

## Linguistics 51

### Hittite Scriptio Plena

Hittite was written in a cuneiform writing system borrowed from the Akkadians in which each symbol could represent either V (a vowel alone), CV (a consonant plus a vowel), or CVC (a consonant plus a vowel plus a consonant). But not all the possible combinations of consonants and vowels had corresponding signs; in particular the number of CVC signs was rather limited. This gave rise to three problems:

(1) **CVC syllables:** If no CVC sign existed for some particular CVC sequence, the scribes would have to make do with writing CV-VC (usually), provided these signs also existed.

For example, to write *ḥenkan* ‘plague’, a scribe could write ḥe-en-ka-an, since no sign existed for ḥen, or he could write ḥe-en-kan, since there was a specific sign for kan.

(2) Certain **clusters of consonants** could not be written directly: two consonants at the beginning of a word or at the end of a word, or three or more consonants in sequence in the middle of a word, required at least one ‘prop vowel’ to be inserted in writing.

For example, to write *walḥmi* ‘I hit, I strike’, the scribe had to write wa-al-aḥ-mi with a ‘prop’ vowel a before the ḥ. But sometimes one of the consonants was simply not written at all. For example, *sanḥmi* ‘I seek, I try’ appears in three different spellings: ša-aḥ-mi, ša-an-aḥ-mi, and ša-an-ḥa-mi. In the first one the *n* is simply not spelled at all, and the second and third forms a prop vowel a is used after the *n* and after the ḥ, respectively. Whether this implies that sometimes the *n* was not actually pronounced is unknown.

Related to this problem was that there was no simple way to write *k<sup>w</sup>* which is the Hittite reflex of PIE \**k<sup>w</sup>*, \**g<sup>w</sup>* and \**g<sup>wh</sup>*. Instead the scribes had to resort to writing ku or uk.

For example, to write *k<sup>w</sup>ermi* ‘I cut, cut up’, the scribe had to write ku-er-mi, and to write *tark<sup>w</sup>zi* ‘he/she dances’ the scribe had to write either tar-uk-zi or tar-ku-zi.

(3) **Vowel length.** The Sumerian language did not distinguish between long and short vowels, so neither did their cuneiform writing. However, PIE had long and short vowels and it is widely believed that Hittite did as well. To indicate long vowels, scribes *sometimes* made use of a device called *scriptio plena* or ‘plene’ (full) spelling. This involved adding an extra vowel symbol.

For example, to write *nēpis* ‘sky, heaven’ (< PIE \**néb<sup>h</sup>-es-*, cf. Latin *nebula*), the scribe could write ne-e-pi-iš, with the extra e showing that the vowel in ne is long. However, scribes were not always consistent in their use of plene spelling. In fact ne-pi-iš also appears.

Paleographers usually assume that if plene spelling occurs more than 10% of the time, it probably means that the vowel in question was long. If plene spelling occurs less than 10% of the time, it is hard to conclude that the result was not due to spelling errors (which the scribes did often make). Of course, we can use independent evidence for reconstructed vowel length in PIE as a guide to when we might expect to see long vowels in Hittite.

Matters are not, however, very simple in this respect. The reason is because long vowels in Hittite appear even when the PIE vowel was short, under certain circumstances. In the 1950s it was assumed that *scriptio plena* had no etymological value, and was somewhat erratically and randomly used by the scribes. Intensive study of the matter since then has shown that *scriptio plena* is not entirely random, but is not connected in a simple way with long vs. short vowels in PIE.

Most of the time, a long vowel in Hittite points to either (1) a long vowel in PIE, which could be an original long vowel or one derived by compensatory lengthening after loss of a laryngeal in the syllable coda, or (2) an *accented* vowel in Hittite, which *often* but not always reflects an accented vowel in PIE.

So PIE \**néb<sup>h</sup>-es-* ‘cloud’ appears as Hittite *nēpis-* ‘sky, heaven’ and the *e* is long not because it was long in PIE but rather because it is accented in Hittite; the accent in Hittite is here in the same position as it was in PIE, so the word is *nēpis-*.

Given all of this, we can sometimes use long vs. short vowels in Hittite (inasmuch as we can infer them from plene spellings) as clues to changes in the location of the accent in PIE words.

In addition, shifts in the place of the accent in PIE were correlated with changes in stem grades, so that typically an unaccented stem or suffix would have a zero grade if it had a full (e- or o-) grade when accented; or sometimes the full grade would be the weak counterpart to an accented lengthened (ē- or ō-) grade. And these distinctions also sometimes are reflected in differences in vowel *quality* in Hittite.

For example PIE \**uód-ṛ* ‘water’ appears in Hittite as *wátar*, written *wa-a-tar* or *wa-tar*. But since this is a proterokinetic stem (with the extra complication that the suffix alternated between \*-r- in its zero grade and \*-én- in its full grade), the genitive singular was PIE \**ud-én-os*, with the root in its zero-grade and the suffix in its full grade. The Hittite word is spelled *u-ui-te-na-aš*. Specialists debate about why there is an extra *u* at the beginning — it might be because the word was actually *uwitenas* or this might have been some kind of spelling convention and we should instead read *witenas*. In any event we can see from this that the Hittite word has (*u*)*wit-* < PIE \**ud-*, but in *wátar* the full grade *wāt-* < PIE \**uód-* appears.

But you may wonder why, if in PIE \**ud-én-os* the \**e* is accented, then why is the Hittite *e* not written long? This is a difficult question. Maybe it was long, but the scribes did not write it long (they were lazy

or in a hurry, at least every time they wrote that word in a tablet which happened to survive). Or maybe it was in fact long, but they only wrote *some* long vowels with plene spelling, and we don't know yet why. Finally, it is probable that vowel length was eventually lost in Hittite, so later texts (not in 'Old Script' cuneiform style), show fewer plene spellings. Our example of u-ui-te-na-aš comes from a text in Middle Hittite, written in New Script. It is however interesting that there is a known instance of the dative singular written u-i-te-e-ni with plene spelling of the *e*. Presumably this reflects PIE \*ud-én-i. This is, however, also in a Middle Hittite text written in New Script.

These examples show that the *absence* of plene spelling is often not very useful evidence. The *presence* of plene spelling, however, is very suggestive of vowel length, since the scribes really did not have to write it. Presumably, aside from occasional errors, if a scribe bothered to write a vowel long, it was most likely long. But if the scribe did not bother to write a vowel long, it's difficult to conclude anything from that alone.

### **Problem.**

Examine the following sets of inflected verbs, written in *broken transcription*. First you should try to figure out what the bound transcription should be, i.e. discarding all vowels which result from the restrictions of the Hittite cuneiform writing system. Then:

- (1) Determine the PIE root for each verb (using the list of PIE verb stems provided to you, and information from the handout on verbal inflection)
- (2) Determine which stems show alternations in length inasmuch as they can be discerned from plene spellings.
- (3) How are the Hittite agreement desinences different from the ones reconstructed for PIE (factoring in expected sound changes from PIE to Hittite)? To what extent are they archaic and to what extent do they show innovations?
- (4) Do the alternations in length and vowel quality in the verb stems correspond to the expected variation in the grade of the PIE stem? What appears to be regular and what irregular? Discuss.

**Hittite Data**

‘I am’	e-eš-mi	‘I take’	e-ep-mi
‘you sg. are’	e-eš-ši	‘you take’	e-ep-ši
‘he, she, it is’	e-eš-zi	‘he, she, it takes’	e-ep-zi
‘they are’	a-ša-an-zi	‘they take’	ap-pa-an-zi, ap-pa-a-an-zi
‘I was’	e-šu-un	‘I took’	e-ep-pu-un
‘he, she, it was’	e-eš-ta	‘he took’	e-ep-ta
‘they were’	e-še-er, e-šer	‘they took’	e-ep-per
‘I drink’	e-ku-mi		
‘you drink’	e-uk-ši, e-ku-uš-ši		
‘he, she, it drinks’	e-ku-zi, e-uk-zi		
‘we drink’	a-ku-e-ni		
‘you pl. drink’	e-ku-ut-te-ni, e-ku-te-ni		
‘they drink’	a-ku-an-zi, a-ku-wa-an-zi, e-ku-an-zi, e-ku-wa-an-zi		
‘I drank’	e-ku-un		
‘he, she, it drank’	e-uk-ta, e-ku-ut-ta		
‘we drank’	e-ku-e-en, e-ku-en		
‘they drank’	e-ku-er, e-ku-i-e-er		
‘he, she swears’	li-ik-zi, li-in-ga-zi		
‘they swear’	li-in-kan-zi		
‘I swore’	li-in-ku-un		
‘he, she swore’	li-ik-ta, li-in-kat-ta, li-in-ik-ta		
‘they swore’	li-in-ker, li-in-ke-er		
‘I knead’	šal-ga-mi		
‘he/she kneads’	ša-al-ak-zi		
‘they knead’	šal-kan-zi		
‘I kneaded’	ša-al-ku-un		

(originally meaning possibly ‘to pull on’)

‘I sleep’	še-eš-mi
‘he/she sleeps’	še-eš-zi, še-e-eš-zi
‘we sleep’	ša-šu-e-ni, še-e-šu-e-ni
‘they sleep’	ša-ša-an-zi, ša-a-ša-an-zi, še-e-ša-an-zi
‘I slept’	še-e-šu-un, še-šu-un, še-eš-šu-un
‘he/she slept’	še-eš-ta, še-e-eš-ta
‘we slept’	še-eš-u-en

‘I put together, make’	tag-ga-aš-mi
‘you put together, make’	tak-ki-iš-ši, tag-ga-aš-ši
‘he/she puts together, makes’	tak-ki-iš-zi
‘they put together, make’	tak-ša-an-zi
‘we put together, made’	tak-ke-eš-šu-un
‘he/she put together, made’	tak-ki-iš-ta
‘they put together, made’	tak-še-er

‘I eat’	e-et-mi
‘he, she eats’	e-za-az-zi, e-ez-za-zi, e-ez-za-az-zi
‘we eat’	a-du-e-ni, a-du-wa-ni, e-du-wa-a-ni
‘they eat’	a-da-an-zi, a-ta-an-zi, a-ta-a-an-zi
‘I ate’	e-du-un
‘he, she ate’	e-ez-ta
‘they ate’	e-te-er

‘I get lost, perish’	ḥar-ak-mi
‘you get lost, perish’	ḥar-ak-ši
‘he/she gets lost, perishes’	ḥar-ak-zi
‘they get lost, perish’	ḥar-kan-zi
‘he/she got lost, perished’	ḥar-ak-ta

‘I hold, have, keep’	ḥar-mi
‘you hold, have, keep’	ḥar-ši
‘he/she holds, has, keeps’	ḥar-zi
‘you pl. hold, have, keep’	ḥar-te-ni
‘they hold, have, keep’	ḥar-kan-zi
‘I held, had, kept’	ḥar-ku-un
‘he/she held, had, kept’	ḥar-ta, ḥar-da
‘they held, had, kept’	ḥar-ke-er, ḥar-ker
‘I consult an oracle’	a-ri-ya-mi
‘you consult an oracle’	a-ri-ya-ši
‘he/she consults an oracle’	a-ri-ya-zi
‘they consult an oracle’	a-ri-an-zi, a-ri-ya-an-zi
‘I consulted an oracle’	a-ri-ya-nu-un
‘he/she consulted an oracle’	a-ri-ya-at
‘they consulted an oracle’	a-ri-i-e-er, a-ri-er, a-ri-ya-er
‘he/she copulates’	u-en-zi
‘he/she copulated’	u-e-en-ta
‘I make an inscription’	gul-aš-mi
‘he/she makes an inscription’	gul-aš-zi
‘they make an inscription’	gul-ša-an-zi
‘I made an inscription’	gul-šu-un, gul-aš-šu-un
‘he/she made an inscription’	gul-aš-ta
‘they made an inscription’	gul-aš-še-er
‘he/she steals’	ta-a-i-ez-zi, ta-i-ez-zi, da-a-i-ez-zi, ta-a-ez-zi
‘I stole’	ta-i-ya-nu-un, ta-ya-nu-un
‘he/she stole’	da-ya-at, da-a-y-ya-at
‘we stole’	ta-ya-u-en
‘they stole’	da-ya-er, da-i-e-er