das bild-luwische Schriftsystem sei zur Kolonistenzeit geschaffen worden", does not appear to gain much support from the isolated pictograms of the Colony period discussed in her paper.

connection between the function of seals and their elaborate iconography can be perceived.[3]

Stage II characterizes the new situation of the Old Kingdom period (seventeenth through fifteenth centuries B.C.), when the now dominant stamp seals came to feature the little group of well-recognized auspicious signs in their middle part (the periphery was normally occupied by the cuneiform inscription).[4] The most frequent among them were VITA (L 369), a sign reminiscent of the Egyptian "ankh" symbol, and BONUS (L 370), the sign denoting abundance whose precise origin is uncertain (Hawkins 2003: 166). In some cases, a small number of additional signs could also be used in this period. Thus the bulla of Isputahsu, King of Kizzuwatna shows the additional signs TONITRUS and REX, presumably indicating that Isputahsu viewed himself as a king ruling by the authority of the Storm-god.[5] Since the Isputahsu sealing is frequently mentioned in connection with the evolution of hieroglyphic writing, it is important to stress the fact that no other hieroglyphic seals belonging to Kizzuwatna kings are known to us. For all we know, this object may well reflect Hittite cultural influence on Kizzuwatna, just as the name Isputahsu appears to have a Hittite origin.[6]

Stage III, achieved in the Early New Kingdom period (early fourteenth century B.C.), can be as a rudimentary writing system, which included phonetic (syllabic) signs in addition to the logograms. The kings of Hattusa, from Tuthaliya I onwards, used the digraphic seals containing their names and titles recorded in the Anatolian hieroglyphs in the middle surrounded by one or more rings of the cuneiform rendering the same name.[7] Thus the name of Sata(n)duhepa, wife of Tuthaliya II, was rendered as *sà(-)tà-tu-ha-pa* and placed next to her title MAGNUS.DOMINA on the two sealings of a royal seal found in Maşat-Höyük (Mora 1987, #8.4.1 a-b). The short texts such as this do not yield direct evidence as to whether the relevant seals should be considered bilingual as well as digraphic (cf. Hawkins 2003: 140 and Section 4 below). To this one must add a group of sealings belonging to high officials, which appear to predate the Empire period on stylistic grounds (see their representative selection in Boehmer and Güterbock 1987: 43-

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[3] The attempt of Alp (1968: 281-301) to interpret the pictographic elements of the Konya-Karahöyük stamp seals, which probably go back to the end of the Colony period, as an early form of writing must be deemed unsuccessful. For its critique, see Boehmer and Güterbock 1987: 36-40.

[4] For the inventory of hieroglyphic symbols appearing on the Old Kigdom seals, see Mora 1991. The author concludes that "[n]on si può parlare a nostro avviso di inizio della scrittura geroglifica anatolica (nel significato attribuito al sistema di scrittura in uso dall'età imperiale ittita in poi) nei secoli XVII-XVI" (ibid: 22). At the same time, she concedes that the pictograms of this period were used in order to convey semiotic messages and thus represented true signs (ibid:20).

[5] For the description of this famous seal, see Mora 1987, #8.1.1. Cf. Carruba 1974: 88-90 for an unconvincing attempt to read TONITRUS.REX phonetically as Taruhsu, the alleged by-name of Isputahsu. According to Houwink ten Cate 1992: 250, the same group of signs can be read as Tarhuntassa, in spite of the absence of the determinative REGIO and the lack of attestations of Tarhuntassa in written sources before the reign of Muwattalli II.

[6] The likely pronunciation of the name Isputahsu was /spudahsu/. The morpheme –*hsu* was a very common formative element in Hittite names of the early second millennium B.C. The reconstruction of the initial consonant cluster in this name, precluding its Luwian origin, is assured through the variant *Šu-pu-da-ah-šu* attested in an Akkadian text from Kaneš/Nesa of the Colony period (Kt o/k 53.3). On the simplification of clusters *sC-* in Luwian, see Melchert 1994: 271.

[7] The hieroglyphic renderings of the names of the New Kingdom rulers are collected in Boehmer and Güterbock 1987: 80. For the digraphic seal impression mentioning Tuthaliya I, see Otten 2000.

46). Unlike the royal seals, the specimens of this group show the hieroglyphic signs without cuneiform equivalents.[8]

Stage III of the Anatolian hieroglyphic script does not yet give the impression of an elaborate system capable of rendering complex messages. The renditions of royal names or the names of high officials can be fairly described as rebus writings that hint at their phonetic shape as opposed to conveying them according to a standard convention. Thus the spelling MONS.*TU* of the name Tuthaliya consists of the image of the homonymous sacred mountain and the phonetic indicator hinting at its first syllable. By contrast, the spelling PURUS.FONS.*MA$_x$* of the name Suppiluliuma contains the logographic rendering of the toponym Suppiluli (lit. "pure spring"), enhanced by the phonetic indicator *MA$_x$* hinting at the last syllable of the royal name (cf. Güterbock 1998: 203). It appears that the scribes were facing the task of inventing a new rebus each time they had to deal with a new personal name. The simplest way to account for this distribution is to assume that the conventions of syllabic hieroglyphic writing had not yet been fully developed in fourteenth century Anatolia.

The main innovation of Stage IV is the established association between the Anatolian hieroglyphic script and the Luwian language. The earliest datable hieroglyphic inscriptions that contain phonetically written Luwian words are FIRAKTİN and ALEPPO 1 (cf. Hawkins 2000: 19a).[9] The former is a group of inscriptions accompanying the relieves of King Hattusili III and Queen Puduhepa, while the latter mentions Talmi-Sarruma, King of Aleppo, who, like Hattusili III, was a grandson of Suppiluliuma I. The last half of the same century witnessed the creation of large monumental inscriptions written in Luwian, such as YALBURT, SÜDBURG, and the EMİRGAZİ altars (all edited in Hawkins 1995). The association between the Luwian language and the hieroglyphic writing was firmly established by the end of the Empire period, while the development of the script reached the stage when it was fit for the rendition of long continuous narratives.

What emerges from this brief survey is the gradual character of the development of the original pictograms into a full-fledged writing system. This, of course, does not mean that the Hieroglyphic Script developed in isolation in Central Anatolia. Individual Anatolian pictograms, as mentioned above, have suggestive parallels in Mesopotamia and Egypt, and it is only logical to assume that the use of the Mesopotamian cuneiform by the Hittites facilitated the creation of hieroglyphic syllabograms. But none of the four stages discussed above appears to represent a drastic innovation that would require us to assume a wholesale adaptation of foreign practices. The development of hieroglyphic writing in the Hittite milieu, where most of its early known specimens have been created, represents a *prima facie* hypothesis.

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[8] Boehmer and Güterbock (1987: 39, figure 35c) published the seal containing the hieroglyphic combination *HATTI+li* (= Hattusili), which they assigned to the Old Kingdom period on stylistic grounds (ibid: 36). This seal was found in a secondary context, within the wall of the Phrygian fortifications in Hattusa. Pending further discoveries of the similar kind, caution dictates to regard this isolated object as the late imitation of the Old Kingdom artistic style, and not as the first precursor of New Kingdom seals inscribed with hieroglyphic syllabograms.

[9] Note the recent detailed publication of the FIRAKTİN relief and the accompanying inscription in Ehringhaus 2005: 59-65.

3. It is a well-known fact that many early phonetic writing systems established the values of their signs via the principle of acrophonic derivation. Thus, in the early Canaanite alphabet, the letter <b> depicts a house, reflecting the fact that the Canaanite word for house, *bayt, begins with [b], <k> is a pictogram depicting a hand, since *kapp '(palm of) hand' begins with [k], and so on (Hackett 2004: 367). If the same principle underlies the phonetization of Anatolian hieroglyphic signs on Stages III-IV, it is reasonable to presume that syllabograms were likewise assigned values based on the language(s) that the inventors of the new script perceived as their own. If both Hittite and Luwian played a role in this process, then both languages were at home in the community where the script was created. Discussing the characteristic empirical data that can lend support to this claim constitutes the task of the present section.

In what follows I will attempt to provide a systematic survey of hieroglyphic syllabograms with assured or likely "etymologies". In addition to the signs discussed in the previous section, the input of my analysis includes the lists of the acrophonically derived phonetic values collected in Neumann 1992: 39 and Hawkins 2003: 162.[10]

Table 1 contains six phonetic signs attested from the second millennium BC onward, for which the acrophonic derivation that is based on the sound shapes of the Hittite but not Luwian lexemes can be suggested. Only the first four examples must be regarded as probative, whereas the "grey area" contains the signs that theoretically may have been derived based on the unknown Luwian lexemes (the Luwian cognates of Hitt. *pattar* 'basket' and *karzan-* 'basket of wool' have not been identified thus far).

Table 1

L 41		CAPERE	<tà> (/da/)	Hitt. *da-* vs. Luw. *la(la)-* 'take'[11]
L 391		4	<mi>	Hitt. *miwa* vs. Luw. *mawa* 'four'[12]
L 90		PES	<ti>	Hitt. *tiya-* 'walk, step'[13] (cf. Luw. *ta-* 'stand, step')
L 56		INFRA	<ká>	Hitt. *katta* vs. Luw. *zanta* 'down'[14]

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[10] I have, however, excluded from my analysis several signs mentioned in Neumann 1992 because the suggested path to their phonetization strikes me as too speculative.

[11] Cf. Morpurgo-Davies 1987: 211-212, fn. 17: "Hawkins and I … have already pointed out that it would be possible to read all *ta-* forms as logographic on the assumption that the sign no.*41 must be read as CAPERE and not as <tà>. If so, the normal reading of the root would be *la-* (as in Cun. Luwian). The objection is that for *41, the taking hand, a <tà> syllabic value is certain – and it would be difficult to understand the origin of this value if the verb was not *ta-*, but *la-*. It is of course conceivable that an earlier *ta-* verb in existence at the time when the syllabary was created was replaced by a *la-* verb due to phonetic change or lexical replacement."

[12] Note, however, that the same sign could be used in the second millennium B.C. as a phonetic indicator MA_x accompanying a logogram (cf. Güterbock 1998: 203).

[13] Cf. Hawkins 2003: 162: "The relationship of other syllabic values to the corresponding logograms may be unexplained, notably PES, 'foot', syllabic *ti*".

[14] Goedegebuure (forthcoming) presents compelling evidence for the functional equivalence between Luw. *zanta*, phonetically spelled in cuneiform texts, and the Hittite preverb *katta(n)* 'down, together'. The two

L 334			\<pa\>	Hitt. *pattar* 'basket'
L 315		Cf. *314=\<ha$_x$\>	\<kar\>	Hitt. *karzan-* 'basket of wool' [15]

In seven cases, the values of Bronze Age syllabograms can be acrophonically derived from Luwian, but not from Hittite lexemes. The probative value of examples cited in Table 2 below is, again, not uniform. Only the first three cases can be seen as assured, whereas the signs in the shaded part of the tablet can be explained from Luwian only under certain assumptions. The derivation of L 376, discussed above in this section, depends on the existence of its logographic value HIC, which is likely but not absolutely certain. In the case of L 319, the suggested explanation is based on the graphic shape of this sign, which resembles an upward-pointing arrow, and on its vague resemblance to L 270 = SUPER. In the case of L 389, the contrast between Hitt. *teri-* and Luw. *tarri-* 'three' is undermined by the absence of a distinct hieroglyphic sign with the value \<teri\>.[16] Finally, since the Hittite word for number '9' is unknown, it remains possible that it sounded *nuwa-* and thus could provide a basis for the acrophonic derivation of L 395.

Table 2

L 13		PRAE (also cf. *14)	\<pari\>	Hitt. *peran* vs. Luw. *parri* 'before'
L 165		BONUS	\<wà/ì\>	Hitt. *assu* vs. Luw. *wāsu-* 'good'
L 327		SIGILLUM	\<sa$_5$\>	Hitt. *siyatar* vs. Luw. *sasanza* 'seal'
L 376		HIC(?)	\<za\>	Hitt. *ka-* vs. Luw. *za-* 'this'
L 319		~SUPER	\<ali\>	Hitt. *parku-* vs. Luw. *ala/i-* 'high'
L 389		3(+ra/i)	\<tara/i\>	Hitt. *teri-* vs. Luw. *tarri-* 'three'

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preverbs are assumed to be cognate and go back to IH. **k'ṃto(-)*. Since the affrication of IH. **k'* represents a pan-Luwic feature, HLuw. INFRA-*ta* must also be read as /zanda/ rather than /katta/.

[15] Melchert (1999: 129) notes that all the occurrences where L 314 functions as a determinative before fully spelled words feature lexemes beginning with /ka-/ or /ha-/. This indicates, according to him, that this sign had an original vague syllabic value \<ka$_x$/ha$_x$\> (vel sim.). For the representation of a wool basket on a relief from Maraş that bears a close resemblance to L 314, see Melchert 1999: 130. The sign L 315 = \<kar\> was secondarily created (presumably in the area of Carchemish) by adding the "thorn" to L 314.

[16] To this example one should probably compare L 270 = SUPER used with the value \<sari\> in the hieroglyphic transliteration of Šarri-Tešub, the Hurrian name of Muwattalli II. Note, however, that the seals of the Empire Period Hittite officials appear to use SUPER+ra/i as the equivalent of *sar(r)i-* (Herbordt 2005: 175-177), pleading for a different phonetic value L 270 = \<sar\> (vel sim.). More syllabographic occurrences of L 270 appear to be necessary to settle the issue.

| L 395 | ⦀ | 9 | <nú> | Luw. *nuwinza* 'nine/nineth' |

But the largest group of examples, summarized in Table 3, comprises those cases where a given sign can be equally well derived from via Hittite and via Luwian. For example, both Hitt. *pāi-/piya-* 'give' and Luw. *piya-* 'id.' could motivate the value <pi> of L 66, graphically a giving hand.[17] In fact, one need not choose between these two options because the person responsible for introducing the new syllabogram could be bilingual in Hittite and Luwian.

Table 3

L 362		DARE	<pi>	Hitt. *pāi-/piya-* vs. Luw. *piya-* 'give'
L 175		LINGUA	<la>	Hitt. *lala-* vs. Luw. *lala/i-*'tongue'
L 100		ASINUS	<ta>	Hitt./Luw. *targasna-*'donkey'
L 160		VITIS	<wi>	Hitt. *wiyan(a)-* vs. Luw. *wiyana/i-* 'vine'
L 329		REL	<kwa/i>	Hitt. kui- vs. Luw. *kui-/kua-* 'which'
L 329		CURRERE	<hwa/i>	Hitt. *huwāi-/hu(i)ya-* vs. Luw. *hui(ya)-* 'run'
L 105		BOS	<u>/<mu>	Onomatopoeic origin (sound of mooing)?
L 196		*HATTI*	<há>	Hitt./Luw. *Hattusa*

It is instructive to contrast the data collected in Tables 1-3 with a group of signs that acquired syllabographic values only in the first millennium B.C. In this late period, when the Hittite language was probably extinct and almost certainly not spoken in the epigraphic community responsible for the production of Luwian hieroglyphic texts, we do not expect the Hittite-based acrophony to play any derivation of new syllabograms. And indeed, all of the sound values listed in Table 4 can be accounted for through the analysis of Luwian lexemes. The only potentially problematic case is that of L 347 = <hú>, for which Neumann 1992 suggests an acrophonic derivation based on Hitt. *huppar* 'pot, bowl, keg'. Yet if Luw. *huppart(i)-* 'pelvis' is indeed derived from the same root, as per Melchert 2003: 196, it is quite likely that the base noun with the meaning 'bowl' also existed in Luwian, but is simply not attested in the available texts.

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[17] One should, of couse, distinguish between the etymology of a given lexeme and its presence in a particular language. For example, although the name of the Hittite capital Hattusa is non-Indo-European in origin, it was intimately familiar to both Hittites and Luwians living in this city.

Table 4

L 103		CERVUS	<rú>	Luw. *Runtiya*- 'Stag-god'
L 313		VIR	<zí>	Luw. *zida/i*- 'man'
L 82		CRUS	$<ta_6>$	Luw. *ta*- 'stand, step'
L 362		~DEUS	<má>	Luw. *massana/i*- 'god'
L 332		NEG	<ná>	Luw. *na* 'not'
L 326		SCRIBA	<tù>	Luw. SCRIBA-*la*- = *tupala 'scribe'
L 347			<hú>	Luw. **huppara/i*- 'pot' (cf. *huppart(i)*- 'pelvis')

It emerges from the analysis undertaken above that although the development of the Anatolian hieroglyphic script was closely connected with the history of the Luwian language, its very initial phase also bears an impact of Hittite. The term "Luwian hieroglyphs" may be relatively more accurate that the earlier misnomer "Hittite hieroglyphs", but both of them ultimately impose an association with one language upon the writing system that was historically the joint venture of the Hittite and the Luwian speakers.[18] This is why I believe that both designations must be abandoned in favor of the language-neutral term "Anatolian hieroglyphs".

The sociolinguistic setting of Hattusa in about 1400 B.C., where the majority of the population was already Luwian, while Hittite enjoyed political and cultural prestige, makes the Hittite capital the most likely venue for the phonetization of the Anatolian hieroglyphic script. Thus there is no more reason to speculate about Arzawa or Kizzuwatna as a place where the first Anatolian syllabograms came into being.

4. We have seen in the previous sections that the combination of the external and the internal evidence refutes Güterbock's claim that the Anatolian hieroglyphic script was created by the Luwians, in the Luwian lands, and for writing Luwian. My answers to the questions posed in Güterbock 1956 are very different from his: the Anatolian hieroglyphic script was developed in Hattusa, in the mixed Hittite and Luwian environment, for writing Anatolian names and titles on durable objects, such as seals. This happened at the time when the cuneiform script of Mesopotamian origin had been already in use in the Hittite capital for more than two hundred years. But what prompted

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[18] For the sake of completeness, one should also mention that the Anatolian hieroglyphs were used for writing divine names in Hurrian on the YAZILIKAYA reliefs (Hawkins 2003: 141) and recording Urartian weight measures on ALTINTEPE pythoi (Hawkins 2000: 588-89). These exceptional cases, however, do not appear to have had any impact on the development of the hieroglyphic writing system.

the Hittite rulers and high officials to introduce the new script in addition to the cuneiform for rendering their official signatures?

I believe that this decision was primarily dictated by nationalistic concerns. The Hittite royal seals of the Old Kingdom period, the so-called "*tabarna*-seals", were inscribed in Akkadian. Even in the later period, the cuneiform periphery of the royal seals could in principle be read in Akkadian as well as in Hittite or Luwian, and there was no easy way to resolve this ambiguity within the cuneiform script, as long as the inscription consisted entirely of personal names and Sumerographic expressions. One could, of course, phonetically render the common nouns making part of the royal title, such as "son" or "king", but this would make the legends much longer and, in addition, would run afoul of the common practice of writing these words as Sumerograms in Hittite texts. The radical alternative was the invention of an entirely new writing system, which was not in use in Mesopotamia. The choice of this solution could be triggered by the pre-existence of auspicious symbols decorating the central part of Old Kingdom seals.

This change may be compared with a different process, namely the transition from Akkadian to Hittite as the main language of written expression in Hattusa, which was implemented step by step. Certain genres of texts, such as the ritualistic literature pertaining to the official state cult, had been routinely recorded in Hittite at least since the reign of Telibinu. Certain other types of documents, such as royal land grants (*Landschenkungsurkunden*), were always compiled in Akkadian in the Old Kingdom period, but came to be executed in Hittite in the Early New Kingdom (van den Hout, forthcoming). Finally, the bulk of the translation of Mesopotamian epic literature from Akkadian and Hurrian into Hittite appears to have been undertaken in the thirteenth century BC.[19] The nationalistic reforms within the sphere of seal production fit well within the general pattern described above. Their only formal peculiarity was that in this case we are dealing not with the shift to the national language, which would have been difficult to implement in a short formulaic text, but with the shift to the national script.

But the difference between these two reforms also had a sociolinguistic dimension. The cuneiform tablets were written and read by the professional scribes, who would have no difficulties discriminating between Akkadian and Hittite. Introducing a new written language must have represented a sufficient way of nationalistic self-expression for this group. The seals, on the other hand, could belong to a variety of officials, not all of which were necessarily literate. Changing a set of obscure foreign signs on their personal signature would do little to boost their sense of national identity. Introducing a set of entirely new symbols whose pictographic shapes would be easily recognizable even to an illiterate person was obviously a better strategy.[20]

This leaves us with the question about the underlying language of the first hieroglyphic texts. I suggest that it could be both Hittite and Luwian depending on the

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[19] A number of well-known mythological texts of Akkadian and Hurrian origin (such as the Epic of Gilgamesh or the Hedammu and Ullikummi stories) are known exclusively from New Script fragments. The availability of Middle Script tablets inscribed with the Akkadian and Hurrian versions of the Gilgamesh epic, and the Hurrian version of the Hedammu myth suggests that this gap is probably not accidental.

[20] Cf. Neumann (1992: 27): "Demnach könnte bei der Schöpfung der Hieroglyphen das Streben eine Rolle gespielt haben, in einem mehrsprachigen Land breitere Schichten unmittelbar anzusprechen – mit Hilfe eines neuen Mediums, bei dem jedermann wenigstens einen Teil der Zeichen sofort verstand, nicht nur Schriftgelehrte".

individual preferences of the reader. In a largely bilingual society, in the absence of an open conflict between the two languages, the linguistic associations of the hieroglyphic script may have originally been vague. As Hawkins (2003: 140) aptly observes, even though the names and titles inscribed on seals are attributable *to* a language, these texts are not *in* a language. There is no *linguistic* way to show that their language is either Hittite or Luwian. In practice, this means that certain population groups may have given them a different linguistic attribution from one that had been originally intended. While the court literati probably expected that the hieroglyphic titles be read in Hittite, the same titles could have received the Luwian interpretation among the common people of Hattusa. This interpretation was particularly likely given that many names of the local high officials were, after all, Luwian in origin.[21]

The extent to which the new script came into private use in the Hittite kingdom depends on the unsolved problem of wooden waxed boards, which were quite popular in Late Bronze Age Anatolia (Symington 1991). A large group of scholars are of the opinion that they were sometimes used for the writing of the Anatolian hieroglyphic script (see lately Uchitel 2005: 55).[22] A different group of scholars (e.g. Marazzi 1994) continue to maintain that wooden boards were always used for writing cuneiform. Although chances of finding a Hittite wooden board with traces of signs preserved on it are rather slim, the discovery of Late Bronze Age private letters or business transactions recorded on different media conducive to tracing hieroglyphic signs, such as lead strips, may eventually contribute to the resolution of this controversy.

Pending this or similar archaeological evidence, the considerations that follow must be regarded as speculative. But if the Anatolian hieroglyphs were indeed used for private records, this could provide an appropriate context for the emergence of their secondary association with the Luwian language. If the Luwian speakers constituting the bulk of the Central Anatolian population appropriated the hieroglyphic script, presumably enticed by its iconicity, they had no reason to use it for writing Hittite. The first private documents possibly represented formulaic business notes, where the use of syllabic signs was limited to proper nouns, just as on Hittite seals. The Iron Age KULULU lead strips (Hawkins 2000: 506-11), where all the phonetic complements are perfectly redundant, give a good idea of what such documents might have looked like. When the phonetic complements and the full phonetic spellings eventually appeared, they could have only reflected the Luwian language used for dictating the respective business records.

The creation of a full-fledged phonetic script might, in its turn, have given rise to new kinds of hieroglyphic texts, such as ownership inscriptions similar to the Bronze Age ANKARA bowl (Mora 2007), or private letters. Once again, we do not have any specimens of the latter category of documents from the Empire period, but their appearance need not have been different from that of the Iron Age ASSUR letters

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[21] One argument for the widespread transmission of the first hieroglyphic inscriptions as Luwian is the tripartite opposition <Ca> / <Ci> / <Cu> within the system of hieroglyphic signs correlating with the Luwian three-vowel system, as opposed to the Hittite five-vowel system.

[22]The claim that all the Anatolian wooden boards were inscribed in the hieroglyphic script has, in my opinion, little to recommend itself. We know that this writing implement was also used in Mesopotamia, in particular in Assurbanipal's library (Parpola 1983). Compare also the mention of Kizzuwatna wooden boards inscribed with Hurrian rituals (Miller 2004: 513, fn. 941, 944). But it is easier to draw hieroglyphic images on wax than on clay, and wooden boards, originally designed for writing in the cuneiform, may have secondarily contributed to the proliferation of the new writing system.

(Hawkins 2000: 534-37). Eventually, the Luwian language associated with the hieroglyphic script might have become the preferred vehicle of all-purpose written communication outside the palatial sphere. This would explain why the last Hittite rulers accepted Luwian as the language of their monumental inscriptions. The real choice was in favor of the Anatolian hieroglyphs, deemed suitable means of nationalistic self-expression, whereas the Luwian language probably came along as a part of the package deal.[23] It must have been easier for the hieroglyphic scribes to design the monumental inscriptions if they could use the familiar linguistic conventions, while the rulers had no reasons to insist on using Hittite. The widespread use of the Luwian "*Glossenkeil*-words" attested in the texts attributed to the thirteenth-century kings of Hatti suggests that these monarchs, unlike their predecessors, did not shy away from code-switching even in their own public discourse.

The functional extension of hieroglyphic writing in the late Empire period independently allows one to explain why it survived the "Dark Age" that followed the disintegration of the Hittite Empire in the early twelfth century B.C. This period witnessed the abandonment of the cuneiform in central Anatolia, reflecting the fact that the writing system used primarily for administrative purposes cannot survive without state sponsorship. The same political upheavals must have decreased the demand for large-scale stonework, as indicated by the small number of monumental hieroglyphic inscriptions datable to the last two centuries of the second millennium B.C. (cf. Hawkins 2000: 19). The ostensive revival of hieroglyphic writing in the early first millennium B.C. can be best explained on the assumption that the scribal lore continued to be transmitted in the interim period in response to the mundane needs of private individuals.

I must repeat that the private circulation of Luwian hieroglyphic texts in the in the thirteenth century B.C. finds but a minimal support in the archaeological record. The ANKARA bowl is the only relevant text of more than one sentence in length that does not emanate from the royal administration. By contrast, the Hattusa origin of the Anatolian hieroglyphs follows from the available archeological evidence taken at face value and supported by the internal analysis of the script. Thus, whatever one thinks about the evolution of the Hieroglyphic script in the Hittite Empire and thereafter, there is no reason to believe that the Hittites borrowed it from anyone else in the Early New Kingdom period.

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[23] This explanation is different from the hypothesis of van den Hout 2006: 235, according to which the choice of Luwian as the language of public monuments directly reflected the "alleged solidarity" of the Hittite kings with the common population of the Empire. Even if the desire to please the common people was one of the factors involved in this decision, the choice of the Hieroglyphic script was a more efficient way to achieve this goal. The illiterate spectators would hardly have been able to figure out the underlying language of the inscriptions, but everyone could see the difference between the hieroglyphs and the cuneiform signs.

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