
They wrote on wood. The case for a hieroglyphic scribal tradition on wooden writing boards in Hittite Anatolia

Author(s): Willemijn Waal

Source: *Anatolian Studies*, Vol. 61 (2011), pp. 21-34

Published by: British Institute at Ankara

Stable URL: <http://www.jstor.org/stable/23317552>

Accessed: 24-01-2016 23:19 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



British Institute at Ankara and Cambridge University Press are collaborating with JSTOR to digitize, preserve and extend access to *Anatolian Studies*.

<http://www.jstor.org>

They wrote on wood. The case for a hieroglyphic scribal tradition on wooden writing boards in Hittite Anatolia

Willemijn Waal

Leiden University

Abstract

The wooden writing boards frequently mentioned in Hittite texts have given rise to much debate, mostly regarding the scale on which they were used and the type of script that was written on them (cuneiform or hieroglyphs). In this paper, the evidence for the use of wooden writing boards in Hittite Anatolia will be (re-)evaluated. It will be argued that they were used for private and economic documents, and that they were written on in Anatolian hieroglyphs. Important indications of this are the distinct terms consistently used in connection with writing on wood, which point to a separate scribal tradition. Further, the form and nature of the hieroglyphic script itself and the fact that it survived after the fall of the Hittite empire confirm that the script must have been widely employed. It is thus proposed that two parallel scribal traditions existed in Hittite Anatolia: a (lost) hieroglyphic tradition on wooden writing boards used for private and daily economic records, and a Hittite cuneiform tradition reserved for palace administration.

Özet

Hitit metinlerinde sıkça adı geçen ahşap yazı tahtaları, daha çok kullanıldığı ölçek ve üzerindeki yazıların türü (çiviyazısı veya hiyeroglif) açısından pekçok tartışmaya yol açmıştır. Bu makalede, Hitit Anadolu'su'nda ahşap yazı tahtalarının kullanıldığına dair kanıtlar (yeniden) değerlendirilecektir. Bunların, özel ve mali evraklar için kullanıldığı ve Anadolu hiyeroglifi ile yazılı olduğu savunulacaktır. Bunun önemli göstergeleri, farklı bir yazı geleneğine işaret eden, ahşap üzerine yazı yazmayla ilgili sürekli kullanılan belirgin terimlerdir. Ayrıca, hiyeroglifin kendi biçim ve niteliği ve Hitit İmparatorluğu yıkıldıktan sonra da hala var olduğu göz önüne alındığında, bu yazının yaygın olarak kullanılmış olduğu anlaşılmaktadır. Böylece, Hitit Anadolu'su'nda iki paralel yazı geleneğinin yaşamış olabileceği önerilmektedir: özel ve günlük mali kayıtlar için ahşap yazı tahtaları üzerine yazılan (kayıp) hiyeroglif geleneği ve saray yönetimi için ayrılmış Hitit çiviyazısı geleneği.

The Hittites had various writing materials at their disposal: we know they made use of clay, metal (silver, bronze, gold, iron) and wood. Of all these script bearers, clay is by far the best known. Due to the durability of this material, thousands of clay tablets and fragments have survived. As for metal, if it were not for the accidental find of a bronze tablet in 1986, we would only know of their existence from texts on clay. The situation is even less fortunate for the wooden writing boards; on Anatolian soil none has survived. The often mentioned wooden diptych found in a 14/13th century BC shipwreck near the coast of Uluburun is better left

out of consideration, for the provenance of this ship and its international cargo are uncertain and there are indications that the diptych is to be connected to the Aegean world (for example, Shear 1998; Pulak 2005; Bachhuber 2006). We thus rely solely on the information given by Hittite clay tablets, which tell us that the wooden writing boards were used for various kinds of records.

The frequent textual references to 'wooden tablets' (and scribes-on-wood) have given rise to several questions regarding their usage, but no consensus has been reached among Hittitologists. First of all, there is a long-standing debate over the type of script that was

written on these wooden writing boards: cuneiform or hieroglyphic? From the early days of Hittitology onwards, it has from time to time been suspected that the Hittite wooden writing boards were not written in cuneiform, but in a different script, namely Anatolian hieroglyphs (for example, Güterbock 1937: 53; 1939: 36; San Nicolò 1948: 69–70; Bossert 1958; following Hawkins, most recently, 2008: 31; and Yakubovich 2010; I use the term ‘Anatolian’ rather than ‘Luwian’ for the hieroglyphs, since the script itself was not necessarily confined to the Luwian language). This idea has not found general acceptance and currently there are both supporters of the hieroglyphic thesis (for example, Güterbock 1939: 36; Bossert 1958; Dinçol, Dinçol 2002: 210; Payne 2008: 118–19) and of the theory that wooden tablets were inscribed in cuneiform (for instance, Singer 1983: 40–41; Symington 1991: 115–16; Marazzi 1994; van den Hout, most recently, 2010: 257–58), and also of the use of both hieroglyphs and cuneiform (Hawkins 2000: 3; 2008: 33). Similarly, there is no agreement as to the scale on which the wooden writing boards were employed, particularly whether or not they were used to record daily economic administration and private documents, i.e. text types that are (almost) completely absent from Hattusa.

Because of the elusive nature of the wooden writing boards, it is impossible to settle the controversy with absolute certainty. There are, however, strong indications that the texts on wooden writing boards were not written in Hittite cuneiform, but in Anatolian hieroglyphs and that their usage was in fact quite widespread. This argument has been made before, but a thorough investigation presenting all the available evidence has not been offered previously. In this paper I will (re-)evaluate the evidence for the use of the Hittite wooden writing boards, adding new arguments to the existing ones. It will be argued that two scribal traditions existed in Hittite Anatolia: a (lost) hieroglyphic tradition on wooden writing boards used for private and daily economic records, and a Hittite cuneiform tradition which was reserved for palace administration.

Terminology used in connection to wooden writing boards

An important indication that the wooden tablets were not written in Hittite cuneiform, but in a different script, is the fact that a distinct terminology is consistently used in connection to writing on wood.

^{LÜ}DUB.SAR.GIŠ

First of all, the Hittites made a clear distinction between a ^{LÜ}DUB.SAR (‘scribe’) and a ^{LÜ}DUB.SAR.GIŠ (‘scribe-on-wood’), a distinction not found outside of Anatolia. Such a division implies that there was a fundamental

difference between these two types of scribes. Recently, Theo van den Hout has argued that this difference is to be explained by the different function the scribes-on-wood had: they ‘primarily seem to have been administrators in the narrower sense of “clerks”’ (van den Hout 2010: 262). He suggests that the element GIŠ is short for ‘wood(en chest/container)’. The wood scribes ‘would then be the officials who are in charge of securing and recording incoming and outgoing goods into and out of the storerooms, so called after the most typical way of storage in the royal magazines’. Although the ^{LÜ}DUB.SAR.GIŠ was certainly involved in administrative affairs, his activities were clearly not restricted to the storerooms alone (see below). In addition, the assumption that his professional title is coined after the material of the containers used within the storage rooms feels somewhat artificial. A simpler and more elegant solution is ready at hand, if we look at the interesting parallels provided by Neo Babylonian texts and the Persepolis tablets. In the latter case, the scribes writing in alphabetic Aramaic are called ‘scribes (writing) on leather’ (^{HAL}tup-pi-ip KUŠ^{MEŠ} uk-ku) or ‘Babylonian scribes (writing) on leather’ (^{HAL}tup-pi-ip ^{HAL}ba-ip-li-ip KUŠ^{MEŠ} uk-ku). Similarly, in Neo and Late Babylonian a *sepīru*, a scribe writing in alphabetic script (mostly on leather or parchment), was designated by the Sumerogram ^{LÜ}KUŠ.SAR (*CAD* 225 s.v. *sepīru*; Henkelman 2009: 93; Hunger 2009: 269). Scribes writing in a different script and language were thus identified by means of the (primary) writing material they used. By analogy, in Hittite Anatolia GIŠ (‘wood’) would refer to scribes (primarily) *writing on wood*, and presumably in a different script.

One confirmation of this can be found in the fact that the counterpart of ^{LÜ}DUB.SAR.GIŠ KARAŠ, ‘a wood-scribe of the army’, in hieroglyphs, is SCRIBA.EXERCITUS, ‘army scribe’ (Lebrun 2005: 209–10; van den Hout 2010: 262). The term ^{LÜ}DUB.SAR.GIŠ mentioned in a cuneiform text (*KUB* 31.73 v 6; *CTH* 530) thus corresponds directly to SCRIBA in hieroglyphs, which supports the idea that the ^{LÜ}DUB.SAR.GIŠ was simply a scribe, yet one writing in a different script, namely in hieroglyphs.

The verb gulš-, ‘to write in hieroglyphs’?

The verb *gulš-*, generally translated as ‘to carve’, ‘to engrave’, ‘to mark’ or ‘to write’, is consistently used in connection with the wooden writing boards. (Following general convention, the verb *gulš-* is written phonetically here. There are, however, indications that this verb should rather be understood as GUL-š.) This verb is related to Luwian *gulzattar*, used to identify wooden documents (see below). The verb *gulš-* is *never* attested in combination with clay tablets. The fact that different

verbs are used for writing on clay tablets and for writing on wood is eloquent, and again implies an essential difference between the use of the two mediums. This difference cannot lie in the technique of writing: the writing of cuneiform on a wooden writing board covered with wax hardly requires a different technique to writing on clay.¹ This problem may be solved if we assume that the verb *gulš-* refers to a different kind of script being used, namely Anatolian hieroglyphs, a suggestion already made cautiously by Heinrich Otten, who remarks in relation to *KBo* 12.38 that the verb (*andan gulš-*) ‘einen Hinweis zu bieten scheint dass diese Aufzeichnung in hethitischen Hieroglyphen erfolgte’ (Otten 1967: 234). This assumption is supported by the fact that the use of the verb *gulš-* is not confined to wooden writing boards alone, but, as the examples below show, is also attested in relation to metal and stone – materials on which hieroglyphic inscriptions are known.

1. 1 *KI-LI-LU KÙ.BABBAR ŠUM ŠA* ^d*U GAŠRU an-da-an gul-aš-ša-an*
a coronet of silver, the name of the mighty Stormgod
g-ed in it
(*KUB* 38.1 i 32–33)
2. 1 *ALAM GIŠ KÙ.BABBAR GAR.RA ... ŠUM ŠA*
LUGAL-kán ki-im-ra-aš-ša hu-u-i-tar an-da-an gul-aš-ša-an
one wooden statue plated with silver ... the name of
the king and beasts of the field g-ed in it
(*KUB* 38.3 ii 7–9)
3. *A-WA-AT* ^{NA4}*hé-kur SAG.UŠ-kán ma-ah-ha-an ŠA*
^d*U ku-un-ta-ar-ra an-da-an gul-ša-an-za*
How the word concerning the Eternal Rock Sanctuary
is g-ed in the *kuntarra* shrine of the Stormgod
(Bronze tablet i 94–95)
4. (This image [my father] Tudhaliya did not [make]; I,
Suppiluliuma [the Great King], King of Hatti, son of
Tudhaliya, the Great King, grandson of Hattusili, the
Great King, and great-grandson of Mursili, the Great
King, made it)

¹ Symington (1991: 114–15) does in fact describe them as employing different techniques, yet without giving any explanation. However, she quotes (1991: 115) Wiseman, in whose view the stylus used for writing on wax was identical to the one used on clay. This latter view is also the opinion of San Nicolò (1948: 69). The fact that in Mesopotamia and Syria no distinction was made between scribes-on-wood and scribes-on-clay confirms that writing in clay or wax was regarded as being essentially the same.

nu A-BU-IA ^m*Tu-ut-ha-li-ia-aš LUGAL.GAL GIM-an` a-ša-an-za LUGAL-uš*
e-eš-ta nu-kán QA-TAM-MA a-ša-an-da LÚ-na-tar^{HLA} ***an-da-an gul-šu-un***

And just as my father, the Great King Tudhaliya was a true king, in the same way I g-ed [his] true manly deeds thereon

(*KBo* 12.38 ii 11'–14')

Although it is not completely certain from what material the *kuntarra* mentioned in example 3 was made, this is very likely to have been stone. Particularly interesting is the fourth example. It comes from a tablet comprising two texts, which Güterbock (1967: 74, 81) suggests, on very different grounds, are likely to represent Hittite versions of Luwian hieroglyphic inscriptions. He bases this idea on the opening lines of the second inscription, which reads ‘I am My Sun, the Tabarna Suppiluliuma’. Such an opening is very atypical for Hittite compositions, which are normally introduced by the Akkadian formula *UMMA* (‘thus speaks’). For hieroglyphic inscriptions, however, this sort of introduction is quite standard. He therefore concludes that the first text (= no. 4 above) was carved in hieroglyphs on a statue and that the second inscription may be identified with the hieroglyphic Luwian inscription of the (stone) Nişantaş relief, an identification which has been widely accepted.

The verb *gulš-* is thus not strictly connected to writing on wood, but may also be used for writing on metal and stone. The different natures of these materials exclude the possibility that the choice of this verb was dictated by the specific writing technique applied. As mentioned above, the verb is *never* attested in combination with clay, which considering the numerous attestations of *tuppi* cannot be due to chance. The clay tablets were exclusively reserved for cuneiform. Apart from some incidental postscripts of scribes, who wrote their names in hieroglyphs at the end of a tablet (fig. 1), this medium was not used for hieroglyphs. By contrast, the materials used in connection to *gulš-*, which have come down to us, i.e. metal and stone, do show examples of hieroglyphic inscriptions (for example the Südberg and Nişantaş inscriptions in stone, the silver Ankara bowl and the silver ‘Boston fist’-rhyton).

The meaning of *gulš-* in the examples above would thus be ‘to write hieroglyphs’. With respect to the *gulš-* deities, this would mean that they drew fate in hieroglyphs. In addition, the verb is in some (ritual) contexts used in a more general sense ‘to draw’ or ‘to mark’ (cf. *HED* K s.v. *gulš-*). These two meanings go together very well; in ancient Egypt, which had a long and well-known hieroglyphic tradition, the verb used for writing and drawing (*ss*) was also the same (cf. Bossert 1952: 172).



Fig 1. Hieroglyphic inscription on Hittite clay tablet (KBo 13.62) (photo W. Waal; Ankara Museum of Anatolian Civilizations)

The verb hazziye/a-, 'to write in cuneiform'?

The above assumption would gain strength if, in addition, a verb used to express writing in cuneiform can be identified. Unfortunately, there are not many references to the actual inscribing of clay tablets. The colophons, which sometimes mention which scribe(s) wrote the tablet, would potentially be a good source of information, but here the Akkadogram *IŠTUR* (*šaṭārum*, 'to write') is used without exception and the underlying Hittite word is unknown. In most other occurrences, *tuppi* is connected to more general verbs like 'to make' (*aniye/a-*) or 'to write/send' (*hatrae-*), which rather refer to the composing or the sending of the document than to the actual writing process (Waal 2010a: 121–23). In two cases, there is a direct reference to the inscribing of tablets.

5. *na-at-kán AN.BAR-aš tup-pí ha-az-zi-ia-nu-un*
that I h.-ed on an iron tablet
(KBo 4.10 rev. 22; CTH 106)
6. When my father lets you go to your house
nu-uš-ma-aš ma-a-an-ha-an-da ha-at-re-eš-ki-iz-zi
na-at-ta-ša-ma-aš ^{LÜ.MEŠ}DUGUD-aš *tup-pí ha-az-zi-*
an har-zi
just a he customarily writes to you, has he not h.-ed a
tablet for you dignitaries?
(KBo 22.1 22–23; CTH 272; see CHD L–M s.v.
mahhanda: 111)

The basic meanings of the verb *hazziye/a-* are 'to strike/stroke', 'to pierce' or 'to play (a musical instrument)'. In the examples above it is used with the meaning 'to inscribe' (cf. *HW H* s.v. *hazzi(ya)*: 539–41; *HED H* s.v. *hat(t)*: 248–55). The verb may be compared to Akkadian *lapātum*; this verb, of which the basic meaning is 'to touch', 'to affect' or 'to play (a stringed musical instrument)', is also commonly used in the meaning 'to write (in cuneiform)', i.e. to touch, to impress the surface of the clay tablet with a stylus (cf. *CAD L* s.v. *lapātu*: 82–94).

In examples 5 and 6 *hazziye/a-* is used to mean inscribing in iron and clay respectively, the common denominator being that both these texts were written *in cuneiform*, the verb *hazziye/a-* representing the action of impressing the clay/metal with the stylus or chisel.² The primary meaning of this verb may be rendered as 'to impress' or 'to touch or affect the surface'.

Here again, the assumption is confirmed by archaeological evidence: the bronze tablet demonstrates that metal could be inscribed with cuneiform; the writing of cuneiform in clay obviously does not need to be demonstrated.³

In sum, the verb *gulš-* is used to indicate writing on wood, metal and stone. These materials are of very different natures, so the verb cannot be connected to a certain writing *technique*, but rather refers to the kind of script used, namely Anatolian hieroglyphs. This hypothesis is supported by archaeological evidence: hieroglyphic inscriptions on stone and metal have indeed been found. It is further significant that precisely in KBo 12.38, which has been identified as containing blueprints for hieroglyphic inscriptions, the verb *gulš-* is used. This verb is, on the other hand, never attested in connection with clay tablets, a material exclusively reserved for writing in

² For a different view, see Marazzi (1994: 137), who also comments on the difference between *hazziye/a-* and *gulš-*. He does not connect either verb to a certain type of script, but rather assumes that *hazziye/a-* represents the movement of the hand of the scribe, whereas *gulš-*, which he connects to the drawing of furrows, denotes the impact of the writing on the surface. Apart from the fact that one wonders why such a distinction would be useful at all, this solution does not explain the distribution of the two verbs.

³ Admittedly, we cannot entirely exclude the possibility that the instructions mentioned in example 6 were also written down on a metal tablet, which is not specified here as such – especially since there is mention of a bronze tablet of the oath in the instructions for the ^{LÜ}DUGUD. In this case, there would be no example of *hazziye/a-* referring to writing on clay. But, even then, there is the interesting contrast between examples 3 and 4, where the verb *gulš-* is used to express writing on metal, and the above examples where we find the verb *hazziye/a-* used for writing on this material.

cuneiform, for which the verb *hazziye/a-* seems to have been used. In addition, the verb *hazziye/a-* may also refer to metal tablets. Metal is thus the only material attested in combination with both the verbs *gulš-* and *hazziya/e-*, and precisely on this material we find examples of both the hieroglyphic and the cuneiform script. I would therefore argue that the verb *gulš-* means ‘to write in hieroglyphs’, whereas the verb *hazziye/a-* means ‘to write in cuneiform’, representing the strokes of the stylus into the clay.

Gulzattar/GIŠ.HUR

Another point of interest is the terminology used for the wooden writing boards themselves: they are commonly referred to by means of the Sumerogram GIŠ.HUR or Hittite *gulzattar* (in addition, we find the Akkadian term for wooden writing boards, ^{GIŠ}*lē’u*, or the ‘pseudosumerogram’ ^{GIŠ}LE.U₅, which is generally taken to refer to the same type of documents, see also Weeden 2011: 235; some other terms are attested as well, see Symington 1991: 113). The noun *gulzattar* is a Luwism, connected to the above-discussed verb *gulš-*. The basic meaning of GIŠ.HUR is ‘drawing’, which is certainly a fitting description for a document written in pictographic hieroglyphs.

Interestingly, the Sumerogram GIŠ.HUR is never found in Mesopotamian contexts referring to writing or wooden writing boards (^{GIŠ}*lē’u*) (in the Neo-Assyrian and Neo-Babylonian period the Sumerograms GIŠ.DA or GIŠ.ZU may represent ^{GIŠ}*lē’u*, see Weeden 2011). Here, the logogram GIŠ.HUR is used to represent Akkadian *uṣurtu(m)* (‘drawing’). If the verb *gulš-* indeed means both ‘to draw’ and ‘to write (in hieroglyphs)’ as has been suggested above, this may explain the aberrant use of this Sumerogram by the Hittites: in Akkadian, the verb *eṣeru(m)* is only used with the meaning ‘to draw’ and not ‘to write’. The corresponding Hittite verb *gulš-*, however, makes no distinction between these two actions, which is why GIŠ.HUR (‘drawing’) could end up being used with the meaning ‘writing (in hieroglyphs)’ in an Anatolian context: the acts of ‘drawing’ and ‘writing’ being considered one and the same by the Hittites. The deviant use of the Sumerogram GIŠ.HUR in Anatolia may thus be seen as a further indication that the Anatolian wooden writing boards were written in hieroglyphs.⁴

⁴ Kindly pointed out to me by Mark Weeden. Possibly, the Hittite use of GIŠ.HUR/*gulzattar* is to be connected to a document referred to as *iṣurtum* in Old Assyrian texts, which appears to be associated with native Anatolians. Weeden (2011: 235) cautiously remarks that ‘a possible parallel between the use of Old Assyrian *iṣurtum* and Hittite GIŠ.HUR for types of document, when neither of these terms are used similarly in Mesopotamia, would be striking’. On *iṣurtum*, see Veenhof 1995.

What kinds of documents were written on wood?

For information regarding the kinds of texts that were written on wood, we have to rely solely on textual references from clay tablets of the palace administration, a circumstance which seriously distorts our view on what appear to be private records. Dorit Symington (1991) gives an extensive overview of the contexts in which wooden writing boards were used and, more recently, van den Hout (2010) has done the same for the ^{LÚ}DUB.SAR.GIŠ. I will therefore limit myself here to a summary of the most important conclusions.

The ^{LÚ}DUB.SAR.GIŠ frequently appears in administrative activities and is involved in affairs such as daily offerings, the delivery and distribution of goods, the distribution of (cult) supplies and the making of inventories. A nice illustration of the involvement of the ^{LÚ}DUB.SAR.GIŠ in daily offerings is given in the following example.

7. LUGAL-uš-ma-kán ma-ah-ha-an UD-ti-li šī-pa-an-za-ki-iz-zi nu GIŠ.HUR ^{LÚ.MES}DUB.SAR.GIŠ har-kán-zi
The scribes-on-wood have a wooden writing board (concerning) how the king performs offerings on a daily basis
(*KUB* 10.45 rev. iii 12–14)

The ^{LÚ}DUB.SAR.GIŠ operates in the palatial administration, but is also often attested in provincial contexts (Symington 1991: 118; van den Hout 2010: 259–63). In the deposition *KBo* 8.32, for example, a ^{LÚ}DUB.SAR.GIŠ has been summoned to record damages in the town of Kattana:

8. Thus speaks the DUB.SAR.[GIŠ]⁵
The people of Kattanna [have made] a reque[st?]
[nu-w]a-mu a-pé-e-da-aš dam-me-eš-ha-aš[]
[š]a-ra-a gul-šu-u-wa-an-zi u-i[-e-ir (?)]
and they s[ent] me to record these damages []
(*KBo* 8.32 obv. 9’–11’)

As for the wooden writing boards, they were used for religious, administrative and juridical documents and private correspondence.

Religious texts

There are several references that show that wooden writing boards could contain festival or ritual prescriptions. Sometimes it is stated that the instructions are inscribed on an old/ancient (*annala-* or *karuili-*) writing board, as in *KUB* 43.50.

⁵ Restoration based on obv. 7’. The fragmentary context unfortunately does not inform us whether the scribe-on-wood was sent from Hattusa or was already present in Kattana.

9. *nu ŠA GU₄ pu-u-hu-ga-ri GIM-an SISKUR an-na-la-az IŠ-TU* ^{GIŠ}LE.U₅ *gul-aš-ša-an*
how the ritual of the substitute oxen is written on an old wooden tablet
(*KUB* 43.50+ rev. 28'–30')

Interestingly, these (older) ritual or festival prescriptions on wood are almost all connected to Kizzuwatna, an area where Luwian was widely spoken. This could be seen as an indication that in this region the preferred medium was wood, probably written on in Luwian. As has been noted by Andrej Sidel'tsev, a number of Middle Hittite texts, including the Mastigga rituals from Kizzuwatna, show a foreign influence, which is reflected in the inverted word order (Sidel'tsev 2002: 180). Jared Miller subsequently wonders,

if indeed some significant portion of the Kizzuwatna ritual texts, as well as those of other genres, represent imports from Kizzuwatna, i.e. reflections of texts originally composed and written down in Kizzuwatna, why does there seem to be no, or practically no, corresponding foreign influence on the Hattusan ductus? (Miller 2004: 536).

This inconsistency would be solved if these original Kizzuwatna texts were in fact written down in the Luwian language in a different script, namely hieroglyphs, which were subsequently transferred to Hittite cuneiform (see also below). The assumption that these rituals already existed in written form in Kizzuwatna is confirmed by *KBo* 17.65+ obv. 38 in which a wooden *kurta*-document from Kizzuwatna is mentioned (Mouton 2008: 21–22).

Further, the phrase *ANA GIŠ.HUR-kan handan* is found in the colophons of some 50 festival texts. This expression is usually taken to mean 'in accordance with the wooden tablet', assuming that the clay tablet has been copied from a wooden original (see, for example, Singer 1983: 41; *HED* H s.v. *handai*–: 102; *HW* s.v. *handai*–: 66 translates more neutrally 'Es (ist) auf dem G.H festgelegt'). A different interpretation is offered by M. Marazzi, who suggests that *GIŠ.HUR* does not, in this context, refer to a text on a wooden writing board, but to the outline or schedule of the festival (Marazzi 1994: 145–48). Since in other occurrences *GIŠ.HUR* clearly refers to writing boards, this interpretation is not attractive. It is more likely that *GIŠ.HUR* refers to a text on a wooden writing board here as well than to assume a different meaning, all the more because the Hittite and Akkadographic complements attested in this formula confirm that the underlying words are, as in other texts, *gulzattar* and *UŠURTU* respectively (cf. Schwemer

forthcoming). This does not, however, necessarily imply that it refers to a wooden *Vorlage*; the expression *ANA GIŠ.HUR-kan handan* may rather refer to an additional copy made on wood, meaning 'matched with/recorded on a wooden tablet' (Waal 2010a: 134–35). Apart from one possible attestation in an economic text, the phrase *ANA GIŠ.HUR-kan handan* occurs only in the colophons of festival texts. These festival texts are elaborate compositions that usually comprise several large tablets, containing descriptions of activities that took place at different locations over several days or weeks. These tablets were quite heavy – a large three-column tablet may easily weigh several kilos – and it would certainly have been a weighty burden to carry all these tablets along to the various festival locations. It is therefore conceivable that the festival descriptions were transferred to the much lighter and more easily transportable wooden writing boards and that the copies on clay remained in the archives of Hattusa (cf. Starke 1990: 459).

Similarly, Itamar Singer suggests that during the annual celebrations copies on wooden tablets were used, thus minimising the wear upon the library exemplars (Singer 1983: 42). The basic meanings of the verb *hantae*- are 'to fix', 'to determine', 'to match'. Rather than 'true to the wooden original tablet', we may thus take the expression *ANA GIŠ.HUR-kan handan* to mean 'matched with a wooden tablet', referring to a corresponding contemporary wooden copy. This assumption is confirmed by the colophon of *KUB* 43.55, which clearly does refer to the copying of a text from a wooden *Vorlage*, which is expressed in a very different manner, by means of the verb *arha aniya*, 'to copy from (a written source)': [*k*]i-i-ma-kán *TUP-PA* ^{HI.A} *IŠ-TU* ^{GIŠ}*LI-IH-E* [*a*]r-ha a-ni-ia-u-e-en, '[T]hese tablets we copied from wooden tablets (*KUB* 43.55 rev. v 1'–3'; cf. Waal 2010a: 134–35; 2010b: 558; Schwemer forthcoming).

A subsequent question concerns the nature and function of these additional copies. Though they could of course be literal renderings of the cuneiform festival descriptions, it is worthwhile considering that they may have been documents containing practical information for the performance of the festivals, such as details regarding supplies, offerings and recitations, etc. (cf. example 7 above). In this case, the wooden board would not so much be a literal copy, but rather an additional practical guide based on the prescriptions written down on clay (see also below). Since these wooden documents have not been preserved, their contents cannot be established with any certainty and the relation between the festival documentation on clay and on wood remains unclear (cf. Schwemer forthcoming).

Administrative texts

The wooden writing boards were used for various types of lists and inventories (Symington 1991: 118–19).

Receipts and sale contracts

In the court deposition *KUB* 13.35, GAL-⁴U and his father Ukkura, a commander of ten, are accused of having tampered with royal property. In this text there is recurrent mention of the sealing of goods and writing boards. At a certain point Ukkura states:

When they sent me to Babylon, I sealed the wooden writing boards (^{GIŠ}LE.U₅), which I had concerning the horse(s) and mule(s), and while I was on my way to Babylon, until I returned again, I did not seal them again (*KUB* 13.35 rev. iv 35–40).

This passage informs us that wooden writing boards were used in commercial traffic, which is confirmed by the example given below from the Instructions to the Priests and Temple Officials (*CTH* 264). It concerns a temple official who has received a gift from the palace, which he should not keep in his house, but offer for sale.

10. (When he sells it, he must not sell it in secret. Let the Lords of Hatti be present and watch)
nu-za ku-it wa-ši-ia-zi na-at GIŠ.HUR i-ia-an-du na-at-kán pí-ra-an ši-ia-an-du
 Let them set down on wooden tablets whatever he buys, and let them seal it
 (*KUB* 13.4 obv. ii 41'–42')

It is clear from the examples above that commercial transactions were recorded on wood and subsequently sealed. In both, personnel from the palace or the temple are concerned, but the possibility that these registering and sealing practices were also used for private transactions should certainly not be excluded (Herbordt 2005: 26).

Juridical texts

As the following fragment from the Instructions for the *Bēl Madgalti* shows, wooden writing boards could be used as documents in court cases.

11. *ma-a-an DI-NU-ma ku-iš GIŠ.HUR tup-pi-az ši-ia-an ú-da-i nu a-ú-ri-ia-aš EN-aš DI-NAM SIG₅-in ha-an-na-ú*
 But if someone brings a case on a wooden tablet (or) a (clay) tablet, sealed, let the border commander judge the case well
 (*KUB* 13.2 iii 21–23)⁶

The explicit distinction made between clay tablets and wooden writing boards is noteworthy. Their function here is the same: they both concern cases that are brought to trial. The material on which the court cases were written down and handed over to the *Bēl Madgalti* would hardly seem relevant. If, however, the distinction concerns documents presented in different scripts and languages, then it does become relevant since the commander would have to judge cases presented to him in hieroglyphs as well as in cuneiform. Interestingly, the court is the precise location where the spheres of the palace and the common people would have met: where the king or one of his representatives would judge the cases of the local community. The people could bring their cases in Anatolian hieroglyphs, the vernacular language and script (see also below), whereas the actual trial at the palace would be recorded in Hittite cuneiform, which explains the presence of the handful of court depositions found at Hattusa.

Private correspondence

Finally, two examples may show that the wooden writing boards could be used for correspondence.

12. *nu GIM-an I-NA URU Ta-pa-aš-pa ar-hu-un nu-mu GIŠ.HUR ŠA^m He-eš-ni ú-te-er*
 When I arrived in Tapaspa, they brought me a wooden tablet of Hešni (saying) 'Do not go in the presence of his Majesty...'
 (*KUB* 31.68 obv. 5'–6'; a few lines later, obv. 7'–8', it is mentioned that they also brought a wooden writing board to a Lilawanda; cf. Symington 1991: 119)

13. (Concerning the affair of the lawsuit regarding the house of Tarhunmiya)
ku-it IŠ-TU GIŠ.HUR ha-at-ra-a-nu-un
 which I wrote on a wooden tablet
 (*HKM* 60 v 6)

Both examples seem to concern private, not state-related, affairs which were written down on wooden tablets.

⁶ The grammatical construction of this sentence is somewhat unclear. The participle *šiiān* seems to refer to the case – *DINU* (*uttar*) rather than the expected *DINAM*. The noun *GIŠ.HUR* does not have a case-marker, but presumably it was, like *tuppi*, in the ablative case. Possibly, the absence of a case-marker on *GIŠ.HUR* may indicate that the expression *GIŠ.HUR tuppi* had become a frozen phrase for 'written documents'.

In conclusion, wooden writing boards seem to have been used for religious texts, mostly stemming from Kizzuwatna, a region closely associated with Luwian. Further, wooden writing boards and scribes-on-wood are to be found in the context of administrative procedures, economic and juridical administration, the performance of festivals, commercial transactions and private correspondence, which is consistent with the fact that these types of documents are almost completely missing from the preserved archives of Anatolia. The evidence for private use may seem meagre, but this is largely due to the one-sidedness of our material. Considering the fact that all available texts stem from the palace administration, it is not surprising that private documents are rarely mentioned. The fact, however, that the local people handed in their cases to the *Bēl Madgalti* in a written form implies an extent of literacy beyond the palace. Presumably, not all such documents were drafted by the individual involved, but rather by public scribes (see below). The textual references confirm the assumption that the wooden writing boards were used for daily administration and all-purpose written communication outside the palatial sphere.

Physical characteristics of the hieroglyphic script

The form and nature of the hieroglyphic script itself provides a further important indication that it was written on wooden documents. Already in 1939, Hans Güterbock noted with respect to the cursive *Hieroglyphenformen* on seals:

die Annahme liegt nahe, dass diese Kursivschrift sich eben beim Schreiben auf Holz herausgebildet hat, dass also nicht nur die Siegel der Beamten sondern auch die Urkunden über ihre Amst- und Geschäftstätigkeit, und vielleicht auch die Privaturkunden der Bevölkerung in Hieroglyphenschrift abgefasst waren (Güterbock 1939: 36).

Likewise, Annick Payne observes:

only regular use of the script can explain two other facts: first, that the few surviving full-length inscriptions from the Empire period already show a fully functional writing system, albeit not developed to the level encountered in the Iron Age; second, that during the Empire period there is already evidence of cursive sign forms, notably on seals (see, e.g., SBo II 130, 238). This move towards more abstract, simpler shapes is commonly interpreted as the result of frequent, handwritten usage (Payne 2008: 119).

In particular, the shift to cursive sign forms is significant. David Hawkins points out that the development of

cursive forms probably indicates writing with pen and ink (Hawkins 1986: 374). One would not expect such a development to cursive sign forms if the hieroglyphs were only carved in hard materials such as stone. On similar grounds, it has been established that the Linear B script was not designed for writing on clay, but was primarily used for writing on perishable material(s) with pen and ink (Chadwick 1976: 27). The very nature of hieroglyphs makes the script more suitable to be written *on* a surface rather than to be incised *in* it: the complex pictographic signs do not lend themselves well for use on hard materials and it is therefore unlikely that the script was primarily used for stone inscriptions (on the distinction between writing materials that are *incised* as opposed to those which are *written*, see Bowman, Thomas 1983: 32).

Physical aspects of the wooden writing boards

The development of the hieroglyphic script brings us to the physical aspects of the wooden writing boards. If the script was indeed written with a pen or brush in ink, this would imply that the widely-held assumption that all wooden writing boards used in Hittite Anatolia were diptychs or polyptychs covered with wax must be abandoned. There is, of course, no doubt that this type of wooden writing board with wax did exist in the ancient Near East: for the first millennium BC there is evidence that wooden writing boards filled with wax – or a mixture of wax and clay (Symington 1991: 114; MacGinnis 2002) – were employed in the temple and palace administration of Mesopotamia (for example, Postgate 1986: 22–27; MacGinnis 2002). In addition, there are several Neo-Hittite reliefs depicting hinged writing boards (Hawkins 2000: 274–75, pl. 125). For the second millennium the evidence is scarcer. Waxed tablets (*tuppum ša iškurim*) are occasionally referred to in the Old Assyrian period (Veenhof 2010: 100 with references) and, once, in Ugarit in an unclear context (Symington 1991: 122). Further, there is the well-known wooden diptych found in the Uluburun shipwreck, which is likely to be of Aegean origin (see above).

As for Hittite Anatolia, there is only indirect evidence for the use of writing boards covered with wax. R.M. Boehmer identifies some styli found at Boğazköy as styli that were used to write hieroglyphs in wax (Boehmer 1972: 133–34). He sees the pointed end of these styli as being that with which the hieroglyphic signs were written, with the flattened end of the metal styli being used for erasing (see also Symington 1991: 114; Payne 2008: 118; Volk 2009: 285). The facts that these styli are very similar to the Roman styli used for writing in wax (Stauner 2005: 75) and cannot have been used for writing in cuneiform (Volk 2009: 285) make this interpretation

attractive. It can, however, not be excluded that these styli were (also) used for hieroglyphic writing on other materials; Payne does not exclude the possibility that this kind of styli was used for the Aššur letters that were written (in Anatolian hieroglyphs) on lead strips (Payne 2005: 113).⁷

Although the possibility that the Hittites made use of such waxed wooden writing boards should thus not be excluded, it is conceivable that they (also) wrote directly on wood or bark with ink.⁸ From a practical and economic perspective, the use of ink on wood had its advantages: the making of writing boards with wax was time-consuming and more expensive than producing wooden tablets, for which the surface only needed to be smoothed. Wood was a cheap and widely available material in thickly forested Anatolia (cf. most recently Dörfler et al. 2011: 103–04), which made it a logical and convenient writing material for everyday administration.

In this respect it is interesting that in the above-mentioned examples 1–4, when the verb *gulš-* is used for writing on stone and metal it is accompanied by the adverb *andan* ('in'), which is never used in combination with GIŠ.HUR; we usually find GIŠ.HUR in the ablative case (*IŠTU GIŠ.HUR gulš-*). This adverb may express the action of incising the signs *in* the material, as opposed to *on* the wooden tablets with ink.

In comparison, in contemporary Egypt writing with ink on wood (and papyrus) is well attested from the Old Kingdom period onwards (fig. 2). Writing boards covered with wax only appeared in Egypt for the first time in Graeco-Roman times (Gestermann 1984: 702).



Fig. 2. Wooden writing board written with ink, Egypt, Early 18th Dynasty, ca 1500 BC. © Trustees of the British Museum

An example a bit further from home is provided by the Vindolanda tablets. This collection of documents stemming from the first to second century AD was excavated from a Roman fort at Vindolanda in northern England. It consists in large part of thin slivers of smoothed wood, containing letters, lists, accounts, pay records, etc. These so-called leaf tablets were written with pen and ink and could be folded and pierced (fig. 3). Apart from the leaf tablets, a small part of the archive consists of wooden 'stylus tablets'; diptychs or polyptychs that were filled with wax, some of which also ended up being written on in ink (Bowman, Thomas 1983: 32–45). Although admittedly stemming from a considerably later date, the Vindolanda corpus is a good illustration of how well wood could serve as an everyday writing material and how different types of wooden documents could co-exist.

The format and layout of the Anatolian wooden tablets written in ink may have been different from that of clay tablets or wooden diptychs. Possibly, they looked similar to the Kululu and Aššur lead strips, with landscape orientation, the script running parallel to the grain of the wood.



Fig. 3. Wooden leaf tablet written with ink, Vindolanda, ca first to second century AD (Tablet 343: business letter from Octavius to Candidus). © Trustees of the British Museum

⁷ Note that the often-quoted example regarding the cult of the Deity of the Night (*KUB 32.133 obv. i 5–7; CTH 482*), in which Mursili II supposedly has wooden writing boards replaced by clay tablets to avoid the falsification of the wooden documents, which would imply writing in wax, is arbitrary and is interpreted differently by, for example, Miller: *LÚ.MEŠ DUB.SAR.GIŠ LÚ.MEŠ É DINGIR^{LIM}-ia wa-ah-nu-uš-ke-wa-an da-a-ir na-at^m Mur-ši-DINGIR^{LIM}-iš LUGAL.GAL tup-pi-ia-az EGIR-pa a-ni-ia-nu-un*, '(those rituals and obligations which he determined in the temple of the Deity of the Night – it came about, however, that) the scribes-on-wood and the temple personnel began to incessantly alter them – I, Mursili, Great King, have re-edited them from the tablets' (translation Miller 2004: 312).

⁸ The idea that Anatolian hieroglyphs were written in ink is, of course, hardly new, see, for example, Forrer 1922: 180; Bossert 1950: 224; 1952. Note that Bossert identifies an inkpot on the Maraš-stele (Maraš 9; see Hawkins 2000: pl. 125), and is followed in this by Bittel (1976: 338, n.46), but the identification is uncertain. Bossert further points to a first millennium BC Kululu-sherd with an inscription in ink, see Bossert 1950: pl. XXXI. Evidence for the use of ink in the Hittite period may be found on the fragment *KUB 56.41*, which possibly shows traces of ink (Kořak 1988: 147). On the possible substance of ink, see Volk 2009: 284.

Since none of the wooden tablets from Anatolia have survived, discussion about their physical aspects is inevitably speculative. The assumption, however, that all Hittite wooden writing boards were filled with wax, is equally tentative. The hieroglyphic script was more suited to being written in ink and for daily, ephemeral documents a cheap disposable writing material would be a logical choice. The possibility that the Anatolian wooden documents were leaf tablets written with ink on wood, which co-existed with wax-filled writing boards, should therefore certainly not be excluded.

Further arguments for a widespread use of hieroglyphs

A further indication for a more widespread use of hieroglyphs is the presence of stone blocks in Hattusa that preserve scribal names in hieroglyphs (most recently Hawkins 2008: 33; Payne 2008: 118–19). Such stone blocks have been found in the surroundings of four temples (Temples I, IV, VI and XVI; BOĞAZKÖY 14, 15, 17 and 22; see Hawkins 2000: 35). One of them was found in a wall close to one of the northern gates of Hattusa, naming two scribes, Patisina and Samituli. To these, a fifth example (Bo 2001/1), currently in the museum of Boğazkale, has been added in the meantime (Dinçol, Dinçol 2002). It bears the name Sariya, with the title SCRIBA. Although the provenance of this stone is uncertain, it is likely to have come from the surroundings of Temple XVI. The graffiti have already been explained by Kurt Bittel as signs for public scribes who offered their scribal services to the inhabitants of Hattusa (Bittel 1957: 19). The presence of public scribes in Hattusa would imply a wider use of hieroglyphs than for seals and stone inscriptions alone. A.M. and B. Dinçol therefore conclude ‘dass es einen grossen Bedarf für die öffentlichen Schreiber in der Hauptstadt gab und dass das unoffizielle Schrifttum der hethitischen Gesellschaft viel reicher war, als wir von dem materiellen Befund entnehmen können’ (Dinçol, Dinçol 2002: 210). They compare this practice to the scribes and seal cutters of Istanbul, who up to the early 1960s offered their services in the courtyard of the Yeni Validesultan mosque to elderly people unfamiliar with the Latin script, filling in forms and writing requests to various authorities (Dinçol, Dinçol 2002: 207). The hiring of public scribes by private persons is, of course, also well known in the rest of the ancient Near East.

In addition, we may mention *KBo* 19.28, a list of personnel. In this document, 19 scribes (^{LU}DUB.SAR) are listed, as opposed to the 33 scribes-on-wood (^{LU}DUB.SAR.GIŠ), out of a total of 205 employees of the É.GIŠ.KIN.TI, the house of the craftsman (Payne 2008: 118; van den Hout 2010: 263). This is only one text and may not be representative, but it is certainly noteworthy that in this list of personnel considerably more scribes-

on-wood than regular scribes are mentioned, and this may be seen as a sign that the scribes-on-wood were responsible for the composition of a major part of the texts.

Last but not least, the fact that the hieroglyphic script continued into the Iron Age implies that it was firmly rooted within society and not just some ornamental script used for royal inscriptions. In fact, the circumstance that precisely these royal propaganda inscriptions, aimed at the population, were presented in hieroglyphs may also be seen as an indication that this was the script of the common people.

Bilingualism and code-switching

An often-repeated argument against the idea that the wooden writing boards were written in hieroglyphs is based on the fact that hieroglyphic script is always used for the Luwian language. This one-to-one relation between script and language would imply that the texts that were recorded on wooden tablets and subsequently transferred to clay tablets would at the same time have to be translated. The notion of translation does not form an insurmountable problem and the simultaneous use of two scripts and languages within the same administration is not exceptional or unparalleled: a good example of this practice in the ancient Near East is the simultaneous use of Elamite and Aramaic in the Persepolis administration.

It has been generally accepted that Luwian was spoken by the majority of the population and that Hattusa was basically a bilingual society in the later Empire period, so the scribes would certainly have been capable of switching from Luwian to Hittite (van den Hout 2010: 257; Yakubovich 2010: 396–416). In fact, example 4 (*KBo* 12.38) presented above, a cuneiform text written for a hieroglyphic inscription, proves that the scribes could and did indeed switch from Luwian to Hittite. The text has been described as ‘a deliberate phrasing of the text according to typical Hieroglyphic Luwian stylistic patterns by a court scribe intimately familiar with Luwian and able to switch from one to the other’ (van den Hout 2006: 238). The occasional hieroglyphic ‘postscripts’ found at the end of Hittite cuneiform compositions confirm that at least a part of the scribal population mastered both scripts and languages (fig. 1; for more examples, see Ünal 1989). In respect of these postscripts, it is interesting that we find the name *Pi-ha* , written in hieroglyphs after the colophon of *KBo* 22.214 (Laroche 1975: 68). Possibly, this may be the same *Piha*-UR.MAH who is attested as a scribe-on-wood in several colophons (Mascheroni 1983: 102).

The translation process would mostly apply to lists and inventories originally composed on wood that were later to be compiled on clay tablets, which are by their nature simple texts, as well as incidental translations of larger compositions, such as, for example, the ritual texts

from Kizzuwatna discussed above. An often-heard objection is that the hieroglyphic script would not be suitable for such elaborate compositions and that wooden writing boards containing festival or ritual instructions must therefore have been waxed writing boards written in cuneiform. Such wooden writing boards written in cuneiform may surely have existed (see above), but it is unlikely that they were referred to with the same terminology as that used for hieroglyphic writing.⁹ Though ritual and festival descriptions are considerably longer than any texts thus far found in Anatolian hieroglyphs, their content is no more complex than that of hieroglyphic texts from the first millennium BC, so there is no compelling reason to assume that this type of text can only have been written down in cuneiform. In addition, the wooden tablets may have held abbreviated versions of the festival and ritual descriptions (see above).

Alternatively, one could consider that the hieroglyphic script was – at least originally – not confined to the Luwian language, but could also be used for the Hittite language. I. Yakubovich persuasively argues that the Anatolian hieroglyphic script was initially not exclusively restricted to Luwian, but was historically a joint venture of Hittite and Luwian speakers (Yakubovich 2010: 285–99; see also Hawkins 2008: 34). Theoretically, the wooden writing boards may thus have been inscribed in Hittite as well. Since all hieroglyphic texts known to us are written in Luwian, however, it may be safest to assume that the script was used only for this language, at least in the late Empire period.

Absence of evidence is not evidence of absence

A second frequently used argument against the idea that the wooden writing boards were written in hieroglyphs is that there is no archaeological evidence for the existence of a wide-spread hieroglyphic tradition in the Hittite empire. This is absolutely true, but, since the supposedly hieroglyphic documents were all written on wood, this is hardly surprising and one could not have expected otherwise. To reverse the question: what evidence could one hope to find for the use of a hieroglyphic script on perishable material? Only incidental inscriptions on more durable materials, such as metal and stone, and textual references to this lost medium are likely to survive, and, indeed, these have come down to us. Though it is admittedly hazardous to make assumptions

based on objects that do not exist, it is equally hazardous to focus only on the limited material available to us, in the sense that it may not be representative and give us only part of the picture.

In comparison, the evidence we have for the use of hieroglyphic script for economic texts and letters from the post-Empire period is entirely based on just a few examples; without these fortunate finds, we would not have known that it was used for private and economic records at this time.

Apart from the question of what language or what script was written on the wooden tablets, it is important to realise that we have a giant gap in our Hittite sources. A look at the archives of other civilisations of the ancient Near East tells us just how much is missing from Hattusa: apart from all types of private records, we also have hardly any texts regarding grain distribution, deliveries, running accounts of offerings, rations, agricultural dues, issues and receipts of silver and gold, registers of slaves, workmen, etc., etc. These types of administration must have existed and must have been documented on a perishable material. The idea that such administration could have been done orally is simply not tenable for a complex and highly structured state as that of the Hittite empire. This is confirmed by the fact that texts of a juridical and administrative nature, which are lacking from Hattusa, have been found in Hittite-ruled vassal states such as Ugarit and Emar.

Conclusions

A number of arguments point to the existence of a scribal tradition in Anatolian hieroglyphs: the fact that the ^{LÜ}DUB.SAR.GIŠ is clearly differentiated from the ^{LÜ}DUB.SAR, the fact that a different verb is used for referring to writing on clay as opposed to writing on wood, the form and nature of the hieroglyphic script itself, the frequent textual references to wooden documents, the evidence for public scribes offering their services in hieroglyphs, the fact that the hieroglyphic script was a fully developed script that survived into the Iron Age – all in all, there is sufficient evidence to argue that a scribal tradition in Anatolian hieroglyphs existed, and that it was used for daily economic texts, most of the provincial records and the records of the common people. Since these texts were written on perishable wood, they have been irretrievably lost. This in contrast to the tradition of cuneiform written on clay, of which thousands of documents have survived. The latter was the script of the empire, reserved for the palatial archives. The strict connection of the cuneiform script with the royal palace is confirmed by the fact that it is only used on royal seals, whereas the seals of officials are composed only of hieroglyphic inscriptions.

⁹ At first glance, no clear difference in function between, for example, GIŠ.HUR/*gulzattar*, ^{GIŠ}lē'u or ^{GIŠ}kurta is discernable, but, possibly, an in-depth study of the different terms used for wooden writing boards may reveal that they do in fact represent different types of documents.

A question that has not been addressed here is when the hieroglyphic script was first employed in Anatolia. It is certain that it was in use by the 13th century BC, but considering that hieroglyphic signs are attested on seal impressions from the Old Hittite period onwards and that the script was already fully developed in the 13th century, it may well have been in use before.¹⁰ The references on clay tablets to ancient wooden documents also point to a longer existence of a hieroglyphic tradition. The fact that the hieroglyphic signs found on seal impressions are mostly only symbols and do not represent a fully fledged language does not necessarily mean that the script was not yet fully developed. Seals are symbolic in their nature and one does not expect to find elaborate grammatical sentences on this type of medium. In this context, the possibility that hieroglyphs were initially used for both Hittite and Luwian, and later became used for Luwian only, has been noted (see above).¹¹

In the 17th or 16th century, probably under Hattusili I, the cuneiform script was introduced to the Hittite empire. This was in all likelihood directly connected to this king's Syrian campaigns and international ambitions. The use of Akkadian was essential for communicating with local Syrian rulers during his campaigns and for all later diplomatic contacts. Apart from international ambitions, a sense of status and prestige may have triggered the use of cuneiform for the internal documents within the royal

administration, such as the annals and land deeds. Recently it has been argued by Maciej Popko and Theo van den Hout that the cuneiform script was at first exclusively used for Akkadian and that only at a later stage was a proper Hittite cuneiform tradition developed (Popko 2007; van den Hout 2009). This Hittite cuneiform functioned as the language of the state; it was a language of power, serving as a binding phenomenon and ensuring the continuation and unity of the empire.

It has been generally accepted that there was a substantial Luwian substrata in the Hittite empire and that Hattusa was, especially in the late period, a bilingual society. In the last phase of the empire, the importance of the Luwian language grew and had a visible influence on the Hittite language (for example, Melchert 2005; Rieken 2006; van den Hout 2006; Yakubovich 2010). It is plausible that this vernacular language also had its own scribal tradition. The Luwian-speaking population used, and continued to use, its own script for everyday administration and private documents, adjacent to the cuneiform tradition of the palace.

The scenario sketched above is unavoidably tentative, since the 'evidence' was written on perishable wood and has been irretrievably lost. The prime objective of this paper is to show that, although 'hard proof' may be missing, there are sufficient indications to assume the existence of a much more extensive use of Anatolian hieroglyphs than the presently available material may initially lead us to conclude. The clay tablets tell only one side of the story, the story of the royal palace, whereas the story of the common people largely escapes our view. It is telling that Hittite cuneiform completely vanished when the empire collapsed; it was a tradition associated with the élite and the imperial administration. The Anatolian hieroglyphs, on the other hand, formed the everyday script and continued to exist well after the fall of the Hittite empire.

Acknowledgements

This article results from the project 'Impact of Migration', funded by the Netherlands Organisation for Scientific Research (NWO). I would like to thank David Hawkins, Wouter Henkelman, Theo van den Hout, Jorrit Kelder and Mark Weeden for their helpful comments during earlier stages of this study. Needless to say, I alone remain responsible for the views expressed here.

Bibliography

- Bachhuber, C. 2006: 'Aegean interest on the Uluburun ship' *American Journal of Archaeology* 110.3: 345–63
- Bittel, K. 1957: 'Vorläufiger Bericht über die Ausgrabungen in Boğazköy im Jahre 1956. Untersuchungen in der Altstadt' *Mitteilungen der Deutschen Orient-Gesellschaft* 89: 6–25

¹⁰ If the hieroglyphic inscription on the Ankara bowl is indeed to be ascribed to the time of Tudhaliya I, this would push back the first hieroglyphic text to around 1400 BC (Hawkins 2005; 2008: 32–34), but this dating is debated (most recently Dunford 2010). If the expression *gulzattar gulš-* is to be connected to the Old Assyrian expression *išurtum ešērum*, the date might be pushed back even further (see also above).

¹¹ The idea proposed by Yakubovich (most recently 2010: 295) that the Anatolian script was invented as a new writing system around 1400 BC out of nationalistic concerns, for 'the cuneiform periphery of the royal seals could in principle be read in Akkadian as well as in Hittite in Luwian', and was triggered by the pre-existence of auspicious symbols decorating the central parts of Old Kingdom seals seems far-fetched. The very presence of hieroglyphs on these older seals undermines this supposed need for such a new national script – especially since only the royal seals were written in cuneiform! – and, furthermore, it is hard to reconcile this with the fact that the Anatolian script survived after the fall of the empire. It is highly questionable whether a new, artificially created script could become a widespread and common manner of writing so rapidly, especially when there was already another script – cuneiform – in use. The parallel drawn by Yakubovich, with the Bisitun inscription of Darius, is telling: this newly-invented script, which was not in widespread use for economic purposes, died out immediately after the fall of the Persian empire. It is preferable and more in accordance with the available evidence to assume a more gradual development of the script.

- 1976: *Die Hethiter. Die Kunst Anatoliens vom Ende des 3. bis zum Anfang des 1. Jahrtausends vor Christus*. Munich
- Boehmer, R.M. 1972: *Die Kleinfunde von Boğazköy aus den Grabungskampagnen 1931–1939 und 1952–1969* (Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft 87, Boğazköy-Hattuša 7). Berlin
- Bossert, H.T. 1950: 'Kleine Mitteilungen. Zu drei Hieroglyphen-hethitischen Inschriften' *Jahrbuch für Kleinasiatische Forschung* 1.2: 218–24
- 1952: 'Schreibstoff und Schreibgeraet der Hethiter' *Bulletin* 16: 9–16
- 1958: 'Sie schrieben auf Holz' in E. Grumach (ed.), *Minoica. Festschrift zum 80. Geburtstag von Johannes Sundwall*. Berlin: 67–79
- Bowman, A.K., Thomas, J.D. 1983: *Vindolanda: The Latin Writing-Tablets*. London
- CAD = *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. Chicago 1956–
- Chadwick, J. 1976: *The Mycenaean World*. Cambridge
- CHD = *The Hittite Dictionary of the Oriental Institute of the University of Chicago*. Chicago 1980–
- CTH = *Catalogue des textes hittites*. Ed. E. Laroche. Paris 1971
- Dinçol, A.M., Dinçol, B. 2002: 'Die "Anzeigen" der Öffentlichen Schreiber in Hattuscha' in S. de Martino, F. Pecchioli Daddi (eds), *Anatolia antica: studi in memoria di Fiorella Imparati* (Eothen 11). Firenze: 207–15
- Dörfler, W., Herking, C., Neef, R., Pasternak, R., von den Driesch, A. 2011: 'Environment and economy in Hittite Anatolia' in H. Genz, D.P. Mielke (eds), *Insights into Hittite History and Archaeology*. Leuven: 99–124
- Dunford, S.P.B. 2010: 'How old was the Ankara silver bowl when its inscriptions were added?' *Anatolian Studies* 60: 51–70
- Forrer, E. 1922: 'Die Inschriften und Sprachen des Hatti-Reiches' *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 76: 174–269
- Gestermann, L. 1984: 'Schreibmaterial' in W. Helck, W. Westendorf (eds), *Lexikon der Ägyptologie* 5. Wiesbaden: 700–03
- Güterbock, H.G. 1937: 'Schrifturkunden. A. Die Siegel' *Mitteilungen der Deutschen Orient-Gesellschaft* 75: 52–60
- 1939: 'Das Siegel bei den Hethitern' in J. Friedrich, J.G. Lautner, G. Miles, T. Folkers (eds), *Symbolae ad jura Orientis antiqui pertinentes Paulo Koschaker dedicatae*. Leiden: 26–36
- 1967: 'The Hittite conquest of Cyprus reconsidered' *Journal of Near Eastern Studies* 26: 73–81
- Hawkins, J.D. 1986: 'Writing in Anatolia: imported and indigenous systems' *World Archaeology* 17: 363–76
- 2000: *Corpus of Hieroglyphic Luwian Inscriptions*. Berlin, New York
- 2005: 'A Hieroglyphic Luwian inscription on a silver bowl' *Studia Troica* 15: 193–204
- 2008: 'The disappearance of writing systems: hieroglyphic Luwian' in J. Baines, J. Bennet, S. Houston (eds), *The Disappearance of Writing Systems. Perspectives on Literacy and Communication*. London: 31–43
- HED = *Hittite Etymological Dictionary*. Ed. J. Puhvel. Berlin, New York 1984–
- Henkelman, W.F.M. 2009: *The Other Gods Who Are. Studies in Elamite-Iranian Acculturation Based on the Persepolis Fortification Texts* (Achaemenid History 14). Leiden
- Herbordt, S. 2005: *Die Prinzen- und Beamtensiegel der hethitischen Grossreichszeit auf Tonbullen aus dem Nişantepe-Archiv in Hattusa – mit Kommentaren zu den Siegelinschriften und Hieroglyphen von J. David Hawkins* (Boğazköy-Hattuša 19). Mainz
- HKM = *Maşat-Höyük'te Bulunan çivi yazılı Hitit Tabletleri/Hethitische Keilschrifttafeln aus Maşat-Höyük*. Ed. S. Alp. Ankara 1991
- Hunger, H. 2009: 'Schreiber C. Im 2. und 1. Jahrtausend' in M.P. Streck (ed.), *Reallexikon der Assyriologie* 12.3/4. Berlin, New York: 269–73
- HW = *Hethitisches Wörterbuch* 2. völlig neu bearbeitete Auflage. Eds J. Friedrich, A. Kammenhuber. Heidelberg 1975–
- KBo = *Keilschrifttexte aus Boghazköy*. Leipzig 1916–1923, Berlin 1954–
- Košak, S. 1988: 'Review of H. Klengel, *Keilschrifturkunden aus Boghazköi* 56 *Hethitische Gelübde und Traumtexte sowie Rituale und Festbeschreibungen* (KUB 56). Berlin 1986' *Zeitschrift für Assyriologie und vorderasiatische Archäologie* 78: 145–49
- KUB = *Keilschrifturkunden aus Boghazköy*. Berlin 1921–1990
- Laroche, E. 1975: 'Keilschrifttexte aus Boghazkoi, Heft XXII (Ouvrages reçus)' *Revue Hittite et Asianique* 33: 67–71
- Lebrun, R. 2005: 'Syro Anatolica Scripta Minora VI 1. Le scribe Pitiku-x' *Le Muséon* 118: 209–10
- MacGinnis, J. 2002: 'The use of writing boards in the Neo-Babylonian temple administration at Sippar' *Iraq* 64: 217–37
- Marazzi, M. 1994: 'Ma gli Hittiti scrivevano veramente su "legno"?' in P. Cipriano, P. Di Giovine, M. Mancini (eds), *Miscellanea di studi linguistici in onore di Walter Belardi*. Rome: 131–60

- Mascheroni, L.M. 1983: 'A propos d'un groupe de colophons problématiques' *Hethitica* 5: 95–109
- Melchert, H.C. 2005: 'The problem of Luvian influence on Hittite' in G. Meiser, O. Hackstein (eds), *Sprachkontakt und Sprachwandel. Akten der XI. Fachtagung der Indogermanischen Gesellschaft, 17.–23. September 2000, Halle an der Saale*. Wiesbaden: 445–60
- Miller, J. 2004: *Studies in the Origins, Development and Interpretation of the Kizzuwatna Rituals* (Studien zu den Boğazköy-Texten 46). Wiesbaden
- Mouton, A. 2008: *Les rituels de naissance kizzuwatniens. Un exemple de rite de passage en Anatolie Hittite*. Paris
- Otten, H. 1967: 'Zur Datierung und Bedeutung des Felsheiligtums von Yazilikaya. Eine Entgegnung' *Zeitschrift für Assyriologie und vorderasiatische Archäologie* 58: 222–40
- Payne, A. 2005: 'Überlegungen zur Hieroglyphenschrift der Assur-Briefe' *Mitteilungen der Deutschen Orient-Gesellschaft* 137: 109–18
- 2008: 'Writing systems and identity' in B.J. Collins, M.R. Bachvarova, I.C. Rutherford (eds), *Anatolian Interfaces. Hittites, Greeks and their Neighbours: Proceedings of an International Conference on Cross-Cultural Interaction, September 17–19, 2004*. Oxford: 117–22
- Popko, M. 2007: 'Zu den Datierungsfragen in der Hethitologie' in D. Grodek, M. Zorman (eds), *Tabularia Hethaeorum. Hethitologische Beiträge Silvin Košak zum 65. Geburtstag*. Wiesbaden: 575–81
- Postgate, J.N. 1986: 'Middle Assyrian tablets' *Altorientalische Forschungen* 13: 10–39
- Pulak, C. 2005: 'Who were the Mycenaeans aboard the Uluburun ship?' *Aegaeum* 25: 295–312
- Rieken, E. 2006: 'Zum hethitisch-luwischen Sprachkontakt in historischer Zeit' *Altorientalische Forschungen* 33: 271–85
- San Nicolò, M. 1948: 'Haben die Babylonier Wachstafeln als Schrifttrager gekannt?' *Orientalia* 17: 59–70
- Schwemer, D. forthcoming: 'Quality assurance managers at work: the Hittite festival tradition' in *Liturgie oder Literatur? Die Kultrituale der Hethiter. Workshop 2.–3. Dezember 2010, Akademie der Wissenschaften und Literatur Mainz*
- Shear, I.M. 1998: 'Bellerophon tablets from the Mycenaean world? A tale of seven bronze hinges' *Journal of Hellenic Studies* 118: 187–89
- Sidel'tsev, A.V. 2002: 'Middle Hittite inverted word order' in V. Shevoroshkin, P.J. Sidwell (eds), *Anatolian Languages* (Association for the History of Language Studies in the Science and History of Language 6). Canberra: 137–88
- Singer, I. 1983: *The Hittite KILAM Festival* (Studien zu den Boğazköy-Texten 27). Wiesbaden
- Starke, F. 1990: *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens* (Studien zu den Boğazköy-Texten 31). Wiesbaden
- Stauner, K. 2005: 'Kommunikation in Krieg und Frieden. Das offizielle Schriftwesen des Römischen Heeres von Augustus bis Gallienus (27 v.Chr.–268 n.Chr.)' *Antike Welt* 1: 75–81
- Symington, D. 1991: 'Late Bronze Age writing-boards and their uses: textual evidence from Anatolia and Syria' *Anatolian Studies* 41: 111–23
- Ünal, A. 1989: 'Drawings, graffiti and squiggles on the Hittite tablets. Art in scribal circles' in K. Emre, M. Mellink, N. Özgüç (eds), *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*. Ankara: 505–13
- van den Hout, T.P.J. 2006: 'Institutions, vernaculars, publics: the case of second-millennium Anatolia' in S. Sanders (ed.), *Margins of Writing, Origins of Cultures*. Chicago: 217–56
- 2009: 'A century of Hittite text dating and the origins of the Hittite cuneiform script' *Incontri Linguistici* 32: 11–35
- 2010: 'LU¹DUB.SAR.GIŠ = "Clerk"?' *Orientalia* 79.2: 255–67
- Veenhof, K.R. 1995: 'Old Assyrian iṣurtum, Akkadian eṣērum and Hittite GIŠ.HUR' in T.P.J. van den Hout, J. de Roos (eds), *Studio historiae ardens. Ancient Near Eastern Studies Presented to Philo H.J. Houwink ten Cate on the Occasion of his 65th Birthday* (PIHANS 74). Leiden: 311–32
- 2010: *Ankara Kültepe tabletleri*. Ankara
- Volk, K. 2009: 'Schreibgriffel' in M.P. Streck (ed.), *Reallexikon der Assyriologie* 12.3/4. Berlin, New York: 280–86
- Waal 2010a: *The Source as Object. Studies in Hittite Diplomats*. PhD thesis, Leiden University
- 2010b: 'Review of P. Dardano, *Die hethitischen Tontafelkataloge aus Hattusa* (CTH 276–82). Wiesbaden 2006' *Bibliotheca Orientalis* 67.5/6: 554–60
- Weeden, M. 2011: *Hittite Logograms and Hittite Scholarship* (Studien zu den Boğazköy-Texten 54). Wiesbaden
- Yakubovich, I. 2010: *Sociolinguistics of the Luvian Language*. Leiden, Boston