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Heterograms in Hittite, Palaic, and Luwian context

The cuneiform, as the primary means of written communication in the kingdom of Hattusa, was used to record texts in Hittite and other languages functioning within its borders. The peculiarity of the Anatolian cuneiform was the written use of the Sumerian and Akkadian lexemes alongside phonetic spellings. Such written units usually, but not always, corresponded to the specific lexemes of the matrix language of the text, and we will refer to them as *heterograms*. This paper presents a comparison of cuneiform texts in Hittite, Palaic, and Luwian with the focus on the frequency and function of heterograms.

Keywords: cuneiform writing, Hittite language, Luwian language, Palaic language, heterograms

1. Sociolinguistic setting

The cuneiform first made its way into Anatolia early in the second millenium BC along with textiles, tin, and other exportable goods brought to the peninsula by the Assyrians who expanded there a large network of merchant colonies. In order to keep track of their trading operations and maintain contact with the homeland, Assyrian merchants could not dispense with using writing (Bryce 2005: 21). Archeological excavations performed at the sites of the ancient trade activity unveiled a substantial number of clay tablets inscribed with Old Assyrian cuneiform, which have preserved for us the oldest examples of Anatolian personal names and toponyms. Surprisingly enough, Anatolians themselves were reluctant to borrow and use for their own purposes the writing system to which they were exposed on the regular basis; this is why the start of literacy among the indigenous population dates back no earlier than to the reign of the Hittite king Hattusili I or some time shortly before it (Weeden 2011: 382). The Hittites adopted the Mesopotamian cuneiform script in its Old Babylonian form and, as is agreed among most of the scholars nowadays, at first only used it for writing Akkadian, the language of scribal culture and international communication. The earliest attempts of transmitting the Hittite language in writing, as is believed by some, could have been made even centuries later (van den Hout 2009: 95, but see also Archi 2010). Writing in Hittite did not cease until the collapse of the kingdom of Hattusa and the abandonment of its capital (modern Bogazköy), where the bulk of the Hittite corpus comprising thousands of cuneiform documents had been kept.

Despite its prestigious status of the main chancellery language in the kingdom of Hattusa, Hittite was by no means the only language spoken within its borders. The territory of the Hittite heartland including Hattusa was previously occupied by the speakers of Hattic, a language isolate that remained in limited use as ritual language after most of the Hattic population was assimilated by the Indo-Europeans. Although there is evidence that small Hattic-speaking groups still existed even in the New-Hittite period, these were Indo-European languages pertaining to the Anatolian group that shaped the linguistic landscape of Late Bronze Age Anatolia; apart from best attested Hittite this group also included Palaic and Luwian.

The former is currently believed to have been spoken in the north of Anatolia on the territory of the region of Pala mentioned in the Hittite laws. The significance of Pala as well as that of its language was evidently in decline throughout the course of the second millenium. It is assumed that the primary use of Palaic in Hattusa pertained to spiritual practices since all at-

tested text fragments in that language are found in Hittite ritual descriptions. The question whether Palaic remained a living language during the last centuries of Hittite kingdom is still open for discussion (Kassian, Shatskov 2013: 98). Palaic was written in the same form of cuneiform script as Hittite.

Luwian, on the contrary, being spoken in the center and south of the peninsula at the dawn of Hittite kingdom was expanding its territory into the regions of Kizzuwatna (southwestern Anatolia) and north-western Syria. The growth of Luwian-speaking population in Hattusa during the second half of the second millennium BC led to the state of Hittite-Luwian bilingualism in the capital and, subsequently, to the predominance of Luwian in everyday communication while Hittite maintained its positions in bureaucratic milieu (Yakubovich 2013: 107). Luwian fragments mostly consisting of transcriptions of magic incantations are found in cuneiform transmission in Hattusa archives and they are much more numerous than Palaic fragments. During the last centuries of the Hattusa kingdom Luwian texts was also recorded in the indigenous Anatolian hieroglyphic script. The preserved Luwian hieroglyphic texts of this period consist of monumental inscriptions honoring the Hattusa rulers and their achievements.

This paper is primarily devoted to the studying the adaptation of the Mesopotamian cuneiform script for writing in Hittite, Palaic, and Luwian, with the focus on the frequency and function of heterograms. After introducing the notion of heterogram (Section 2) I turn to their use in Hittite, Palaic, and Luwian texts (Section 3, 4, and 5 respectively). The discussion of the generalizations that follow from the preceding survey is provided in Section 6.

2. Notion of Heterogram

The history of Mesopotamian cuneiform presents in itself an interesting case of interrelation between the spoken and written forms of language. The cuneiform script was most likely invented for writing Sumerian, the dominant cultural language of the southern part of Mesopotamia in the second part of the third millennium BC. In the course of subsequent several centuries, the script was slowly developing into a complex system involving the use of logograms (literally, 'word-signs') and phonetic graphemes, each standing for a certain syllable. The use of logograms in the Sumerian writing was twofold: on the one hand, they could be deployed as signs for lexemes of the spoken language, on the other hand, they could function as determinatives pointing to the semantic category of a lexeme they accompanied in the text. The pictographic character of cuneiform signs gradually wore off and their shapes became more abstract (Gelb 1963: 69).

In the middle of the second millennium BC the cuneiform script was adapted for writing the Akkadian language, which gradually took over the status of *lingua franca* in the region from Sumerian. The speakers of Akkadian borrowed the bulk of Sumerian logograms along with the phonetic syllabary and employed them for writing corresponding Akkadian lexemes. There is limited evidence for the occasional pronunciation of logograms in Akkadian context with their Sumerian values (Weeden 2011: 5-7). This suggests that the script and the language for which it had originally been designed could not always be differentiated in the minds of the literate people at the time.

Some logograms were borrowed into the Akkadian writing with their Sumerian phonetic complements. In addition, certain grammatical morphemes of Sumerian, e.g., the plural markers HI.A and MEŠ, could attach to logograms and stand for Akkadian functional categories. As a result, Akkadian texts abounded in Sumerian word-forms, which were frequently ex-

tended by syllabically written Akkadian complements. Formally, it would not be completely correct to proceed with referring to Sumerian word-signs in the Akkadian context as logograms. Instead of postulating a simple bipartite relation between *signifiant* and *signifié* for word-signs and the corresponding Akkadian lexemes, as would be appropriate for the use of logograms in Sumerian texts, it this case one should also not forget the role of the Sumerian language as the probable mediator. Following the terminology of Igor Diakonoff (see e.g. Diakonoff 1967: 69), I will refer to cases such as Sumerian logograms in Akkadian context as *heterograms*. A heterogram can be defined "as a sign or combination of signs that reproduce in writing a segment of A as a part of a text composed in B where A and B are two distinct languages and one can reasonably assume that the segment in question did not exist in the spoken language B" (Kudrinski, Yakubovich 2016: 55).

As a result of adapting the Akkadian cuneiform for writing Hittite, yet another system came into being, which made use not only of syllabograms and Sumerograms but also of Akkadian word-forms written syllabically, that is to say Akkadograms. For example, the Hittite noun *išḫaš* 'master' could be written either syllabically or using the Sumerogram EN (Sum. 'master') or using the Akkadogram *BELU* (Akk. 'master'). The Sumerograms are traditionally rendered with capitals in the Roman transliteration of Hittite texts, while Akkadograms are indicated with italic capitals. One also encounters mixed writings such as *BELU*ᴴᴵ·ᴬ-*uš* 'master.PL-ACC.PL', which is the Akkadographic rendering of the stem with Sumerographic plural marker and Hittite inflectional ending. Similarly to the case of Sumerograms employed in Akkadian writing, there is evidence pointing to the occasional pronunciation of Sumerian and Akkadian elements in Hittite writing in their source languages. As a result, the use of the Mesopotamian cuneiform deployed by the Hattusa scribes for writing Hittite presents even a more complicated picture from the semiotic viewpoint than the Akkadian cuneiform.

Alongside Akkadian nouns and verbs, Akkadian prepositions also made their way into Hittite writing and were employed to mark the syntactic role of heterographically written nouns. Thus, the preposition *ŠA* signifies that the following heterographic noun is a genitive modifier or a free-standing genitive, *ANA* stands before a dative or allative argument, etc. Determinatives kept being employed in Hittite texts in order to indicate the semantic class of the adjacent nouns they. Thus, the determinative D (DINGIR) accompanied deity names, e.g., ᴰ*IŠTAR* '(goddess) Ištar', while URU stood before city names as in ᵁᴿᵁ*HATTI* 'Hattusa'.

Mark Weeden in his influential study of heterograms in Hittite texts came to the conclusion that the Akkadian language played a crucial role in Hittite scribal culture. According to Weeden, in the situation of dictating or writing a cuneiform text in Hittite, Hattusa scribes used a special form of professional jargon heavily impacted by Akkadian. Sumerian, on the other hand, was not as important as Akkadian and Sumerograms were either used as logograms to write Hittite lexemes or read in Akkadian (Weeden 2011: 359). Furthermore, Weeden argued that the Hattusa scribes were conscious of the fact that the primary function of their script had been writing in Akkadian and it influenced the way the Hittite texts were written (Weeden 2011: 382).

It is interesting that cuneiform text fragments from Hattusa in Palaic and Luwian also contain some, albeit few, heterographic writings. Unlike Hittite texts, cuneiform renderings of Palaic and Luwian were not shaped by strict orthographic conventions and, therefore, the use of heterographic writings in Palaic and Luwian context depended more on the decision of a particular scribe. Its comparison with the situation in Hittite could yield insights on the role that the heterograms played in Hittite scribal culture and their specific functions. Ultimately, this can shed light on the differences in how Hittite, Palaic, and Luwian were presented in writing.

3. Heterograms in Hittite context

The heterograms in Hittite texts were traditionally thought to have been always pronounced in Hittite. Thus, for example, in the earliest account on the script and grammar of the freshly deciphered Hittite language, Hrozný (1917: vi) claimed that both Sumerograms and Akkadograms were normally read by the Hittites in their own tongue. Although later Friedrich (1940: 2) in his influential *Hethitisches Elementarbuch* did not exclude the possibility that Akadograms could be pronounced in Akkadian, the idea that the heterograms mainly served as labels for Hittite lexemes dominated the field for a long time. The scholars drew upon the fact that many of them carried Hittite phonetic complements, which clearly pointed out to the underlying Hittite forms. Nevertheless, certain inconsistencies in the phonetic complementation of Sumerian and Akkadian forms made their way to Hittitological literature (see, e.g., Hoffner and Melchert 2008: 22). Thus, the complemented heterographic writing *A-BU=YA-an-na-aš-za* in the example below is presumed to correspond to the Hittite form *attaš=miš=naš=za* (or simply *attaš=naš=za* if one presumes the Hittite enclitic possessives to be extinct by the New Hittite period) while the phonetic complements indicate otherwise:

(1)   *A-BU=YA-a=n-na-aš=za*   ᵐ*Mur-ši-li-iš*   4   DUMU.HI.A
     father=POSS.1SG=1PL.ACC=PTCL   Mursili.NOM.SG   4   child.PL

     ᵐ*Hal-pa-šu-lu-pí-in*   ᵐNIR.GÁL-*in*   ᵐ*Ha-at-tu-ši-li-in*
     Halpasulupi.ACC.SG   Muwatalli.ACC.SG   Hattusili.ACC.SG

     ᶠDINGIR.MEŠ-IR-*in=na*   DUMU[(.SAL-*an*)]   *ha-aš-ta*
     Massanauzzi.ACC.SG=&   daughter.ACC.SG   generate.PST.3SG

     'My father Mursili raised us, 4 children: Halpasilipi, Muwatalli, Hattusili, and Massanauzzi the daughter.' (KUB 1.1 obv. i 9-11, see Otten 1981: 4)

The complementation *-an-na-aš-za* on the Akkadographic form suggests that the scribe dictated it in Akkadian, not in Hittite. In a similar fashion, the phonetic complements on *BE-LU-uš-ša-an* in (2) preclude the pronunciation of this string as Hitt. *išhaš=šan* and suggests that the Akkadogram was pronounced in Akkadian.

(2)   *BE-LU-u=š-ša-an*   *BE-LÍ=YA*   *am-me-el*   *A-NA*   *É=YA*
     lord=PTCL   lord=POSS.1SG   1SG.GEN   ALL   house=POSS.1SG

     IGI.HI.A-*wa*   har-*ak*
     eye.NOM.-ACC.PL   hold.IMP.2SG

     'O lord, my lord, keep your eyes on my house.' (HKM 52 25-26, see Hoffner 2009: 195)

Occasional erroneous writings indicate that the Hattusa scribes could sometimes use the Sumerian readings of Sumerograms in dictation; such are, e.g., the forms BA.UŠ instead of BA.ÚŠ 'he died' or ᴳᴵˢGÚ.ZA instead of ᴳᴵˢGU.ZA 'chair'.

Weeden (2011) showed that the evidence for the ambiguous nature of Sumerograms and Akkadograms in Hittite texts was not limited to the examples of inconsistent phonetic complementation or scribal errors. In addition, the influence of Akkadian on the use of heterograms was apparent in those cases where the Akkadographically written verbs in Hittite context featured Akkadian argument structure or semantics nuances that make them distinct from the corresponding Hittite verbs (see Weeden 2011: 356). The Hittite language, in turn, also influenced the Akkadian writing, which could lead, among other things, to the inconsistent use of feminine gender (Hittite lacked the opposition of masculine and feminine genders featuring only common/neuter gender distinction) or to the occasional Hittite word order in heterographic phrases.

The Sumerian and Akkadian languages mostly featured right-branching syntactic constructions, where the dependents (e.g., attributive adjectives or possessor nouns within a noun phrase) normally followed their heads. Thus, in the example below, the nominal modifier KUR ᵁᴿᵁ*HA-AT-TI* 'of the land of Hattusa' is placed after its head noun LUGAL 'king':

(4) LUGAL KUR ᵁᴿᵁ*HA-AT-TI*
     king   land   Hattusa

'The king of the land of Hattusa.'

Hittite, on the other hand, features, as a rule, the inverse left-branching word order. Thus, in (4) the modifiers *kāš* and *tantukešnaš* precede its head noun DUMU-*aš*.

(3) *ka-a-aš*   *ta-an-tu-ke-eš-na-aš* DUMU-*aš*
    DEM.NOM.SG.C mortality.GEN.SG   child.NOM.SG

'This mortal (lit. 'this child of mortality').' (KUB 7.5 obv. i 8, see Hoffner 1987: 272)

It was traditionally assumed that all the deviations from the Hittite left-branching pattern in heterographic writings should be regarded as reflecting the result of graphic inversions aimed at replicating the word order of Sumerian and Akkadian documents (see Hoffner and Melchert 2008: 273). Nevertheless, one can show that at least in some cases the word order in heterographic phrases reflected the word order in underlying spoken utterances.

Hittite syntax featured a number of elements that always take the same syntactic position. Such are, e.g., sentential clitics, which always follow the first word-form in a clause, as in (5). The clitics in question are the quotative particle =*war*, unaccented pronominal forms =*aš* and =*mu*, and the locative particle =*kan*, which all follow the connective =*nu* functioning as the first element of the clause and support for the clitic chain.

(5) *nu=wa-r=a-aš=mu=kán*   BA.ÚŠ
    PTCL=QUOT=3SG.NOM=1SG.DAT=PTCL die.PST.3SG

'And he (my husband) died on me.' (KBo 5.6 rev. iv 5, see Güterbock 1956: 96)

Some non-sentential clitics also adhere to certain syntactic positions. For example, as the intraclausal connective enclitic particle =*(y)a* (assimilating to the preceding consonant and doubling it) normally occupies the position after the first element in the coordinated syntactic constituent. Thus, in the following example =*(y)a* > =*la* is placed after the dependent genitive noun within a noun phrase:

(6) *nam-ma=za zi-ik*   ᵐ*Tar-ga-aš-ša-na-al-li-iš tu-el*   ZI-[*an*   *t*]*u-el*   É=*KA*
    then=PTCL   2SG.NOM Targassanali.NOM.SG   2SG.GEN soul-ACC.SG 2SG.GEN house=POSS.2SG

    tu-el=la   ᴸᵁAMA.A.AT=*kán ma-ah-ha-an uš-ke-ši*
    2SG.GEN=&   housemate=PTCL   when   regard.PRS.2SG

'You, Targassanali, when you have regard for yourself, your house and your loved one(s)…' (KBo 5.4 obv. 24-25)

If the hypothesis that the underlying word order in heterographic writings does not differ from the typical Hittite word order, then the clitic placement in combinations with heterograms should not differ from the ordinary patterns of clitic placement. Nevertheless, in some cases the combinations of sentential and non-sentential clitics and heterographic writings trigger the unusual positions of clitics. Thus, sentential clitics can be hosted by the clause-initial head noun of a complex noun phrase:

(7) ANŠE.KUR.RA=*wa* *ŠA* ᴸᵁ́UŠ.BAR *tu-u-ri-an h*[*ar-ta*?]
    horse=QUOT   GEN weaver   harness.PRF.3SG

'He had harnessed the horse of the weaver.' (KUB 28.88 (=Bo 778) + Bo 6910 rev. 17, Werner 1967: 70)

In the example above, the noun phrase ANŠE.KUR.RA *ŠA* ᴸᵁ́UŠ.BAR occupies the first position within a clause. If the underlying word order in this noun phrase followed the Hittite left-branching pattern, i.e., with the dependent element preceding its head, then the sentential clitics would have attached to the noun modifier, which would have been the first wordform in a clause, rather than to the head noun, which should have taken the position after its dependent. The position of the quotative clitic *=wa* shows that the head noun is indeed the first wordform within a clause: this leads one to conclude that the underlying word order in this case follows the Sumerian/Akkadian syntactic pattern rather than the Hittite one.

Similar examples are found with non-sentential clitics. Thus, in the example below the particle *=(y)a* attaches to the head noun within the noun phrase, which means that this head noun should be the first element within the noun phrase and that its dependent noun follows the head:

(8) *ma-a-an=za* A.ŠÀ.HI.A-*n=a*   *k*[(*a-ru-ú-i-li-in*)] *šar-ra-an-zi*
    if=PTCL   field.PL-ACC.SG=& old.ACC.SG   divide.PRS.3PL

'And if they divide old land…' (KBo 6.2 rev. iii 10-11 + dupl. KBo 6.3 rev. iii 12-13, see Hoffner 1997: 64)

Such placement of *=(y)a* points to the underlying Sumerian/Akkadian word order and speaks against the hypothesis that right-branching syntax in writing in this case can be explained as the result of a graphic inversion. These facts lead one to conclude that the jargon of Hattusa scribes was heavily influenced by the Sumerian or Akkadian syntax. Neither should one exclude the possibility of occasional code-switching (see Kudrinski 2016 for other examples and detailed analysis).

Normally it is assumed that the main function of heterograms in Hittite context was abbreviation. At least in the case of the Sumerograms it is true that most of them would take less space on a tablet than the corresponding Hittite lexemes (see Marquardt 2011: 116-117). It is not, however, clear if the same also applies to the Akkadograms, most of them, just as the Hittite forms, were written with multiple syllabograms.

On the other hand, one can show that in some cases the heterograms did not merely represent the corresponding Hittite forms but were employed to convey some additional layer meaning, which otherwise would have been left unmarked in written transmission, or for the purpose of morphological disambiguation. Thus, the Akkadographic prepositions, which were normally used to mark the syntactic function of heterograms, could occasionally be employed to disambiguate the homonymic forms of Hittite inflected nouns. Thus, in the example below, the Akkadographic preposition *ANA* indicates that the Hittite noun *halpūti* of unknown meaning is employed as the indirect object rather than subject (the nominative and dative form of this noun are homophonous).

(9) *A-NA* [*hal-*]*pu-u-ti ma-a-an*(-)*ha-an-d*[*a*] *ma-a-al-di*
    DAT   ?.DAT.SG   as   chant.PRS.3SG

'As he chants before(?) *halputi*…' (KBo 25.112 obv. ii 14'-15', Neu 1980: 191)

In the next example, the Akkadogram *ANA* helps to determine the case and number of the syllabographically written Hittite noun ᴸᵁ́.ᴹᴱˢ*ašušālaš*. The Hittite case ending *-aš* could denote

nominative/genitive singular and every oblique case in plural. The Akkadogram *ANA* makes it possible for a reader to parse the word-form in the example above quickly and unequivocally.

(10) *ANA* ^{LÚ.MEŠ}*a-šu-ša-a-la-aš*
     DAT   cult functionary.DAT.PL

    'For the *ašušala*-functionaries…' (KBo 17.36 rev. iii 4', see Neu 1980: 123)

In a similar way, heterographic plural markers could sometimes be employed to disambiguate the syllabically written Hittite wordforms for number. One frequently encounters such writings with Hittite neuter nouns exhibiting homonymy in singular and plural nominative forms, e.g. *waštul*^{ḪI.A} 'sins'.

In certain cases, the heterograms were employed for the disambiguation of semantic rather than morphological oppositions. Thus, the writing ^É*arzana-* 'inn, brothel' in some cases apparently corresponded in speech to the free-standing genitive noun phrase *arzanaš*, which was derived via head noun ellipsis from the noun phrase *arzanaš pēr* 'inn, brothel', lit. 'house of porridge' (Yakubovich 2006: 44-45). It means that in the writing ^É*arzana-* the Sumerogram É 'house' was employed to specify the meaning of the noun *arzana-*, which otherwise would simply mean 'porridge'. Unlike other determinatives, which normally classify the lexemes according to their meanings but do not resolve any ambiguity, the Sumerogram É in this case disambiguates the homophones and thus enhances the transparency of written communication.

4. Heterograms in Palaic context

Heterograms are only used in a small number of Palaic text fragments. There were no orthographic conventions regulating the written transmission of Palaic, and therefore the use of heterograms in Palaic context essentially depended on the will of a particular scribe.

The restricted inventory of heterograms used for writing Palaic clearly distinguishes the text fragments in that language from the cuneiform documents in Hittite. Both the number of different heterograms standing for spoken Palaic wordforms and that of different determinatives are reduced; only the determinatives LÚ, MUNUS, URU, and DINGIR are found. This fact should be of no surprise since the Hattusa scribes likely possessed very limited competence in Palaic, which would not allow them to understand the semantics of most lexemes that they encountered in the dictated Palaic texts. Furthermore, it is indicative that all the occurrences of determinatives are attested with either proper nouns (e.g. ^{URU}*Li-ih-zi-i-na*, KBo 32.18 obv. i 14') or lexemes that have direct correspondences in Hittite, which are written with the same determinatives (e.g. ^{LÚ}*mayanza* 'senior', KBo 32.18 rev. iv 10' or ^{MUNUS}*tawananna* '(royal title)', KBo 19.152 obv. i 17' among other occurrences). Both Palaic and Luwian cuneiform texts lack verbs in heterographic transmission.

In a stark contrast with Hittite texts, the Palaic lexemes are never recorded Akkadographically. The number of Sumerograms standing for Palaic forms is also small. Let us take a quick look at each of them.

The Sumerogram A.A could be employed in Hittite context for writing the noun *muwa-* 'power', as well as in rebus writings of proper names with the same phonetic value, e.g. ^m*MIZRA-A.A* for *Mizramuwa* (KBo 4.12 obv. 6). In KUB 35.165, the only Palaic fragment where we encounter A.A, it also has the phonetic value [muwa], being employed in the form A.A-*ntan* standing for *muwantan* 'powerful (acc.)'. It is, therefore possible to conclude that direct phonetic correspondence between the Hittite and Palaic morphemes provided motivation

for the heterographic writing in this case. The scribe could have employed the Sumerogram simply for its phonetic value; it is important that such use of heterograms did not require much knowledge of Palaic.

The use of the Sumerogram ÍD 'river' in Palaic context could also be due to an etymological match between Palaic and Hittite. In Hittite texts, ÍD was also in use with the meaning 'river', while the simplest Hittite word for 'river' was *hapa-*. There are, however, additional Sumerographic writings such as ÍD-*ni* (KUB 17.8 iv 23) and ÍD-*anna* (KUB 53.14 iii 14), where the phonetic complements are rather pointing to something like *hapana-*. There also exist complete phonetic spellings of the latter lexeme, namely *hāppana* KUB 58.50 iii 2, and *hapana* Bo 6980 7 (Kloekhorst 2008: 295). This is reasonably close to the Palaic word *hāpna-* 'river' (ÍD-*an-aš* KBo 19.153 rev.? iii 18', ÍD-*aš* KBo 19.154 10'). Again, the use of the heterogram is mediated by the formal similarity between the Hittite and Palaic lexemes.

The use of the Sumerogram GÍR for Palaic *hašīra-* 'dagger' is more difficult to account for, since there is no known Hittite phonetic reading for this lexeme. Nothing precludes us, however, from advancing a hypothesis that, as in the other two cases, the Luwian and Hittite lexemes for 'dagger' were similar.

In all the attested instances, the Sumerograms employed in Palaic context are supplied with Palaic phonetic complements. In the absence of Akkadian prepositions, which served as grammatical markers attached to heterographic forms in Hittite texts, scribes had no other option than to explicitly mark the endings of Sumerograms.

The Palaic fragment in KBo 19.152 obv. i is duplicated by KBo 19.153 rev.? iii. The former tablet is a Middle Hittite composition while the latter one dates back to the New Hittite period and constitures the text where the most of the heterograms attested in Palaic context are found. This leads one to the conclusion that the use of heterograms in the New Hittite tablet likely reflects the intention of its scribe to spare time while copying the older manuscript. It is also possible that the scribes who wrote down Palaic did not consciously decide to use heterograms but employed them automatically when copying phonetic combinations for which were accustomed to use Sumerograms in Hittite context.

A doubtless example of using a heterogram for abbreviation is Palaic KI.MIN 'ditto' (see, e.g., KUB 35.165 rev. 11'- 13'). This Sumerogram is functionally identical to the repetition symbols in modern stenographic records.

5. Heterograms in Luwian context

Heterograms in Luwian context are much more frequent than in Palaic; most of the longer cuneiform Luwian passages contain at least some heterogams. The inventory of heterograms employed for writing Luwian is also considerably larger, for both determinatives and logograms, and comprises more than a hundred different items. The use of determinatives in cuneiform Luwian appears to be no less frequent than in Hittite written records; this is undoubtedly due to the fact that the Hattusa scribes must have had high proficiency in Luwian, some of them even being native speakers of this language, which enabled them to categorize Luwian lexemes according to their semantic values.

Given the increased frequency of heterographic writings in cuneiform Luwian fragments compared to that in Palaic written records, it appears to be even more significant that the freestanding Akkadograms are fairly rare. Occurrences of Akkadian elements in Luwian context are mostly restricted to mixed writings (DINGIR-*LIM-aš* KUB 35.54 obv. ii, UD-*MI*.HI.A-*ti* KUB 35.45 obv. ii 9). Akkadian prepositions are never used except for the context below:

(11) *a=ta*   *a-[ap-p]a* DINGIR.MEŠ-*an-za* ŠA
    PTCL=3SG.NOM.N back   god.PL-DAT.PL   GEN

    EN SÍSKUR *pár-ra-an* ni-[*iš*]   *a-ú-i-ti*
    lord ritual   before   PROHIB come.PRS.3SG

    'Let it not come again before the gods of the ritual patron' (KUB 35.54 obv. ii 39'-41', Starke 1985: 67)

In this case the Akkadographic preposition ŠA was used in order to point to the syntactic relation within the noun phrase DINGIR.MEŠ-*anza* ŠA EN SÍSKUR 'gods of the ritual patron'. This noun phrase is quite frequent in Luwian fragments, but the possessive relation between the head and dependent is otherwise marked with Luwian phonetic complements or using the Akkadian possessive constructions with the head noun in the *status constructus* form (see, e.g., KUB 35.54 obv. ii 13). The exceptional writing with the preposition ŠA in KUB 35.54 can be due to the end of the line after DINGIR.MEŠ-*anza*, which prompted the scribe to underscore the unity of the noun phrase.

As a consequence of the nearly absent Akkadographic prepositions, most of the Sumerograms employed as logograms in Luwian context bear Luwian phonetic complements, which explicate the endings of the underlying Luwian forms and, thus, to their grammatical properties. Nevertheless, in some cases the phonetic complements could be dropped. This could happen, for example, when a heterogram was written next to a noun modifier endowed with a Luwian phonetic complement:

(12) *a=wa=ti*   *zi-in-za*   ÍD.TUR.MEŠ=*KU-NU* *a-ah-ha* *t*[*i-*…]
    PTCL=QUOT=3SG.DAT.RFL DEM.ACC.PL.C river.little.PL=POSS.2PL   away

    'And away from these little rivers…' (KUB 35.89 17', Starke 1985: 228)

(13) *a=ku-wa*   *a-pí-in-za*   ^{LÚ.MEŠ}NAGAR *ú-w*[*a-ta-an-du*]
    PTCL=QUOT DEM.ACC.PL.C carpenter.PL   bring.IMP.3PL

    'And let them bring those carpenters…' (KBo 29.25 rev. iii? 12', Starke 1985: 226)

Occasional refraining from double case marking within noun phrases was probably a conscientious strategy aimed at writing Luwian in an efficient way and saving time and space on a tablet. One can find similar examples in Old Hittite ritual texts, where phonetic complements could sometimes be omitted on the second coordinated noun within a sequence. These examples above date back to the Old Hittite period when the orthographic conventions for writing Hittite were only developing. It may be not accidental that a similar technique was used for writing Luwian, the language that had no orthographic norm in cuneiform transmission.

(14) ^DUTU-*i*   ^DIŠKUR=*ya* *me-e-mi-iš-ki*
    Sun-god-DAT.SG Storm-god=& speak.IMP.2SG

    'Speak to Sun-god and Storm-god…' (KBo 17.3 rev. iii 5, Neu 1980: 15)

(15) *ta*   LUGAL-*i*   MUNUS.LUGAL=*ya* *ta-ru-e-ni*
    PTCL king-DAT.SG queen=&   tell.PRS.1PL

    'And we tell the king and the queen…' (KBo 34.121 5', Neu 1980: 10)

Phonetic complements on heterograms could also be omitted if the respective wordform was a part of a right-branching possessive construction. The use of such constructions in Luwian text fragments was limited to few combinations (EN SÍSKUR 'ritual patron', LUGAL KUR ^{URU}HATTI 'king of Hattusa', ^DU AN 'Storm-god of heaven').

Occasionally heterographic writings could be used to disambiguate the semantics of the underlying Luwian lexemes. Thus, e.g., the possessive adjective *lūlahi(ya)-* 'of mountain-dwellers' in most cases is written with the determinative LÚ 'man'. In one context, however, this adjective is accompanied by the determinative DINGIR 'deity'. The determinative here plays a crucial role in conveying the meaning of utterances disambiguating the reference of possessive adjectives. This is similar to the way heterograms could sometimes be employed for semantic disambiguation in Hittite texts (see Section 3).

(16) ^D*Lu-u-la-hi-in-za-aš*=tar   *hu-u-up-pa-ra-za*   *ku-in-zi*   *hi-iš-hi-ya-an-ti*
      of.Lulahi.ACC.PL=PTCL   belt.ACC.PL   REL.NOM.PL bind.PRS.3PL

'Those who tie the belts of Lulahi(-gods)…' (KUB 9.31 obv. ii 24, see Starke 1985: 53)

Another instance of semantic disambiguation in Luwian fragments concerns the use of Sumerian plural markers with heterographically written possessive adjectives. In some case forms of Luwian possessive adjectives, the number of possessor could not be expressed phonetically, in which case the Sumerian plural markers could be deployed for grammatical disambiguation (see, e.g. KUB 35.48 obv. ii 15 SISKUR.HI.A-*ši-in* EN-*an* 'patron of the rituals'). In other cases, the disambiguation may be lexical (see, e.g. KUB 35.88 rev. iii 15 IGI.HI.A-*za* GIG-*z*[(*a*)] 'eye disease'). In the last case, the Sumerian plural marker serves to stress the lexical meaning of the noun 'eye(s)', since IGI could also denote certain other lexemes in the Anatolian cuneiform, e.g., the Hittite adverb *menahhanda* 'opposite' (written IGI-*anda*). When IGI conveyed the meaning 'eye', however, it was always written with HI.A in Hittite and Luwian texts.

As in Palaic, the Sumerogram KI.MIN 'ditto' is also found in Luwian passages, which indicates that abbreviation was an important function of heterographic writings in Luwian context.

6. Discussion

Palaic and Luwian cuneiform text fragments feature major differences in the use of heterograms in comparison to Hittite texts. Thus, Sumerograms are employed less frequently in Luwian and even more rarely in Palaic contexts, while Akkadograms are rare in Luwian and completely absent in Palaic.

The restricted use of heterograms in Luwian and Palaic texts could be due to the genre peculiarities of the respective fragments. These are mostly the transcriptions of magical incantations or ritual invocations, which remained untranslated in Hittite texts, because it was crucial for these utterances to preserve their original spoken form in order to exhibit power. The excessive use of heterograms was likely to introduce ambiguity and obscure the original form of the text, which was unacceptable when it concerned magic and ritual practices.

It is the (near-)absence of Akkadograms in non-Hittite cuneiform texts that appears to provide us with the most indicative insight on the differences between heterograms of Sumerian and Akkadian origin. Sumerograms must have been perceived by the Hattusa scribes as belonging to the core inventory of the Mesopotamian cuneiform script and, unlike Akkadograms, being neutral with respect to the language of writing. As argued by Mark Weeden, the Hattusa scribes did not exhibit such proficiency in Sumerian as they did in Akkadian. Therefore, their overall awareness of the connection between Sumerian and Sumerograms must have been significantly lower in Hattusa than the awareness of the connection between Akkadian and Akkadograms, most of which were likely pronounced in Akkadian in the scribal jargon.

Hittite was virtually never written without the use of Akkadograms, because the Hittite writing was the direct descendant of Akkadian scribal culture and developed as a result of the

adaptation of Akkadian orthographic conventions to the need of recording Hittite utterances. It is likely that the process of dictating and especially reading Hittite texts usually involved some traits of Hittite-Akkadian code-switching. Palaic and Luwian, on the other hand, were not connected to the Akkadian scribal culture to the same degree, as they were not literary languages in the context of cuneiform literacy and did not develop stable orthographic conventions. This could be the reason why Palaic and Luwian text fragments, unlike Hittite texts, feature predominantly Sumerograms. Another reason for this could again be the intention to introduce as little ambiguity in the texts as possible. If the use of Akkadograms was in fact connected to the code-switching in scribal jargon, the Hattusa scribes could consciously dispense with this practice when writing magical incantations out of the fear that they would lose their power.

The different frequency of heterograms in Palaic vs. Luwian fragments was likely due to the fact that Hattusa scribes possessed different competence in Palaic vs. Luwian. Palaic was obviously less known if at all understandable to the scribes, while Luwian must have been a native language for many of them. The use of heterogams in Palaic texts was essentially limited to the cases when the meaning of Palaic forms could be extrapolated from Hittite.

Finally, the analysis of heterograms in Palaic and Luwian context gives us some insights regarding the general functions attached to heterographic writings in the scriptoria of Hattusa. Sumerograms in Palaic and Luwian text fragments appear to be used mostly for abbreviation purposes. Nevertheless, a limited number of examples show that they could also serve for grammatical or lexical disambiguation and thus make it easier for a potential reader to process cuneiform writing. More examples of the same kind can be found for heterograms in Hittite context.

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Литература

Дьяконов, И. М. 1967. *Языки древней передней Азии*. М: Наука.

Касьян, А. С., А. В. Шацков. 2013. Палайский язык. В: Ю. Коряков, А. Кибрик (ред.). *Языки мира: реликтовые индоевропейские языки Передней и Центральной Азии*: 97–106. Москва: Академия.

Якубович, И. С. 2013. Лувийский язык. В: Ю. Коряков, А. Кибрик (ред.). *Языки мира: реликтовые индоевропейские языки Передней и Центральной Азии*: 106–130. Москва: Академия.

References

Archi, A. 2010. When did the Hittites begin to write in Hittite? In: Y. Cohen, A. Gilan, J. L. Miller (eds.). *Pax Hethitica: Studies on the Hittites and their Neighbors in Honour of Itamar Singer*: 37–46. Wiesbaden: Harrassowitz.

Bryce, T. 2005. *The Kingdom of the Hittites. New Edition*. Oxford University Press.

Diakonoff, I. M. 1967. *Jazyki drevnej perednej Azii*. Moscow: Nauka.

Friedrich, J. 1940. *Hethitisches Elementarbuch. Erster Teil. Kurzgefasste Grammatik*. Heidelberg: Carl Winter.

Gelb, I. J. 1963. *A Study of Writing*. Chicago: University of Chicago Press.

Güterbock, H. G. 1956. The deeds of Suppiluliuma as told by his son, Mursili II (Continued). *Journal of Cuneiform Studies* 10(3): 75–98.

Hoffner, H. A. 1987. Paskuwatti's ritual against sexual impotence (CTH 406). *Aula Orientalis* 5: 271–287.

Hoffner, H. A. 1997. *The Laws of the Hittites. A Critical Edition*. Leiden, New York, Köln: Brill.

Hoffner, H. A. 2009. *Letters from the Hittite kingdom*. Atlanta: Society of Biblical Literature.

Hoffner, H. A, Melchert H. C. 2008. *A grammar of the Hittite language*. Winona Lake, Indiana: Eisenbrauns.

Hrozný, B. 1917. *Die Sprache der Hethiter: ihr Bau und ihre Zugehörigkeit zum indogermanischen Sprachstamm. Ein Entzifferungsversuch*. Leipzig: J. C. Hinrichs'sche Buchhandlung.

Kassian, A. S., Shatskov, A. V. 2013. Palajskij jazyk. In: J. Kor'akov, A. Kibrik (eds.). *Jazyki mira: Reliktovye indo-jevropeyskie jazyki Perednej i Centralnoj Azii*: 97–106. Moscow: Academia.

Kloekhorst, A. 2008. *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden, Boston: Brill.

Kudrinski, M. 2016. Hittite heterographic writings and their interpretation. The evidence of sentential clitics. *Indogermanische Forschungen* 12: 159–175.

Kudrinski, M., Yakubovich, I. S. 2016. Sumerograms and Akkadograms in Hittite: Ideograms, Logograms, Allograms or Heterograms? *Altorientalische Forschungen* 43(1-2): 53–66.

Marquardt, H. 2011. *Hethitische Logogramme. Funktion und Verwendung*. Wiesbaden: Harrassowitz.

Neu, E. 1980. *Althethitische Ritualtexte in Umschrift*. Wiesbaden: Harrassowitz.

Otten, H. 1981. *Die Apologie Hattusilis III. Das Bild der Überlieferung*. Wiesbaden: Harrassowitz.

Starke, F. 1985. *Die keilschrift-Luwischen Texte in Umschrift*. Wiesbaden: Harrassowitz.

van den Hout, T. P. J. 2009. Reflections on the origins and development of the Hittite tablet collections in Hattuša and their consequences for the rise of Hittite literacy. In: Franca Pecchioli Daddi, Giulia Torri & Carlo Corti (eds.). *Central North-Anatolia in the Hittite Period. New Perspectives in Light of Recent Research. Acts of the international conference held at the University of Florence (7–9 February 2007)*: 71–96. Rome: Herder.

Weeden, M. 2011. *Hittite Logograms and Hittite Scholarship*. Wiesbaden: Harrassowitz.

Werner, R. 1967. *Hethitische Gerichtsprotokolle*. Wiesbaden: Harrassowitz.

Yakubovich, I. S. 2006. The free-standing genitive and hypostasis in Hittite. *Journal of Near Eastern Studies* 65(1): 39–49.

Yakubovich, I. S. 2013. Luvijskij jazyk. In: J. Kor'akov, A. Kibrik (eds.). *Jazyki mira: Reliktovye indo-jevropeyskie jazyki Perednej i Centralnoj Azii: 106–130*. Moscow: Academia.

Максим Кудринский. Гетерограммы в хеттских, палайских и лувийских текстах

Клинопись была основным средством письменной коммуникации в царстве Хаттусы и использовалась для записи текстов на хеттском и других языках, которые функционировали в его пределах. Особенностью данного письма являлось то, что, помимо фонетических написаний, в тексте использовались также шумерские и аккадские лексемы, которые обычно (хотя и не всегда) обозначали соответствующие по смыслу лексемы языка текста. Такие единицы письма мы будем называть гетерограммами. Данная статья посвящена сравнению клинописных текстов на хеттском, лувийском и палайском языках; главным образом, нас будет интересовать частота употребления и функции гетерографических написаний.

Ключевые слова: клинопись, хеттский язык, лувийский язык, палайский язык, гетерограммы