

Linguistic interpretations of the spelling of Hittite dat.-loc.sg. and all.sg. forms

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It is with great pleasure that I dedicate this small study¹ into the linguistic interpretation of some Hittite spelling phenomena to Theo van den Hout. I consider myself lucky that I have had the opportunity to study with him during the last two years that he worked as professor of Hittitology at the University of Amsterdam, and greatly appreciate the genuine kindness, generosity and helpfulness that he has shown to me ever since.

1. Phonetic spellings of dat.-loc.sg. forms

Hittite dative-locative singular forms contain crucial information about the place of their accent. When the vowel of the ending is spelled plene, °*Ci-i*, this vowel is long and accented, e.g. *ták-ni-i* ‘earth’ = /təkñí/, *ki-iš(-ša)-ri-i* ‘hand’ = /k̄i:s:rí/, *ḫa-aš-ši-i* ‘fire-place’ = /has:í/, and *iš-ši-i* ‘mouth’ = /is:í/.² But when the vowel of the ending is spelled non-plene, °*Ci*, this vowel is short and unaccented, /-i/, which means that the stem of the word must have been accented, e.g. *pa-aḫ-ḫu-e-ni* ‘fire’ = /pah:˘éni/, *me-e-ḫu-ni* ‘time’ = /mēhoni/ and *pé(-e)-ru-ni* ‘stone’ = /péruni/.³ Such a distinction can be found in other cases as well (e.g. gen.sg. accented °*Ca-a-aš* /-Cās/ vs. unaccented °*Ca-aš* /-Cas/), but in these cases the difference in spelling is lost after the Old Hittite period.⁴ This contrasts with the dat.-loc.sg. case, in which the distinction between the two allomorphs of the ending is found in texts of all periods.⁵

There is one environment in which the difference between accented /-í/ and unaccented /-i/ in the dat.-loc.sg. case cannot be established, however, and that is when the form is followed by enclitics: in this position the vowel of the ending virtually always shows non-plene spelling,⁶ also if it is spelled plene in isolation. For instance, the dat.-loc.sg. form of ‘hand’ always shows plene spelling of its ending when it stands in isolation, *ki-iš(-ša)-ri-i*, but not when enclitics are attached to it: e.g. *ki-iš-ša-ri=ma* and *ki-iš-ri-i=t-ti* (not ***ki-iš-ri-i=t-ti*).⁷ Likewise, for instance, *ḫa-aš-ši-i* vs. *ḫa-aš-ši=ja* ‘fireplace’.⁸ This does not mean that in these forms the ending was unaccented: I would still analyze e.g. *ḫašši=ja* ‘and into the fire-place’

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² Melchert (1994: 102, 131, 185) interprets the plene spelled dat.-loc.sg. ending °*Ci-i* as an accented but phonologically short vowel, /-í/, which, because it stands in an open syllable, was allophonically lengthened (hence the plene spelling). To my mind, the length is phonological, however, since it contrasts with word-final short accented /-í/, which can be found in words like *ak-ku-uš-ki(-i)* /ək˘:sk:í/ ‘keep drinking!’ < **h₁g˘^{wh}-ské* and *az-zi-ik-ki(-i)* /ət:sik:í/ ‘keep eating!’ < **h₁d-ské* (Kloekhorst 2014: 464-5). This short accented /-í/ is sometimes spelled plene (especially in older texts), but usually not, and is the outcome of PIE word-final *-é (Kloekhorst 2014: 464-5). The long accented /-í/ is always spelled plene, however, in texts from all periods, and is the outcome of PIE word-final *-éi, e.g. *ták-ni-i* < **d̥^hg̃-m-éi*, *ki-iš(-ša)-ri-i* < **g̃^hs-r-éi*, etc. (Kloekhorst 2014: 445, following an idea by Melchert 2011, but cf. already Eichner 1973: 77, Oettinger 1976: 31).

³ The fact that the plene spelled dat.-loc.sg. ending bears the accent whereas the non-plene spelled one does not, has been recognized early on (e.g. Eichner 1973: 77, Oettinger 1976: 31).

Note that in *paḫḫueni*, *mēḫuni* and *pēruni* the exact place of the accent in the stem (whether it falls on the first or second syllable) can be decided on the basis of the spelling of the vowels of the stem, but not on the basis of the ending: this only shows that it was unaccented, not more.

⁴ Cf. Kloekhorst 2014: 316-20 for an extensive description and analysis of this phenomenon.

⁵ Cf. Kloekhorst 2014: 444-60.

⁶ I only know of a few exceptions to this rule: [*ḫa-aš-š*]i-i=kán (KBo 39.73 obv.⁷ 4), *ḫa-aš-ši-i=ma=kan* (KUB 1.13 ii 26), ^{Gl}*pád-da-ni-i=ma* (KUB 9.6 i 12), ^{Gl}*pád-da-ni-i=ma-a=š-ša-an* (ibid. 14), [*u*]d-da-ni-i=ma (KUB 18.6 i 3).

⁷ Cf. Kloekhorst 2014: 448¹⁷⁵⁵ for examples.

⁸ Cf. Kloekhorst 2014: 446¹⁷⁴⁹ for attestation places.

as being accented on the ending of the noun.⁹ However, it is well possible that before an enclitic the long vowel of the accented ending was shortened: e.g. /has:í=ia/ vs. isolated /has:í/. Nevertheless, if a certain noun is in its dat.-loc.sg. form only attested with clitics attached to it, we cannot determine whether it was accented on its ending or on its stem: both the accented and the unaccented ending would be spelled non-plene before the clitic.

2 Sumerographic spellings of dat.-loc.sg. forms

In my 2014 book on accent in Hittite, I have briefly discussed the idea that also when Hittite dat.-loc.sg. forms are spelled as a sumerogram + phonetic complement, they reveal information on their accentuation.¹⁰ This follows from the observation that when a word in its full phonetic spelling shows plene spelling of the vowel of the dat.-loc.sg. ending, °*Ci-i*, this word is sumerographically in principle always spelled SUMEROGRAM-*i* and not **SUMEROGRAM-*Ci*. Compare, for instance, the following cases:¹¹

<i>ták-ni-i</i> ‘earth’	=	KI- <i>i</i>	(not **KI- <i>ni</i>);
<i>ki-iš(-ša)-ri-i</i> ‘hand’	=	ŠU- <i>i</i>	(not **ŠU- <i>ri</i>);
<i>iš-ši-i</i> ‘mouth’	=	KAxU- <i>i</i>	(not **KAxU- <i>ši</i>);
<i>iš-ḫi-i</i> ‘lord’	=	EN- <i>i</i>	(not **EN- <i>ḫi</i>).

The absence of spellings of the type SUMEROGRAM-*Ci* for these words is relevant, since such spellings would certainly not have been impossible. They are in fact well attested for other words, e.g. ^dIM-*ni* ‘Stormgod’, LÍL-*ri* ‘field’, UN-*ši* ‘human being’.¹² This means that the choice for writing e.g. KI-*i* instead of **KI-*ni*, or ŠU-*i* instead of **ŠU-*ri* was a deliberate one. A choice that directly correlates with the plene spelling of the dat.-loc.sg. ending in their phonetically spelled counterparts. In my 2014 book I did not, however, treat the entire material regarding this claim, and I will therefore present it here.

2.1

The meaningful correlation between the spelling SUMEROGRAM-*i* and the full phonetic spelling °*Ci-i* is supported by the fact that spellings of the type SUMEROGRAM-*Ci* in fact regularly correspond to full phonetic spellings in which the vowel of the dat.-loc.sg. ending is spelled non-plene, cf. the following examples:

<i>an-ni</i> ‘mother’	=	AMA- <i>ni</i> (not **AMA- <i>i</i>)
<i>an-tu-uḫ-ši</i> ‘human being’	=	UN- <i>ši</i> (not **UN- <i>i</i>)
<i>aš-šu(-ú)-li</i> ‘well-being’	=	SILIM- <i>li</i> (not **SILIM- <i>i</i>)
<i>ḫal-ma-aš-šu-it-ti</i> ‘throne’	=	^(d/GIŠ) DAG- <i>ti</i> (not ** ^(d) DAG- <i>i</i>)
^{URU} <i>Ḫa-at-tu-ši</i>	=	^{URU} GIDRU- <i>ši</i> and ^{URU} KÙ.BABBAR- <i>ši</i> (not ** ^{URU} GIDRU- <i>i</i> or ** ^{URU} KÙ.BABBAR- <i>i</i>)
<i>iš-ta-ma-ni</i> ‘ear’	=	^{UZU} GEŠTU- <i>ni</i> (not ** ^{UZU} GEŠTU- <i>i</i>)

⁹ If it had been accented on the first syllable of the word, we would expect plene spelling of the *a*, like in nom.sg. *ḫa-a-aš-ša* /ḫās:a/ and acc.sg. *ḫa-a-aš-ša-an* /ḫās:an/, cf. Kloekhorst 2014: 261-3. Accentuation of the particle =*ja* ‘and’ is very unlikely, since it is a clitic.

¹⁰ Note that this does not hold for spellings in which sumerograms are not phonetically complemented but are preceded by the Akkadian prepositions ANA and INA, which are used to sumerographically render Hittite dat.-loc. forms as well. These spellings do not give any linguistic information about the phonetics and/or phonology of the underlying Hittite forms.

¹¹ Cf. Kloekhorst 2014: 445-9 for these cases, with attestation places of the forms mentioned.

¹² I know of no examples of a spelling SUMEROGRAM-*ḫi* that denotes a dat.-loc.sg. form, but this is undoubtedly due to chance: we do have spellings like BAL-*ḫi* ‘I libate’, SUM-*ḫi* ‘I give’ and ḪUŠ-*ḫi* ‘he fears’, which show that there was no graphic constraint against a spelling SUMEROGRAM-*ḫi*.

<i>iš-ta-na(-a)-ni</i> ‘altar’	= (GIŠ)ZAG.GAR.RA- <i>ni</i> (not *(GIŠ)ZAG.GAR.RA- <i>i</i>)
<i>kar-di-mi-at-ti</i> ‘anger’	= TUKU.TUKU- <i>ti</i> (not **TUKU.TUKU- <i>i</i>)
<i>gi-im-ri</i> (<i>ge-em-ri</i> ?) ‘field’	= LÍL- <i>ri</i> (not **LÍL- <i>i</i>)
<i>pal-ši</i> ‘road’	= KASKAL- <i>ši</i> (not **KASKAL- <i>i</i>)
^(d) <i>ši(-i)-ú-ni</i> ‘god’	= DINGIR ^(LIM) - <i>ni</i> (not **DINGIR ^(LIM) - <i>i</i>)
<i>ši-ua-at-ti</i> ‘day’	= UD ^(KAM) - <i>ti</i> (not **UD ^(KAM) - <i>i</i>)
<i>ti-i-e-eš-ni</i> ‘forest’	= GIŠTIR- <i>ni</i> (not **GIŠTIR- <i>i</i>)
<i>ua-ar-ua-la-ni</i> ‘seed, progeny’	= NUMUN- <i>ni</i> (not **NUMUN- <i>i</i>)
<i>ú-i-te(-e)-ni</i> ‘water’	= A- <i>ni</i> (not **A- <i>i</i>);
<i>ú(-i)-it-ti</i> ‘year’	= MU ^{KAM} - <i>ti</i> (not **MU ^{KAM} - <i>i</i>) ¹³

2.2

It cannot be denied, however, that there are some sumerograms that show dat.-loc.sg. forms of both the shape SUMEROGRAM-*i* and the shape SUMEROGRAM-*Ci*, and which would therefore potentially undermine this distribution. Upon closer scrutiny, almost all of these can be explained.

KI: This sumerogram shows not only a dat.-loc.sg. KI-*i*, but also a form KI-*pí*. As we have seen above as well, KI-*i* can be equated with *ták-ni-i* ‘earth’. The form KI-*pí*, however, is generally seen as representing the form *da-ga-an-zi-pí* ‘(personified) earth’. So in this case the two different sumerographic spellings represent two different underlying words.

GE₆: This sumerogram occurs with the dat.-loc.sg. forms GE₆-*i* and GE₆-*ti*. The former is generally thought to represent *da-an-ku-ua-i* ‘black, dark’ (on which see further below), whereas the latter is equated with *iš-pa-an-ti* ‘night’.

In other cases, the situation is less clear.

AN: Its dat.-loc.sg. form occurs a few times as AN-*ši*, which clearly represents *ne(-e)-pí-ši* ‘heaven’. However, once we find AN-*i* as well,¹⁴ namely in KUB 29.11 ii (12) *ták-ku* ^d*SÎN* SI GÜB-ŠÚ UGU AN-*i* *ne-ja-an* ... ‘if the moon’s left horn is turned upwards to heaven, ...’. To my mind, this form must be a mistake. It occurs in a line that stands between two lines where at the same spot KI-*i* ‘earth’ is used: *ibid.* (11) *ták-ku* ^d*SÎN* SI ZAG-ŠÚ GAM KI-*i* *ne-ja-an* ... ‘if the moon’s right horn is turned downwards to the earth, ...’; and *ibid.* (13) *ták-ku* ^d*SÎN* SI GÜB-ŠÚ GAM KI-*i* *ne-ja-an* ... ‘if the moon’s left horn is turned downwards to the earth, ...’. I therefore assume that under the influence of KI-*i* the scribe erroneously wrote AN-*i* instead of AN-*ši*.¹⁵

DINGIR.MAH: The same situation may apply to this sumerogram. Its normal dat.-loc.sg. form is DINGIR.MAH-*ni* (attested dozens of times, cf. Van Gessel 1998: 720-1), which can be equated with the phonetically spelled form [^d*Ha-an-na-h*]a-an-*ni* (KUB 33.59 iv 8) ‘to Hanaḥanna’. Twice do we find the spelling DINGIR.MAH-*i* (KBo

¹³ In view of MU-*an-ti* (KBo 12.2 obv. 1 (OS)) it cannot be excluded that some of the attestations of MU.KAM-*ti* represent /uit:ánti/.

¹⁴ Note that some other seeming occurrences of AN-*i* are interpreted by CHD (L-N: 448) as an akkadographic form AN-*I*, which is a variant of AN-*E*, the sumerographic spelling of Akkadian ŠA-ME-E ‘of heaven’.

¹⁵ Note that in *ibid.* 9 the full phonetic spelling of ‘heaven’ is used: *ták-ku* ^d*SÎN* ZAG-aš SI-ŠU ša-ra-a ne-pí-ši *ne-i-ja-an* ‘if the moon’s right horn is turned upwards to heaven’.

14.21 i 78; FHG 2 iii 21), however. The exact rationale behind these two forms escapes me, but it is relevant that on both tablets on which these forms occur, we also find the spelling DINGIR.MAH-*ni* (KBo 14.21 i 59, ii 18, 53, iii 47; FHG 2 iii 6). I therefore think that these two attestations of DINGIR.MAH-*i*, which compete with more than one hundred attestations of DINGIR.MAH-*ni*, do not alter the general picture that there is a distribution between SUMEROGRAM-*Ci* and SUMEROGRAM-*i*.

GUNNI: The dat.-loc.sg. form GUNNI-*i* occurs often, and must be equated with *ha-aš-ši-i*, which is always spelled with plene spelling of the vowel of the ending. However, a form GUNNI-*ši* is attested as well, which would contradict our findings thus far. As I also argued in Kloekhorst 2014: 447¹⁷⁵³, the form GUNNI-*ši* occurs on one tablet only, KUB 20.45, where GUNNI-*i* can be found as well. We may therefore see GUNNI-*ši* as a feature of this specific tablet, which does not compromise the general picture about the distribution between SUMEROGRAM-*Ci* and SUMEROGRAM-*i*.

IZI: This sumerogram also occurs with two dat.-loc.sg. forms. The form IZI-*ni* (KBo 6.5 iv 16, Bo 3640 iii^(?) 10) can be directly equated with *pa-aḥ-ḥu-e-ni* ‘fire’ (note that IZI-*ni* from KBo 6.5 iv 16 in fact duplicates *pa-aḥ-ḥu-e-ni* (KBo 6.3 ii 54)). However, IZI-*i* also occurs (KBo 11.32 obv. 9, 13, rev. 49, KBo 13.126 rev. 11, KUB 39.70 i 14, KUB 58.98 ii 2), the interpretation of which is less clear to me. Interestingly, according to CHD (Š: 258), one of the attestations of IZI-*i* has to be interpreted as <GU>NNI-*i* ‘fire-place’ (note that IZI = NE, and that GUNNI consists of the signs KI.NE; CHD’s reading of IZI-*i* as <GU>NNI-*i* therefore equals <KI.>NE-*i*):

KBo 11.32 rev. 48-50:

- (48) ... SILA₄ GE₆=*kán BAL¹-ti*
 (49) <GU>NNI-*i* (text: IZI-*i*) *pa[-r]a[-a KI]N[?]-an-zi MUN-an-zi*
 (50) *ša-ri-an-[z]i* ...

‘He offers a black lamb. They ‘fully [pre]pare(?)’ (the goat meat?) at/on the brazier(!) (text: in/at the fire). They salt (it) and truss/sew (it) up” (translation CHD Š: 258).

CHD’s emendation of IZI-*i* to <GU>NNI-*i*, which is based on semantic considerations, is formally attractive as well. As we have seen above, GUNNI-*i* is the sumerographic spelling of *ha-aš-ši-i* ‘fire-place’, in which the spelling of the ending as -*i* is regular.

In the text in which this example occurs, KBo 11.32, we find two more attestations of IZI-*i*, namely in obv. 9 and 13. To my mind, in these contexts, a translation ‘in/onto the fire-place’ would be apt as well:

KBo 11.32 obv. 8-9:

- (8) [E]GIR=ŠÚ^{DUG} KU-KU-BI^{H¹.A} *pa-ra-a šar-ni-kán-zi*
 (9) GUNNI-an=*kán ḥu-u-i-ja-an-zi* Ì=*kán^{GIŠ} te-pa-za IZI-i la-ḥu<-i>*

‘Later they replace the vessels, and they walk around the fire-place. Out of a ^{GIŠ}*tepa-* he pours oil on the fire / onto the fire-place(?)’.

KBo 11.32 obv. 12-13

- (12) 2 NINDA.GUR₄.RA *ha-zi-la[-aš] pár-ši-la-aš pár-ši-ja*
 (13) Ì=*kán me-ma-al IZI-i šu-uh-ḥa-i*
 (14) EGIR=ŠÚ^{DUG} KU-KU-BI^{H¹.A} *pa-ra-a šar-ni-in-kán-zi*
 (15) GUNNI=*kán ḥu-u-i-an-zi*

‘He breaks two thick-breads of *hazila*-weight into crumbs, and pours oil (and strews) the meal into the fire / onto the fire-place(?). After that they replace the vessels and walk around the fire-place.’

Does this mean that we may read IZI-*i* as an alternative way to sumerographically render *ha-aš-ši-i* ‘fire-place’? In fact, in all attestations in which IZI-*i* occurs, a translation ‘onto the fire-place’ would be equally fitting as ‘into/on the fire’,¹⁶ so I am personally inclined to think so.

^dLAMMA: This sumerogram, which denotes the concept of the ‘Tutelary Deity’ (see McMahon 1991: 3 for this translation), occurs with two dat.-loc.sg. forms, namely ^dLAMMA-*ri* and ^dLAMMA-*i*.¹⁷ As McMahon (1991: 4-5) makes clear, the Hittite pantheon knew many different tutelary deities, and it is therefore not always known to which deity a given attestation of ^dLAMMA refers. The dat.-loc.sg. form ^dLAMMA-*ri* is on the basis of its phonetic complement generally thought to refer to Inar(a) (McMahon 1991: 2), and this form may therefore be interpreted as representing an underlying ^dI-na-*ri*.¹⁸ The absence of plene spelling of the vowel of the ending in the latter form matches the sumerographic spelling with ^oCi. The interpretation of the form ^dLAMMA-*i* is less clear: in the light of the existence of many different tutelary deities, this form need not refer to Inar(a), but may represent another deity. The existence of ^dLAMMA-*ri* next to ^dLAMMA-*i* does not therefore invalidate the general picture on the distribution between the spellings SUMEROGRAM-Ci and SUMEROGRAM-i.¹⁹

MUNUS: The two dat.-loc.sg. forms of this sumerogram, MUNUS-*ni* and MUNUS-*i*, will be treated below.

ZAG: This sumerogram occurs dozens of times with the dat.-loc.sg. form ZAG-*ni*, and this form is generally equated with *ku-un-ni* ‘right’. In one text we find the form ZAG-*i* (KUB 59.29 ii 12), however, which contradicts the spelling ZAG-*ni*. Nevertheless, since the context in which ZAG-*i* occurs is rather broken, it is not clear to me whether ZAG should here be read as representing *kunna*- ‘right’, or denotes *erḫ*- / *arḫ*- / *arah*- ‘boundary, limit’ (or is perhaps ^{UZU}ZAG ‘shoulder’?).

We see that the existence of some cases in which a single sumerogram seems to have both a dat.-loc.sg. form spelled SUMEROGRAM-*i* and a form spelled SUMEROGRAM-Ci does not seriously undermine the assumption that the difference between these two types of spellings is

¹⁶ KUB 58.98 ii (2) [NINDA.GUR₄.RA KU₇ *pár-ši-ja n=*]a-an=kán IZI-*i* pé-eš-ši-ja-zi ‘He breaks a sweet bread and throws it into the fire / into the fire-place(?)’; KUB 39.70 i (11) [... nu A-N]A EN.SISKUR (12) [ZA.ḪUM ŠA] KAŠ ar-ḫa da-a-i nu=kán ^{GIS}lu[-u-e-e]š-ni (13) [an-da ši-ip-pa-an-]ti n=a-at=kán ki-iš-ta-nu-zi n=a[-at š]a-ra-a (14) [da-a-i n=a-]at=kán IZI-*i* iš-ḫu-ua-a-i ‘He takes the pitcher of beer from the patient and pours (it) onto the incense and extinguishes it. He lifts it (sc. the incense) up and throws it into the fire / onto the fire-place(?)’; HT 5, (6) [... n=a-a]t=kán IZI-*i* iš-ḫu-u-ua-a-iz-zi ‘He will pour it into the fire / onto the fire-place(?)’; KBo 13.126 rev. (10) ma-a-an=za DINGIR^{MES} MUNUS^{MES} ... (11) IZI-*i* pé-ja-an-te-eš ma-a-an=za UDUN ḫar-š[a-aš ...] (12) ... pé-e-ja-an-te-eš₁₇ nu-uš-ma-aš-kán x[...] (13) IZI-na-az ḫu-u-it-ti-ja[-an-ni-i]š-ga-m[i²] ‘Whether you female deities have been sent to the fire / to the fire-place, or have been sent to the bread-oven ... I will be attracting you back from the fire’. Especially in the latter context, where IZI-*i* contrasts with UDUN ḫarš[aš] ‘bread-oven’, a meaning ‘fire-place’ seems well in place.

¹⁷ Cf. Van Gessel 1998: 687 for attestations.

¹⁸ Cf. Van Gessel 1998: 188 for attestations.

¹⁹ In fact, this distribution may now be used to argue that the attestations of ^dLAMMA-*i* do not represent a form of Inar(a), but must denote the name of a different deity.

linguistically relevant and correlates with the spelling of the ending in the corresponding fully phonetically spelled forms.

2.3

There is, however, one extra factor that we need to take into account. As we have seen above already, the sumerographic spelling GE₆-*i* corresponds to the full phonetic spelling *da-an-ku-ya-i* ‘dark’, and not to a form containing a plene spelled ending -*Ci-i*. Likewise, I have already remarked in Kloekhorst 2014: 459¹⁸¹⁰ that the sumerographic spelling LUGAL-*i* probably represents an underlying phonetic spelling **ḥa-aš-šu-i*,²⁰ and not a spelling ending in -*Ci-i* (cf. also the few attestations LUGAL-*u-i*).

The same phenomenon can be found in the following words:

‘evil’: the dat.-loc.sg. form 𒄩UL-*i* belongs to the *u*-stem adjective *idālu-* / *idālū-*, and represents the full phonetic form *i-da-a-la-u-i* or *i-da-a-lu-i*, which ends in ^o*u-i* (cf. also the sumerographic spellings 𒄩UL-*u-i* and 𒄩UL-lu(-*u*)-*i*).

‘eye’: the dat.-loc.sg. form IGI^{HL.A}-*i* (KUB 33.98 iii 19) belongs with *šākuṣa-*, so we can predict that its underlying form must have been **ša-a-ku-i*, and thus ended in ^o*u-i*.

‘ox’: the dat.-loc.sg. form GU₄-*i* belongs to a *u*-stem noun (cf. nom.sg. GU₄-*uš*, acc.sg. GU₄-*un*; the further phonetic shape of the word is unknown, however),²¹ so that its underlying form must have ended in ^o*u-i*.


‘sun god’: the dat.-loc.sg. form ^dUTU-*i* belongs to the *u*-stem name ^d*Aštanu-* / ^d*Eštanu-* / ^d*Ištanu-* (cf. nom.sg. ^dUTU-*uš*, acc.sg. ^dUTU-*un*), so that its underlying form must have ended in ^o*u-i*: *^d*Aš/Eš/Iš-ta-nu-i*.

‘table’: the dat.-loc.sg. form GIŠ^{BANŠUR}-*i* belongs to a *u*-stem word (nom.sg. GIŠ^{BANŠUR}-*uš*, acc.sg. GIŠ^{BANŠUR}-*un*), so its underlying form must have ended ^o*u-i* (the further phonetic shape of the word is unclear, however).

‘thickbread’: the dat.-loc.sg. form NINDA.GUR₄.RA-*i* (KBo 30.109 obv. 7) belongs to the noun *ḥarši-* / *ḥaršai-*, and represents the full phonetic form *ḥar-ša(-a)-i*, which ends in ^o*a-i*.

‘wood’: the dat.-loc.sg. form GIŠ-*i* belongs to the *u*-stem noun *tāru-*, and represents the full phonetic form *ta-ru-ú-i* (cf. also the spelling GIŠ-*ru-i*), which ends in ^o*u-i*.

The conclusion that must be drawn on the basis of all these forms is that the sumerographic spelling SUMEROGRAM-*i* did not only represent full phonetic spellings ending in ^o*Ci-i*, but also spellings ending in ^o*a-i* and ^o*u-i*. In other words, in all cases in which a word ended in the sign -*i* preceded by a (C)V-sign, ^o(C)V-*i*, the corresponding sumerographic spelling is SUMEROGRAM-*i*.

²⁰ Note that e.g. Puhvel (HED H: 240) states that this word is possibly phonetically attested as “[*ḥa-as-su-u-ú-i*]” in KUB 7.7, 8. However, Puhvel righteously warns that this word possibly could be acephalic as well, and then would not belong to the paradigm of ‘king’. And indeed, when looking at the photo of this tablet (, available through Hetkonk), we see that to the left of the sign 𒄩A traces of a broken sign are present and that there clearly is no word space between these traces and 𒄩A. We should therefore transliterate the form as [...]*x-ḥa-aš-šu-u-ú-i*, which makes its identification as the phonetically spelled dat.-loc.sg. form ‘king’ virtually impossible.

²¹ Cf. Kloekhorst 2008: 507-8, where it was hypothesized that the word underlying ‘ox’ was **kuṣāu-*.

This phenomenon muddles the correlation between the spelling SUMEROGRAM-*i* and the place of the accent. For instance, there can be no doubt that GE₆-*i* = *da-an-ku-ya-i*, HUL-*i* = *i-da-a-la-u-i*, IGI^{H.A.}-*i* = **ša-a-ku-i*, and NINDA.GUR₄.RA-*i* = *har-ša(-a)-i* were accented on their stems: /tánk^wāi/,²² /itālaui/, /sāk^wi/, and /hársāi/,²³ respectively.²⁴ This means that the spelling SUMEROGRAM-*i* does not always indicate that the underlying form was accented on its ending: this is only the case when the corresponding full phonetic form ended in -*Ci-i*. If the underlying form ended in °*a-i* (as in ablauting *i*-stems) or °*u-i* (as in *u*- and *ya*-stems), the accent need not have been on the ending.

2.4

All in all, it seems justified to maintain my 2014 idea that the spelling of Hittite dat.-loc.sg. forms as a sumerogram + phonetic complement contains linguistically relevant information. When in its full phonetic spelling a dat.-loc.sg. form shows the plene spelled ending °*Ci-i* (which therefore must have been accented, /-ī/), the corresponding sumerographic spelling is in principle always SUMEROGRAM-*i*. By contrast, when in its full phonetic spelling a dat.-loc.sg. form shows the non-plene spelled ending °*Ci* (which therefore must have been unaccented, /-i/), indicating that the word must have been accented on its stem), the corresponding sumerographic spelling is in principle always SUMEROGRAM-*Ci*. Note that this does not mean that the sumerographic spelling SUMEROGRAM-*i* automatically corresponds to a full phonetic spelling ending in °*Ci-i*: it can also correspond to words ending in °*a-i* or °*u-i*, and these need not have been accented on their ending.

In fact, it has now become clear that when attaching a phonetic complement to a sumerogram, the scribe in principle always uses the last sign of the fully phonetically spelled word. This implies that the scribe always had the Hittite phonetic spelling in the back of his mind, also when writing sumerographically.

3. The phonetics of some Hittite dat.-loc.sg. forms

A combination of the insights discussed in sections 1 and 2 provides us with a powerful tool for determining the place of the accent in Hittite dat.-loc.sg. forms, also when they are rarely attested or only found in sumerographic spellings. It must be emphasized that this is not a trivial matter. Within the Hittite nominal system in principle all oblique cases (except the locative, if this case has a separate form)²⁵ have the same accentuation.²⁶ This means that if one can determine the place of the accent in the dat.-loc.sg. form of a certain word, one can predict the accentuation of all other oblique cases of that word as well. Therefore, all new knowledge that can be gained on the accentuation of the dat.-loc.sg. form of a specific word can have an impact on our knowledge of the phonological shape of the entire paradigm of that word.

3.1

²² Kloekhorst 2014: 395-6, 690.

²³ Cf. Kloekhorst 2014: 395.

²⁴ Which in all likelihood goes for LUGAL-*i* = **ha-aš-šu-i* as well: /hás:ui/, cf. Kloekhorst 2014: 459¹⁸¹⁰.

²⁵ In Kloekhorst fthc.a, I have argued that in the paradigm for ‘hand’ the instrumental also form shows an accentuation that differs from the one found in the dat.-loc.sg. form: instr. *ki-iš-ša-ri-ta* = /kís:árt/ vs. dat.-loc.sg. *ki-iš(-ša)-ri-i* = /kís:rí/. I regard this as a potential original situation (PIE instr. **ǵ^hs-ér-t* vs. dat.sg. **ǵ^hs-r-éi*), and one should therefore be careful not to project the accentuation of a given dat.-loc.sg. form too easily onto its corresponding instr. form.

²⁶ In fact, this principle goes for the nominal systems of all Indo-European languages, and is a feature inherited from Proto-Indo-European.

In my 2014 book, I already treated several examples for which our new knowledge on the interpretation of the spelling of dat.-loc.sg. forms provides interesting new linguistic information. I will briefly summarize a few important cases here.²⁷

‘heart’: *kar-ti-i* (~ ŠÀ-i) = /kərtí/ < PIE dat.sg. **krd-éi*.

‘moment’: *lam-ni-i*, *la-am-ni-i* = /lamní/, contrasting with ŠUM-ni ‘name’ = /lámni/.

‘basket’: *pád-da(-a)-ni* = /p(ə)t:ʔáni/ < PIE **pth₂-én-i*, but the form *pád-da-ni-i* represents /p(ə)t:ʔaní/, which is the result of an inner-Hittite accent shift of /p(ə)t:ʔáni/ to /p(ə)t:ʔaní/.²⁸

‘blood’: *iš-ḫa-ni* = /išaní/ < PIE **h₁sh₂-én-i*; but the form *iš-ḫa-ni-i* represents /išaní/, having undergone an accent shift like in ‘basket’. The younger form *e-eš-ḫa-ni* = /ʔéshani/, with accentuation and root vocalism of nom.-acc.sg. *e-eš-ḫar* /ʔéshər/ < **h₁ésh₂-r*.

‘forehead’: the adverb *ḫa-an-ti-i* (~ SAG.KI-i) = /həntí/ < PIE dat.sg. **h₂nt-éi* (accentuation matched by abl. *ḫa-an-ta-a-az* /həntáts/), but *ḫa-an-ti* = /hánti/ < PIE loc.sg. form **h₂ént-i*.

‘house’: *pár-ni* (~ É-ni) = /párni/, which indicates that *per* / *parn-* goes back to a PIE static paradigm **pér-r* / **pér-n-*.

‘foot’: GİR-i represents underlying **pa-ti-i* or **pa-di-i* = /patí/ < **pod-éi*, the accentuation of which is corroborated by gen.pl. *pa-ta-a-an* /patán/, dat.-loc.pl. *pa-ta-a-aš* /patás/ and instr. *pa-te-et* /patét/).

‘river’: ÍD-i represents underlying **ḫa-pí-i* = /hapí/, the accentuation of which is corroborated by all.sg. *ḫa-pa-a* /hapá/.

‘star’: MUL-i = /h(ə)strí/ (besides nom.sg. *ḫašterza*) < PIE **h₂str-éi*.

‘woman’: MUNUS-i (also MUNUS-ni-i) probably represents underlying /k^wní/ (through **k^wnái* / < PIE **g^wn-éh₂-i*?), whereas MUNUS-ni probably represents /k^wán:i/, in which the accentuation of nom.sg. MUNUS-*anza* = /k^wánts/ < **g^wén-h₂-s* and acc.sg. MUNUS-*na-an* = /k^wán:an/ < **g^wénh₂-(o)m* has been introduced.

‘much, many’: the OH form *me-ek-ki-i* ‘greatly’ is not an old nom.-acc.sg. form of the adjective *mekki-* / *mekkai-*, but rather an old dat.-loc.sg. form /mek:í/ of the adjective *mēkk-*, which thus originally must have been accentually mobile, e.g. acc.sg.c. *me-e-ek-kán* /mék:an/ vs. dat.-loc.sg. *me-ek-ki-i* /mek:í/, ultimately reflecting a PIE pattern.

3.2

To these interesting cases which were already treated in my 2014 book, we can now add the following observations:

‘bed’: The sumerogram GIŠ.NÁ is equated by e.g. Friedrich (HW: 287) and Tischler (HHW: 229) with Hitt. *šašt(a)-* ‘bed’. The dat.-loc.sg. form GIŠ.NÁ-i (KBo 22.231 rev. 10, KUB 17.25 i 2, KUB 17.26 i 2) implies that its underlying form was accented on its ending (or that the stem was a *u-* or *ya-*stem). This contrasts with the word *šašt(a)-*, the dat.-loc.sg. form of which is spelled *ša-aš-ti*, which must have been accented on its stem, /sásti/. The sumerogram GIŠ.NÁ therefore cannot be equated with *šašt(a)-*.²⁹

‘brother’: The dat.-loc.sg. form ŠEŠ-ni indicates that this form was accented on its stem, and we therefore may assume an underlying **ne-ek-ni* = /nékni/. This implies that the paradigm of *nekna-* (only one form of which is phonetically attested, namely voc.sg. *ne-ek-na* /nékna/) was accented on its stem throughout the paradigm: nom.sg. ŠEŠ-*aš* = /néknas/, acc.sg. ŠEŠ-*an* = /néknan/, dat.-loc.sg. ŠEŠ-*ni* = /nékni/, etc.

²⁷ Cf. Kloekhorst 2014: 450-62 for elaborate treatments of these words.

²⁸ Cf. Kloekhorst fthc.b for the postulation of a phoneme /t:ʔ/ for Hittite.

²⁹ This had already been argued on other grounds by Siegelová 1971: 20f.; cf. also CHD Š: 309-10.

‘disease’: The sumerogram GIG is generally equated with *erman-* / *arman-*. The sumerographically spelled dat.-loc.sg. GIG-*i* (KUB 5.1 i 76 (NH/LNS)) therefore must represent a form of *erman-* / *arman-* with an accented ending, probably **ar-ma-ni-i* /*ərm(a)ní*/. However, the phonetically spelled dat.-loc.sg. form *er-ma-ni* (KUB 8.62 i 19 (NS)) must have been accented on its stem, probably /*ʔérm(a)ni*/. The two forms thus contradict each other. However, since *er-ma-ni* has clearly introduced the stem vocalism of the nom.-acc.sg. form *e-er-ma-an* /*ʔérmən*/,³⁰ and is therefore innovative vs. the expected original form with a stem *arman-* (as is attested in the derived verb *ṛmṛnīje/a-^{zi}* ‘to be(come) ill’), we may assume that the accentuation of *er-ma-ni* /*ʔérm(a)ni*/ is innovative as well, and that the accentuation of GIG-*i* = **ar-ma-ni-i* /*ərm(a)ní*/ is more archaic.

‘fate-goddess’: The dat.-loc.sg. form ^d*Gul-ši* (KUB 5.1 i 48), with non-plene spelling of the vowel of the ending, indicates that in this name the stem must have been accented. This is problematic, however, since the generally accepted etymology of the name ^d*Gulša-* traces it back to a PIE zero-grade formation **k^wls-o-*,³¹ which, from a Proto-Indo-European point of view, can hardly have been accented on its root. Fortunately, Waal’s demonstration that in this word the sign *gul* should be read sumerographically, ^dGUL(-*aš*)-*ša-*,³² and that its underlying form probably was *kuṽanša-* or *kuṽašša-* (Waal 2014) makes it easier to understand the dat.-loc.sg. form, which we now should transliterate as ^dGUL-*ši*. Following Waal’s argumentation, it should represent an underlying **kuṽanši* or **kuṽašši*, which was accented /*k^wá(n)s:i*/.

‘honey’: The sumerographically spelled dat.-loc.sg. form LĀL-*t[i]* (KBo 15.10 i 31 (OH/MS)) indicates that the accentuation in this word must have been on its stem, and we therefore could assume that it represents an underlying form **mi-li-it-ti* /*milit:i*/, reflecting a virtual PIE **mél-it-i*. However, the one attestation *ma-li-it-ti* (Bo 3757 ii 5), which e.g. Starke (1990: 163^{627a}) and Puhvel (HED M: 154) cite as a dat.-loc.sg. form to *militt-*, would fit LĀL-*t[i]* as well. The form *ma-li-it-ti* is interesting since, as Starke (*loc.cit.*) already noticed, the spelling *ma-l^o* represents an initial cluster /*ml-*/.³³ In Kloekhorst 2008: 580, I therefore argued that the original paradigm of ‘honey’ must have been hysterodynamic, **mél-it*, **ml-it-ós*, **ml-it-éi*. This has now become impossible, however, since the non-plene spelling of the vowel of the dat.-loc.sg. ending in *ma-li-it-ti* shows that the ending was unaccented. We therefore now have to assume that the accent stood on the suffix instead, and that the original paradigm of ‘honey’ was in fact proterodynamic. This implies that the suffix must have contained a full grade, and the question then arises: was this full grade **-éit-* or **-iét-*? A preform **ml-éit-i* should regularly have yielded Hitt. **/mléti/*, spelled **ma-le-e-ti*, with lenition of the **t*. This does not fit the spelling *ma-li-it-ti*, where we find geminate, i.e. fortis *-tt-*. We therefore should rather assume a preform **ml-iét-i*, which should regularly yield Hitt. **/mliét:i/*, with geminate *-tt-*. We would expect that a form **/mliét:i/* would phonetically be spelled **ma-li(-i)(-e)-et-ti*, and it is therefore interesting to note that the form that is usually cited *ma-li-it-ti* can in fact be read *ma-li-et-ti* = /*mliét:i*/ as well (the sign E/IT is

³⁰ Cf. Kloekhorst 2014: 163 for a discussion of the spelling *er-m^o* of the dat.-loc.sg. form vs. *e-er-m^o* of the nom.-acc.sg. form.

³¹ Cf. e.g. Kloekhorst 2008: 492-3, with references.

³² Especially the forms ^dGUL-*aš* (instead of ^d*Gul-ša-aš*), ^dGUL-*an* (instead of ^d*Gul-ša-an*) and ^dGUL^{HLA}-*uš* (instead of ^d*Gul-šu-uš*: note the sumerographic plural marker!) cited by Waal 2014: 1020 are convincing arguments to read the sign GUL as a sumerogram here. Yakubovich’s attempt to explain away these sumerographic spellings (Yakubovich 2014: 292; cf. also Melchert 2016: 356-7) is ill-founded and totally unconvincing.

³³ Which is attested in the adjective *maliddu-* /*ml-*/ ‘sweet’ as well (next to *miliddu-* /*milit:u-*/), and is known from e.g. Gr. βλίττω ‘to gather honey’ < **mlit-ie/o-*.

- ambiguous regarding its reading: it can be read both *et* and *it*). We may therefore view *ma-li-et-ti* as the direct reflex of PIE **ml-iét-i*, which justifies the reconstruction of the Proto-Indo-European paradigm of ‘honey’ as **mél-it*, **ml-iét-s*, **ml-iét-i*.
- ‘mountain’: The word underlying the sumerogram *ḪUR.SAG* is unknown. On the basis of the dat.-loc.sg. form *ḪUR.SAG-i*, which is often attested, we can now assume that this word was in its oblique cases accented on its endings.³⁴ However, the two attestations of a dat.-loc.sg. form *ḪUR.SAG-ri* (KUB 29.1 i 14 (NS), KBo 40.335 ii 7 (NS)) rather seem to point to accentuation of the stem. One explanation could be to assume that these two attestations represent a word different from *ḪUR.SAG-i*. Another possibility is that they are the result of an analogical accent retraction like in *išḫanī >> ēšḫani* ‘blood’. This implies, however, that the paradigm of ‘mountain’ contained forms in which the accent stood on the stem, and not on the ending. If this is the case, the word for ‘mountain’ would originally have been an accentually mobile *r*-stem, like the word for ‘hand’ (*keššar*, *kiššeran*, *kišraš* /k:és:ər, k:is:ér̥n, k:is:rás/) or the word for ‘star’ (*ḫašterza*, MUL-*i* /h(ə)stérts, h(ə)strí/).
- ‘oil’: The dat.-loc.sg. form *Ì-i* (KBo 32.14 iii 10, rev. 29 (MH/MS), KUB 8.67, 7) points to an underlying form **ša-ak-ni-i* = /səkní/, the accentuation of which is corroborated by the gen.sg. form *ša-ak-na-a-aš* /səknás/.
- ‘queen’: It is generally accepted that the Hittite word underlying the sumerogram MUNUS.LUGAL was **ḫaššuš(ša)ra-*. Its dat.-loc.sg. form is often attested as MUNUS.LUGAL-*ri*, including in OS texts, implying accentuation of the stem: /hás:us:ri/. However, we also find a few attestations MUNUS.LUGAL-*i* (KBo 10.25 ii 27 (OH/NS), KBo 40.135 rev. 9 (OH/NS), KUB 9.34 i 9 (MH/NS)), the status of which is not fully clear to me. In one case (KBo 40.135 rev. 9) the form directly follows LUGAL-*i*, so we may assume that the spelling with *-i* was taken over from this form (where the spelling is regular since it represents **ḫa-aš-šu-i*). In the other two cases the forms are used independently, so the spelling with *-i* may have to be taken seriously. If so, it would point to accentuation of the ending: /has:us:rí/. This would in principle fit the fact that there are other indications that the feminizing suffix *-š(ša)r(a)-* originally was desinentially stressed in its oblique cases.³⁵ This would mean, however, that these spellings represent archaic forms, whereas the renewed form, /hás:us:ri/, is well attested already in OS texts. This makes this chronology rather shaky.
- ‘son’: On the basis of dat.-loc.sg. DUMU(.NITA)-*li*, it is not only clear that the stem of the underlying word ended in an *-l-* (as is generally recognized, cf. also nom.sg. DUMU-*la-aš*, acc.sg. DUMU-*la-an*), but also that it was accented on its stem in its oblique cases.
- ‘soul’: The sumerographic spelling ZI-*ni* implies that the underlying form was **iš-ta-an-za-ni*, which was accented on its stem: /istántsani/ or /istantsáni/.³⁶
- ‘storm god’: The phonetics underlying the sumerogram ^dIM / ^dU ‘storm god’ are unknown, but on the basis of the dat.-loc.sg. forms ^dIM-*ni* / ^dU-*ni* and ^dIM-un-*ni* we can now not

³⁴ Unless the underlying word is a *u-* or *ya-*stem, which seems to be excluded by the dat.-loc.sg. form *ḪUR.SAG-ri*, which rather points to a stem ending in *-r-*.

³⁵ Cf. Kloekhorst 2014: 80-1. Note that on the basis of the onomastic element *-ḫšušar*, which is found in many personal names in Old Assyrian texts from Kültepe / Kaniš, and which is generally equated with the Hittite word for ‘queen’, we may assume that originally this word was athematic: nom.-acc.sg. **ḫaššuššar* < **-sr*. We therefore can now reconstruct an original paradigm like in *keššar* / *kiššer-* / *kišr-* ‘hand’, namely nom.sg. **/hás:us:ər/*, acc.sg. */has:us:éran/*, gen.sg. */has:us:rás/*, dat.-loc.sg. */has:us:rí/*, etc. When the noun was thematized, the stem accentuation was generalized, yielding **/hás:us:ra-/*, to which the dat.-loc.sg. form MUNUS.LUGAL-*ri* = */hás:us:ri/* belongs.

³⁶ Cf. Kloekhorst 2014: 271⁹⁹⁵ for the possibility that the original form of this word was **ištānzana-*, which implies an underlying **/istántsana-/*, which would have yielded MH and NH */istántsana-/*, with accentuation on the first *a*.

only tell that his name ended in *-unn-*, but also that the name was accented on its stem in its oblique cases. It is in that sense interesting to note that the Luwic name of the storm god, *tarḫu(a)nt-*, which is often thought in one way or another to be cognate to the Hittite form, is in its oblique cases accented on its ending, as is clear from HLuw. (DEUS)TONITRUS-*hu-ti-i* = /tarhuntí/³⁷ and Lyc. dat.sg. *trqqñti* /trk^wntí/.³⁸

‘thunder’: Although the sumerogram BÚN is usually equated with *tetḫeššar* ‘thunder’,³⁹ this does not fit the dat.-loc.sg. form BÚN-*mi* (KUB 5.1 iv 71). This form rather indicates that in this case the underlying word is *tetḫima-* ‘thunder’. Moreover, the form BÚN-*mi* shows that its dat.-loc.sg. form, **tetḫimi*, was accented on its stem: /téthimi/ or (less likely) /tethími/.

‘tongue’: The sumerographically spelled dat.-loc.sg. EME-*i* (KBo 39.8 ii 29, iii 53, IBoT 4.12 iii 7) seems to point to a form that was accented on its ending. This contrasts with the phonetically spelled form of the dat.-loc.sg. of ‘tongue’, *la-a-li*, which clearly was accented on its stem, /lāli/ (cf. the non-plene spelling of the vowel of the ending, and the plene spelling of the *a* of the stem). I therefore regard the sumerographic forms EME-*i* as mistakes: in all three cases the form EME-*i* follows KAxU-*i* ‘in/to the mouth’, and I assume that the spelling with *-i* was taken over from here.

4. The phonetic spelling of all.sg. forms.

Our findings that the spelling of the ending of the dat.-loc.sg. in Hittite is linguistically relevant, also when it is spelled as a phonetic complement to sumerograms, raises the question to what extent this holds for the other oblique case whose ending ends in a vowel, namely the allative singular.

It is well known that the all.sg. ending has two allomorphs: one in which the vowel of the ending is spelled plene, °*Ca-a*, and one in which the vowel is spelled non-plene, °*Ca*. Moreover, it is generally agreed that the plene spelled version must have been accented, whereas the non-plene spelled version was unaccented.⁴⁰ For instance, *ki-iš(-ša)-ra-a* /k:is:rā/ ‘hand’, *ta-ak-na-a* /t(ə)knā/ ‘earth’ vs. *a-aš-ka* /ʔáskal/ ‘gate’, *ne(-e)-pí-ša* /népisa/ ‘heaven’, *šu-u-uh-ḫa* /sōh:a/ ‘roof’. Also when an enclitic is attached to it, all.sg. forms sometimes show plene spelling of their ending when they are accented, e.g. *iš-ša-a-a=š-ma* (KBo 17.2 i 6, 8 (OS)) /is:ā=sma/ ‘to their mouth’, but this is not consistent: *iš-ša-a=š-ša* (KBo 3.38 obv. 4 (OH/NS)), *iš-ša=ma-a=š-ši* (KBo 13.100, 7 (NS)).⁴¹

The place of the accent in these all.sg. forms is always the same as in the corresponding dat.-loc.sg. forms: *ki-iš(-ša)-ra-a* ~ *ki-iš(-ša)-ri-i* /k:is:rī/, *ta-ak-na-a* ~ *ták-ni-i* /t(ə)knī/, *iš-ša-a-a=š-ma* ~ *iš-ši-i* /is:ī/ vs. *a-aš-ka* ~ *a-aš-ki* /ʔáski/, *ne(-e)-pí-ši* ~ *ne(-e)-pí-ši* /népisi/, *šu-u-uh-ḫa* ~ *šu-u-uh-ḫi* /sōh:i/. The all.sg. form, too, is therefore potentially an important case for determining the accent pattern in the oblique cases of a given word. Moreover, just as word-final long accented /-ī/ is retained as such throughout Hittite, word-final long accented /-ā/ also seems to have retained its length throughout the attested period of Hittite: cf. the fact that ^É*ḫištā*, a cultic building, in principle always shows plene spelling of its *a*, ^É*ḫi-iš-ta-a*, ^É*ḫe-eš-ta-a*, whether it is attested in OS, MS or NS texts.⁴² In theory, the difference between all.sg. forms that are accented on their ending (spelled °*Ca-a*) and those that are accented on their

³⁷ Cf. Vertegaal ms. for this analysis of the HLuwian form.

³⁸ Kloekhorst 2013: 138.

³⁹ Cf. the alternation between EZEN₄ BÚN-*na-aš* ‘festival of the thunder’ (KUB 5.4 i 17, 27, iii 4) and EZEN₄ *te-et-ḫe-eš-na-aš* (ibid. i 38, ii 21); see Tischler HEG T: 349, cf. also Friedrich (HW: 279), Tischler (HHW: 216), Weeden 2011: 261.

⁴⁰ Kloekhorst 2008: 161.

⁴¹ The difference between the two ways of spelling may be diachronic: in Old Hittite, the length of the /ā/ was retained, also in word-internal position, whereas after the OH period it was shortened.

⁴² Cf. Kloekhorst 2014: 350¹³⁶², 359¹³⁹⁵, 363¹⁴²⁵ for attestations.

stem (spelled °*Ca*) should therefore be detectable in texts from all periods. Unfortunately, in practice this is hardly the case: the allative is lost as a living case after the Old Hittite period, so that we do not have many attestations of all.sg. forms from younger texts. As a consequence, in order to determine the accentuation pattern of a given word, the all.sg. case is much less useful than the dat.-loc.sg., simply because it is much less often attested.

5. The sumerographic spelling of all.sg. forms

Since we have seen above that dat.-loc.sg. forms that are spelled as a sumerogram + phonetic complement reveal important linguistic information, it is worth-while to pursue to what extent this is the case for the all.sg. case as well.

Let us first look at two all.sg. forms that were petrified as adverbs, namely *āppa* ‘back, afterwards’ and *šarā* ‘upwards’. The former shows consistent non-plene spelling of its final vowel, *a-ap-pa*, whereas the latter shows consistent plene spelling, *ša-ra-a*. When these words are spelled sumerographically with a phonetic complement, they show EGIR-*pa* and UGU-*a*,⁴³ respectively (never **EGIR-*a* and **UGU-*ra*). On the basis of these words, we may assume that also in the all.sg. case there is a correlation between the full phonetic spelling of the ending and its spelling as a phonetic complement after sumerograms: when the vowel of the all.sg. ending of a word is spelled non-plene, °*Ca*, in full phonetic spelling, this word is sumerographically spelled SUMEROGRAM-*Ca*, whereas when the vowel of the all.sg. of a word is spelled plene, °*Ca-a*, in full phonetic spelling, the word is sumerographically spelled SUMEROGRAM-*a*. And since the full phonetic spelling of the all.sg. ending gives information about the accentuation of the word, we may conclude that the phonetic compliments do, too.

When looking at other all.sg. forms that are spelled sumerographically, we see that our postulations on the basis of *āppa* and *šarā* are confirmed.

<i>a-ku-ya-an-na</i> ‘drinking’	= NAG- <i>na</i> (never **NAG- <i>a</i>)
<i>kat-ta</i> ‘downwards’	= GAM- <i>ta</i> (never **GAM- <i>a</i>)
<i>ku-un-na</i> ‘right’	= ZAG- <i>na</i> (never **ZAG- <i>a</i>)
<i>pár-na</i> ‘house’	= É- <i>na</i> (never **É- <i>a</i>)
<i>tu-un-na-ak-ki-iš-na</i> ‘inner room’	= É.ŠÀ- <i>na</i> (never **É.ŠÀ- <i>a</i>)

Also in other cases where we do not have the full phonetic spelling, we can still argue that the rule above is correct.

KASKAL-*ša* ‘road’ should correspond to a phonetically spelled **pal-ša*, which is also the all.sg. form we would expect in the basis of the dat.-loc.sg. form *pal-ši* ~ KASKAL-*ši*. Both forms were accented on their stem: /pálsi/ and /pálsa/.

GÜB-*la* ‘left’ belongs to a word of which we do not know the underlying form. On the basis of this spelling (not **GÜB-*a*), we may assume that it was accented on its stem, which is confirmed by the corresponding dat.-loc.sg. form GÜB-*li* (not **GÜB-*i*).

ḪUR.SAG-*a* ‘mountain’ belongs to a word of which we do not know the underlying form. On the basis of this spelling (not **ḪUR.SAG-*Ca*), we may assume that the word was in its oblique cases accented on the ending, which is confirmed by the numerous dat.-loc.sg. forms ḪUR.SAG-*i*.⁴⁴

⁴³ Admittedly, UGU-*a* is attested only once, in KBo 6.34 iii 18.

⁴⁴ Cf. the discussion above.

^{GIS}TIR-na ‘forest’ should correspond with an underlying form **ti-i-e-eš-na*, which is also the form we would expect on the basis of the corresponding dat.-loc.sg. form ^{GIS}TIR-ni = *ti-i-e-eš-ni*. Both forms were accented on their stem: /t:iés:ni/ and /t:iés:na/.

In some other cases, things are less straightforward:

ÍD-a ‘river’ is attested in KBo 22.2 obv. 3 (OS), and its spelling matches the full phonetic spelling *ḫa-pa-a* (KUB 13.3 iii 29, 32), both pointing to a form that is accented on its ending, /hapá/. This accentuation is confirmed by the dat.-loc.sg. form ÍD-i, which would match a form **ḫa-pí-i* (which is unattested as such), representing /hapí/. However, we also find the sumerographic spelling ÍD-pa (KBo 10.11 i 3 ([Í]D-) (OH/NS), KBo 13.137, 7 (OH/NS)), which rather points to a form that is accented on its stem. Since both attestations of ÍD-pa are from NS texts, I assume that they represent forms in which the accent of the direct cases was introduced. We therefore may assume that the word for ‘river’ originally inflected nom.sg. **/hápas/* (or **/háps/?*), acc.sg. **/hápan/*, gen.sg. **/hapás/*, dat.-loc.sg. /hapí/, all.sg. /hapá/, and that in the all.sg. at a certain point in time the stem of the nom. and acc. forms was introduced, yielding /hápa/, spelled ÍD-pa.

^{URU}MUL-ra ‘Star(-city)’ belongs to the paradigm of ^{URU}Ḫašter(a)- (e.g. acc.sg. ^{URU}Ḫa-aš-te-ra-an, gen.sg. ^{URU}Ḫa-aš-ti-ra-aš), which must be connected with the Hittite word for ‘star’, *ḫašter-*. As we have seen above, the dat.-loc.sg. form of ‘star’, MUL-i, points to a desinentially stressed form **/h(ə)strí/*. The spelling of the all.sg. form of the city name, ^{URU}MUL-ra, rather points to a form with accentuation on its stem: /h(ə)stéra/. We may therefore assume that in the city name the stem accentuation (nom.sg. *ḫašterza* = /h(ə)stérts/) was generalized, whereas in the noun itself the original accentual mobility was retained. Alternatively, we may assume that the city name was in fact thematic /h(ə)stéra-/ and thus forms a derivation of the original athematic noun /h(ə)stér-, h(ə)strí-/.

^{DUG}ÚTUL-ša ‘pot’ is attested in e.g. the OS text KBo 17.43 i 15, 16, and its spelling implies that the underlying form was accented on its stem. However, the dat.-loc.sg. form ^{DUG}ÚTUL-i (e.g. KBo 6.2 i 56 (OS)) implies that its underlying form was accented on its ending. The information of both forms is thus contradictory: is the word for ‘pot’ in its oblique cases accented on its stem or on its ending? Since both forms are attested in OS texts, I am hesitant to assume that the one has undergone an accent shift that the other one has not. So perhaps we should assume that here there are two different words that underlie these forms?

ŠÀ-ta ‘heart’ is attested several times,⁴⁵ and corresponds to the phonetically spelled form *kar-ta* (KBo 17.65 rev. 46,⁴⁶ KBo 24.61 rev. 11).⁴⁷ Both spellings indicate that the accent was on the stem, /kárta/. Its corresponding dat.-loc.sg. form *kar-ti-i* ~ ŠÀ-i rather points to /kərtí/, with accent on the ending, however. Since this latter accentuation must

⁴⁵ E.g. KUB 6.45 iv 46, KUB 13.33 ii 12, KUB 31.77 iii 17, KBo 4.12 obv. 32, KUB 17.28 ii 56, KUB 31.77 iii 17.

⁴⁶ Cf. Beckman 1983: 163 for this form.

⁴⁷ The one attestation in KUB 1.16 iii 58 may have to be emended to *kar-ta<-a=t-ta>* ‘to your heart’, cf. the context: (57) ... *nu=z=(š)a-an* (58) [*ud-da-]a-ar=me-et ḫa-at-ta<-tar>=me-et-t=a kar-ta<-a=t-ta> ši-iš<-ša>-at-ti* ‘you will im<p>ress my [wo]rds and my wisd<om> onto <your> heart’ (note that *kar-ta<-a=t-ta>* is not the only form that needs emendation, and that in *ibid.* iii 63 we also find *kar-di<-i=t-ti>* ‘in <your> heart’, cf. Kloekhorst 2014: 451).

be archaic (reflecting PIE **krd-éi*), we would expect that the all.sg. form originally was accented on the ending as well: **kar-ta-a* ~ **šÀ-a* = /kərtá/.⁴⁸ This implies that in original **kərtá/* an accent retraction to /kárta/ has taken place. We could assume that this happened by analogy to the accentuation of the nom.-acc.sg. form *kir*, *gir* /kír/.⁴⁹ However, in other cases where we encounter such a generalization of the accentuation of the direct cases, the stem of these cases was also introduced (e.g. dat.-loc.sg. *išhanī* ‘blood’ >> younger *ēšhani* (after nom.-acc.sg. *ēšhar*), or dat.-loc.sg. *iššī* ‘mouth’ >> younger *īišši* (after nom.-acc.sg. *īiš*)), and we would therefore expect an outcome ***ki-ir-ta* /kírta/.⁵⁰ I am therefore not fully sure how to interpret *šÀ-ta* = *kar-ta*.

Despite the necessity to make some extra assumptions regarding these latter four cases, I do not think that they seriously undermine the basic principle, namely that also when all.sg. forms are written sumerographically, i.e. as a sumerogram + phonetic complement, the spelling of the ending reveals information on the accentuation of the underlying word.

6. Conclusions

We can conclude that the Hittite dat.-loc.sg. and all.sg. forms reveal important information about the place of the accent in them, also when they are spelled as a sumerogram + phonetic complement. It is therefore of paramount importance in the linguistic treatment of Hittite nouns to look closely at the spelling of these cases.

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⁴⁸ It is in principle possible that the forms *kar-ta-a=š-ma* (VBoT 58 i 13) and *kar-da-a=š-ma* (KUB 31.4 + KBo 3.41 obv. 9) ‘into their heart’ were accented on their ending, because before an enclitic the length of the vowel of the accented ending was not always spelled.

⁴⁹ See Kloekhorst 2014: 426 for the reading of the nom.-acc.sg. form of ‘heart’ as *ki-ir*, *gi-ir* instead of *ke-er*, *ge-er* as advocated in Kloekhorst 2008: 469.

⁵⁰ Likewise the dat.-loc.sg. form *KE/I-E/IR-ti* (KBo 3.21 iii 12, 16, 22, 26 (MH/MS)) may be read as *ki-ir-ti* and analysed as /kírti/ in which the nom.-acc.sg. stem *kir* /kír/ has been taken over into the original dat.-loc.sg. form *kar-ti-i* /kərtí/. It therefore need not represent *ke-er-ti* /kérti/, an old loc.sg. form < PIE **kérđ-i*, as argued in Kloekhorst 2014: 451.

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