



The Hittite 2pl.-ending -šten(i)

Alwin Kloekhorst

Leiden

It is well known that in Hittite besides the normal 2pl.-ending *-tten(i)*¹ sometimes the variant *-šten(i)*² is found. It is generally thought that this *-šten(i)* must be of secondary origin. For instance, Oettinger³ states: “Die Endung *-šten(i)* ist durch Falschabtrennung von auf *°š* auslautenden Stämmen entstanden”. This explanation seems rather ad hoc to me. Following the same line of thought, one would also expect, for instance, a variant ***-šmi* besides *-mi* or ***-šēr* besides *-ēr*. Jasanoff⁴ connects the ending *-šten(i)* with the rise of the 2sg.pret.-ending *-šta* besides older *-tta*. As this ending *-šta* is found in NH and NS texts only⁵, we would expect that *-šten(i)*, too, is only found in NH or NS texts. This is not the case however: compare the OS attestations *da-iš-te-en* (KBo 8.42, Rs. 2, 3), *uš-t[e-e]-ni* (KBo 7.14 + KUB 36.100, Vs. 23), *[p]í-i-iš-te-en* (StBoT 25.7, IV 10)). This means that Jasanoff’s explanation is incorrect as well. Therefore, the ending *-šten(i)* requires an extensive treatment.

In order to do so, I have collected all cases known to me in which a 2pl.-ending *-šteni*, *-štani* or *-šten* is attested. The verbs with which this ending appears can be divided into two categories.

The first category consists of verbs in which the endings *-tten(i)* and *-šten(i)* would merge phonetically, either because the verb stem ends in *-š*⁶ or because the verb stem ends in a dental consonant (**-T-T-* > *-TsT-*)⁷. These verbs are irrelevant to our research as we cannot distinguish between the endings *-tten(i)* and *-šten(i)*.

The second category consists of verbs where there is no phonetic reason to expect that between the verb stem and the ending *-tten(i)* an extra *-š-* would appear. In these verbs the *-š-* seems to be unmotivated, and these cases are therefore the ones that have to be

¹ Next to *-ttani*.

² Next to *-štani*.

³ Oettinger, *Stammbildung*, p. 71.

⁴ J.H. Jasanoff, *Hittite and the Indo-European Verb*. Oxford 2003, p. 184.

⁵ *a-uš[-ta]* (KBo 5.3, III 56 (NH)), *me-mi-iš-ta* (KUB 15.5, III 11 (NH)), *pí-eš-ta* (KBo 11.1, Rs. 12 (NH)), *ši-iš-ta* (KBo 3.34, I 23 (OH/NS)), *da-iš-ta* (KUB 21.27+, I 4, 6 (NH)), *up-pí-eš-ta* (KBo 8.76, Rs. 4 (NS)), *wa-ar-ri-iš-ši-iš-ta* (KUB 31.47, Vs. 13 (NH)).

⁶ These are: *ašāšⁱ/ašešⁱ* ‘to seat’, *eš^{zi}/ašⁱ* ‘to be’, *hanešš^{zi}* ‘to wipe’, *hašⁱ/heš^{zi}* ‘to open’, *hueš^{zi}* ‘to live’, *iššaⁱ/iššⁱ* ‘to make’, *ištamašš^{zi}* ‘to hear’, *idālawēšš^{zi}* ‘to become evil’, *karš^{zi}* ‘to cut’, *karušš^{zi}* ‘to be silent’, *gulš^{zi}* ‘to carve’, *mazⁱ* ‘to resist’, *nakkēšš^{zi}* ‘to become important’, *pahšⁱ* ‘to protect’, *parkuēšš^{zi}* ‘to become pure’, *punušš^{zi}* ‘to ask’, *šeš^{zi}/šašⁱ* ‘to sleep’, *šiš^{zi}* ‘to prosper’, *takš^{zi}* ‘to unify’, *waršⁱ* ‘to wipe’, *wāšⁱ* ‘to buy’, and *wešš^{zi}* ‘to wear’.

⁷ Only attested in *ed^{zi}/ad-* ‘to eat’.

investigated in order to explain the occurrence of *-šten(i)*. These verbs are:

<i>au-ⁱ/u-</i> ‘to see’	(<i>ušt[ē]ni, aušteni, aušten</i>)
<i>ḫalzai-ⁱ/ḫalzi-</i> ‘to call’	(<i>ḫalzišten</i>)
<i>ḫanna-ⁱ/ḫann-</i> ‘to sue’	(<i>ḫanništen</i>)
<i>išḫai-ⁱ/išḫi-</i> ‘to bind’	(<i>išḫaišten</i>)
<i>išpai-ⁱ/išpi-</i> ‘to be satiated’	(<i>išpišten</i>)
<i>mai-ⁱ/mi-</i> ‘to grow’	(<i>maišten</i>)
<i>mēma-ⁱ/mēmi-</i> ‘to speak’	(<i>memištēni, memišten</i>)
<i>nai-ⁱ</i> ‘to turn’	(<i>naištēni, naištani, naišten</i>)
<i>nanna-ⁱ/nanni-</i> ‘to drive’	(<i>nanništen</i>)
<i>pai-ⁱ/pi-</i> ‘to give’	(<i>pištēni, pišten</i>)
<i>parai-ⁱ/pari-</i> ‘to blow’	(<i>paraištēni</i>)
<i>peda-ⁱ/ped-</i> ‘to bring’	(<i>petišten</i>)
<i>penna-ⁱ/penni-</i> ‘to drive’	(<i>penništen</i>)
<i>šai-ⁱ/ši-</i> ‘to seal’	(<i>šaišten</i>)
<i>šunna-ⁱ/šunn-</i> ‘to fill’	(<i>šūništen</i>)
<i>dai-ⁱ/ti-</i> ‘to put’	(<i>[t]ištēni, daišten</i>)
<i>dāla-ⁱ/dāli-</i> ‘to let in peace’	(<i>dālešten</i>)
<i>tarna-ⁱ/tarn-</i> ‘to release’	(<i>tarništen</i>)
<i>ūnna-ⁱ/ūnni-</i> ‘to send here’	(<i>ūnništēni, ūnništen</i>)
<i>uppa-ⁱ/uppi-</i> ‘to send here’	(<i>uppešten</i>)
<i>zai-ⁱ/zi-</i> ‘to cross’	(<i>zištēn[i]</i>)

Of these verbs, *pai-ⁱ/pi-* ‘to give’ is remarkable because it **always** uses the ending *-šten(i)* and **never** *-tten(i)*:

OS: *[p]i-i-iš-te-en* (StBoT 25.7, IV 10)
 MH/MS: *pí-iš-te-ni* (HKM 58, 22, 23, KUB 13.27 + 23.77, Vs. 10, 31, 51, 61, 100),
pí-iš-te-en (KUB 23.77, Vs. 58, KUB 31.105, 17), *pa-iš-te-en* (KUB 23.77,
 Vs. 31, KUB 31.105, 10)
 NH: *pí-eš-te-e-ni* (KUB 14.15+, I 15), *pí-e-eš-te-e-ni* (KBo 5.13, I 8), *pí-eš-te-ni*
 (KUB 22.70, Vs. 43), *pí-eš-ten* (KBo 5.13, I 7) but never: ***pittēni, **pitten* or
***paiitten*

This cannot be due to chance. This verb is well-attested and one of the most common verbs in Hittite.

The other verbs show forms with *-šten(i)* as well as with *-tten(i)*. Of course, it would be very important to establish a chronological distribution between these forms. If we can find out which ending was used in which period, we are likely to receive a better insight into the origin of *-šten(i)*. The verbs that are attested often enough to give a good picture are the following:

*au-*ⁱ/*u-* ‘to see’:

OH period: *uš-t[e-e]-ni* (KBo 7.14 + KUB 36.100, Vs. 23 (OS)), *uš-te-ni* (KBo 3.28, II 9 (OH/NS))

MH period: *a-uš-te-ni* (KUB 13.27, Vs. 26 (MH/MS), KUB 31.105, 12 (MH/MS), *a-uš-ten* (HKM 86, 13 (MH/MS), KBo 12.58+, II 37 (MH[?]/NS)), *a-uš-te-en* (KUB 24.4 + 30.12, II 14 (OH/MS))

NH period: *a-ut-te-ni* (KUB 31.115, 21 (OH/NS), KUB 26.12 + 21.42, I 9, 37, IV 4 (NH, Tudh. IV)).

*dai-*ⁱ/*ti-* ‘to put’:

OH period: [*t*]*i-iš-te-ni* (KBo 8.42, Rs. 1 (OS)), *da-iš-te-en* (KBo 8.42, Rs. 2, 3 (OS)).

MH period: *da-iš-ten* (HKM 60, 15 (MH/MS)),

NH period: *da-a-iš-ten* (KBo 12.18, I 3 (OH/NS), KBo 4.8, II 17 (NH)), *ta-iš-ten* (KUB 21.19, III 9 (NH)); *da-a-it-te-ni* (KUB 13.6, II 5 (NS)).

*nai-*ⁱ ‘to turn’:

OH period: unattested

MH period: *na-iš-te-ni* (KUB 23.77, 94 (MH/MS), KUB 23.72, Rs. 62 (MH/MS), *na-iš-ta-ni* (KUB 23.72, Rs. 58 (MH/MS), *na-iš-ten* (KUB 15.34, I 50, II 2, III 16 (MH/MS), KUB 13.29, 8 (MH/NS)), *na-a-iš-ten* (KUB 17.8, IV 6 (MH[?]/NS)), *na-a-eš-ten* (ibid. (MH[?]/NS)), *ne-ya-ten* (KUB 15.32, I 55 (MH/NS)), *ne-ya-at-ten* (KUB 15.31, I 53 (MH/NS))

NH period: *ne-ya-at-ten* (KUB 7.60, II 30 (NS)), [*ne-*]*i-ya-at-ten* (KUB 14.14, Rs. 34 (NH, Murs. II))

*mēma-*ⁱ/*mēmi-* ‘to speak’

OH period: *me-mi-eš-ten* (KUB 43.55, II 1 (OH[?]/NS))

MH period: *me-mi-iš-te-ni* (KUB 23.77, 28 (MH/MS)), *me-ma-at-te-ni* (KUB 23.82, Rs. 25 (MH/MS or NS)), KUB 13.4, IV 15, 19 (pre-NH/NS)), *me-mi-iš-ten* (KUB 23.72, Rs. 54 (MH/MS), KBo 15.28, Rs. 11 (MS)), *me-mi-iš-te-[en]* (KUB 23.77, 37 (MH/MS)), *me-mi-eš-ten* (KUB 13.4, I 64 (pre-NH/NS))

NH period: *me-ma-at-te-ni* (KUB 26.1, I 21, III 52 (NH), KUB 15.1, II 31 (NH)), *me-ma-te-ni* (KUB 21.42, IV 4 (NH)), *me-mi-eš-ten* (KUB 14.8, Rs. 36 (NH)).

The case of *au-*ⁱ/*u-* is especially telling. In the oldest texts, we find the form *uštēni*. In MH texts, this form is altered to *aušteni* (analogical introduction of the full-grade into the plural stem). A form *autteni* (with the ending *-tteni*) is predominantly found in one text, which is attributed to Tudhaliya IV, one of the last Hittite kings. Consequently, in this verb,

the ending *-šten(i)* is found from the oldest texts onwards, and its replacement by *-tten(i)* took place in the very latest stage of Hittite only.

Also *dai-ⁱ/ti-* ‘to put’ shows a clear distribution: *-šten(i)* is found from OS to NH texts, whereas *-tten(i)* is found only once, in a NS text.

A similar picture is shown by *nai-ⁱ*. The oldest (MH) forms are *naišteni*, *naištani* and *naišten*, showing the ending *-šten(i)*. The ending *-tten(i)* is only found in NH copies of MH texts and in NH texts. It is further remarkable that it is only found when the stem of the verb is *neye/a-^{zi}*, which is the secondarily thematicised *mi*-inflecting variant of the older *hi*-inflecting stem *nai-ⁱ*.

The same distribution is found in the case of *mēma-ⁱ/mēmi-*. The oldest forms, *memišteni*, *memišten*, show the ending *-šten(i)*, whereas the ending *-tten(i)* is found in younger copies of MH texts and in NH compositions only. The text KUB 23.82, in which the oldest attestation of *me-ma-at-te-ni* is found, is paleographically to be regarded as a transition between a MS and a NS text and must be dated to the late MH / early NH period.

Accordingly, the chronological distribution for these four verbs is the following: the oldest (OH and MH) forms show the ending *-šten(i)*, whereas the ending *-tten(i)* is only found in texts (copies as well as original compositions) from the late MH / early NH period onwards. In my view, these facts can only be explained by assuming that in these verbs the ending *-šten(i)* is **not** a secondary ending that replaces original *-tten(i)*, but must have been the **original** one, which in younger times is replaced by the ending *-tten(i)*.

The next question is: what are the common features of verbs that show an original ending *-šten(i)*? When we look at the 21 verbs for which an ending *-šten(i)* is attested (see the list above), we immediately see that they are **all** *hi*-inflected verbs. There is not a single *mi*-inflected verb that shows the ending *-šten(i)*⁸. This cannot be coincidental: statistics show that the chance that a random collection of 21 Hittite verbs consists of *hi*-verbs only, is 1 in 1.2 trillion⁹.

Our conclusion therefore should be that the ending *-šten(i)* is the original *hi*-ending that contrasts with the *mi*-ending *-tten(i)*. This distribution is nicely corroborated by the fact that in the paradigm of *nai-ⁱ* as cited above, all forms that show the *hi*-inflected stem *nai-* take *-šten(i)*, whereas the forms that show the secondarily thematicised *mi*-inflected stem *neye/a-^{zi}* take the ending *-tten(i)*¹⁰.

⁸ Note that, as stated above, *mi*-verbs in which the ending *-tten(i)* would phonetically merge with *-šten(i)* (e.g. *eš-^{zi}/aš-* ‘to be’: *ašteni*; *ed-^{zi}/ad-* ‘to eat’: *azteni*) cannot be used as an argument and must be left out of consideration.

⁹ To my knowledge, we find about 210 *hi*-verbs and 580 *mi*-verbs in Hittite. The ratio *hi*-verbs : total number of verbs therefore is 210 : 790 = 1 : 3.76. The chance that a random list of 21 Hittite verbs consists of *hi*-verbs only then is 1 : 3.76²¹ = 1 : 1,212,170,547,718.

¹⁰ The old paradigm *nehhi*, *naitti*, *nāi*, *naiwani*, *naišteni* / *naištani*, *nēanzi* is replaced by NH *neyami*, *neyasi*, *neyazzi*, *neyaweni*, *neyatteni*, *neyanzi*. Similarly e.g. *halzišten* of *hi*-inflecting *halzai-ⁱ/halzi-* ‘to scream’ besides NS *halziyatteni* of thematicised *halziye/a-^{zi}*.

Nevertheless, not all *hi*-inflected verbs show the ending -šten(i). When a *hi*-verb is attested in NS and NH texts only, it is possible that this is due to the replacement of -šten(i) by -tten(i) in younger times as we have established for *au*-ⁱ/u-, *dai*-ⁱ/ti-, *nai*-ⁱ and *mēma*-ⁱ/mēmi-. However, there are *hi*-verbs attested in OS and MS texts that use -tten(i) instead:

āk-ⁱ/*akk*- ‘to die’: *a-ak-te-en* (KUB 14.1 + KBo 19.38, Vs. 12 (MH/MS)).

ār-ⁱ/*ar*- ‘to arrive’: *ar-te-ni* (KUB 31.101, 31 (MS)), *a-ar-ten* (KUB 23.72+ 40.10, Rs. 28 (MH/MS)).

lā-ⁱ/*l*- ‘to release’: *la-a-at-te-en* (KUB 24.4, Rs. 24 (MH/MS)).

šākk-ⁱ/*šakk*- ‘to know’: *ša-ak-te-e-ni* (KBo 22.1, Vs. 5 (OS)).

dā-ⁱ/*d*- ‘to take’: *da-at-te-e-ni* (KUB 36.106, Vs. 8 (OS)), *da-a-at-te-en* (StBoT 25, 7 IV 9 (OS)), *da-at-te-en* (KUB 31.105, 16 (MH/MS)), *da-at-ten* (HKM 17, l. edge 4 (MH/MS), HKM 41, 12 (MH/MS), HKM 45, 16 (MH/MS)).

tarna-ⁱ/*tarn*- ‘to allow’: *tar-na-at-te-ni* (KUB 23.77+, Vs. 101, 102 (MH/MS), KUB 31.105, 14 (MH/MS)), *tar-na-at-ten* (HKM 41, 14 (MH/MS)).

uda-ⁱ/*ud*- ‘to bring here’: *ú-da-at-te-[en]* (KUB 13.27, Vs. 17 (MH/MS)).

wašta-ⁱ/*wašt*- ‘to sin’: *wa-aš-ta-at-te-ni* (KBo 16.27, I 23 (MH/MS)).

watarnahh-ⁱ ‘to order’: *wa-tar-na-ah-ten* (HKM 44, 8 (MH/MS)).

wiwakk-ⁱ ‘to demand’: *ú-i-wa-ak-<<te->>-ten* (KUB 15.34, III 40 (MH/MS)).

We see that this group consists of verbs that end in a consonant (*āk*-ⁱ/*akk*- ‘to die’, *ār*-ⁱ/*ar*- ‘to arrive’, *šākk*-ⁱ/*sakk*- ‘to know’, *watarnahh*-ⁱ ‘to order’ and *wiwakk*-ⁱ ‘to demand’) and verbs that belong to the ‘half-consonantal’ class, i.e. verbs that originally ended in a laryngeal (*lā*-ⁱ/*l*- ‘to release’, *dā*-ⁱ/*d*- ‘to take’, *tarna*-ⁱ/*tarn*- ‘to allow’, *uda*-ⁱ/*ud*- ‘to bring here’ and *wašta*-ⁱ/*wašt*- ‘to sin’). How do these verbs fit into the picture?

On the basis of all the philological facts gathered up till now, I would like to propose the following scenario.

Originally, all *hi*-verbs showed a 2pl.-ending -šten(i) that contrasted with the *mi*-ending -tten(i). In the course of the development of Hittite, the ending -šteni is gradually being replaced by the ending -tteni. A possible triggering for the replacement could be the fact that -šten(i) and -tten(i) merged phonetically if the verb stem ended in -š- or a dental consonant.

For verbs of which the root ends in a consonant, this replacement took place in pre-Hittite times already, probably for phonotactic reasons: the Hittites could not easily cope with consonant clusters containing an interconsonantal -š-. The replacement in these verbs had ended by the time the first Hittite texts were written, with the result that the original ending -šten(i) is not attested in *hi*-verbs that end in a consonant¹¹.

For verbs of which the root ended in a laryngeal, the replacement started in pre-Hittite times, too. For a few verbs of this class the replacement was fully completed by the time

¹¹ Except -š-, of course, but here we cannot distinguish between -tten(i) and -šten(i).

that the first Hittite texts are written (cf. *dāⁱ-/d-* ‘to take’ that has *dattēni* and *dāttēn* in OS texts already). For other verbs the replacement is still visible in the oldest texts (cf. OH *petišten* ‘you must bring away’ besides younger *pedattēni*; MH *ḥanništen* ‘you must judge’ besides *ḥannatten*)¹².

For the *ḥi*-verbs that end in a vowel (the *dāi/tiyanzi*-class, *mēma/i*-class and *au-/u-* ‘to see’) no replacement took place in the pre-Hittite or OH period. The first signs of replacement in these verbs are visible in the late MH period only (e.g. *zaitten* ‘you must cross’ (KUB 31.101, 7 (MS)) beside older *zištēni* (KUB 26.87, 11 (OH/NS)), *mematteni* ‘you speak’ (MH/MS or NS) beside older *memišteni*), but the bulk of the replacement took place in the NH period. The very frequent verb *paiⁱ/pi-* ‘to give’ never fell victim to the replacement, however, and retained the ending *-šten(i)* up to the last Hittite texts.

This means that the original Hittite verbal endings of the active were as follows:

<i>mi</i> -endings			<i>ḥi</i> -endings			
	pres.	pret.	PIE	pres.	pret.	PIE
1sg.	<i>-mi</i>	<i>-(n)un</i>	< <i>*-m(i)</i>	<i>-ḥḥe, -ḥḥi</i>	<i>-ḥḥun</i>	< <i>*-h₂e(i)</i>
2sg.	<i>-ši</i>	<i>-š</i>	< <i>*-s(i)</i>	<i>-tti</i>	<i>-tta</i>	< <i>*-th₂e(i)</i>
3sg.	<i>-za, -zi</i>	<i>-t(ta)</i>	< <i>*-t(i)</i>	<i>-e, -i</i>	<i>-s</i>	< <i>*-e(i) / *-s</i>
1pl.	<i>-weni</i>	<i>-wen</i>	< ?	<i>-weni</i>	<i>-wen</i>	< ?
2pl.	<i>-tteni</i>	<i>-tten</i>	< <i>*-th₁e</i>	<i>-šteni</i>	<i>-šten</i>	< ?
3pl.	<i>-anzi</i>	<i>-er</i>	< <i>*-enti</i>	<i>-anzi</i>	<i>-er</i>	< <i>*-ēr</i>

What is the origin of this newly discovered ending *-šten(i)*? In my view, the most important element of this ending is *-š-*, as the element *-ten(i)* can easily have been adopted from the *mi*-ending *-tten(i)*.

It is in my view quite likely that the Hittite *ḥi*-endings in one way or another go back to or are cognate with the PIE perfect. Usually, these endings are reconstructed as follows, primarily on the basis of Greek and especially Sanskrit evidence, of which I have given the paradigm as well:

1sg. * <i>CóC-h₂e</i>	1pl. * <i>CC-mé</i>	cf. Skt. 1sg. <i>cakár-a</i>	1pl. <i>cakṛ-má</i>
2sg. * <i>CóC-th₂e</i>	2pl. * <i>CC-é</i>	2sg. <i>cakár-tha</i>	2pl. <i>cakr-á</i>
3sg. * <i>CóC-e</i>	3pl. * <i>CC-(é)r</i>	3sg. <i>cakār-a</i>	3pl. <i>cakr-úr</i>

We see that for the 2pl. an ending *-*e* is reconstructed. This ending is based on the Sanskrit paradigm only, however, as in the other IE languages, the plural endings of

¹² As this class, which consists of verbs that have a root-final laryngeal (**CoH-* / **CH-*), in this case behaves similar to the verbs that end in a consonant (for which, too, the replacement of *-šten(i)* by *-tten(i)* starts in the pre-Hittite period), and not similar to the verbs that end in a vowel (for which the replacement only starts in the late MH period, and largely takes places in the NH period), we might have to assume that at the (pre-Hittite) time of the commencing of the replacement, the root-final laryngeals were still consonantal.

the perfect have not well been preserved. The only other IE language group in which the plural perfect endings seem to have been preserved is Tocharian, namely in its preterite (class I-V, example ‘to be’):

	TochB	TochA	PToch.	
1sg.	<i>takāwa</i>	<i>tākā</i>	< * <i>taka-wa</i>	< *-w-h ₂ e
2sg.	<i>takāsta</i>	<i>tākast</i>	< * <i>taka-sta</i>	< *-s-th ₂ e
3sg.	<i>tāka, takā+</i>	<i>tāk, tāka+</i>	< * <i>taka-Ø</i>	< *-e
1pl.	<i>takām*</i>	<i>tākmās</i>	< * <i>taka-mə</i>	< *-me
2pl.	<i>takās</i>	<i>tākas*</i>	< * <i>taka-sə</i>	< *-su?
3pl.	<i>takāre</i>	<i>tākar</i>	< * <i>taka-re</i>	< *-ro

We see that here in the 2pl. an element -s- is found as well, which is difficult to explain as a secondary creation. It might therefore be attractive to connect this -s- with the -š- found in Hitt. -šten(i). I must admit, however, that it remains difficult to reconcile this *-s- with the Skt. ending -a, which seems to point to *-e.

For the time being, my conclusions are the following: The Hittite *mi*- and *hi*-verbs did not only have different endings in the singular, but in the 2pl. as well, which was -tten(i) in the *mi*-inflection, reflecting the PIE primary ending *-th₁e, and -šten(i) in the *hi*-inflection. The *hi*-ending -šten(i) is gradually being replaced by the *mi*-ending -tten(i) from pre-Hittite times onwards, first in verbs with a root-final consonant or laryngeal, and later on in verbs that end in a vowel. At the end of the Hittite period almost all *hi*-verbs use the ending -tten(i), except for the frequent verb *pai*-ⁱ/*pi*- ‘to give’.

This newly discovered 2pl.-ending -šten(i) (of which the element -tten(i) might have been adopted from the *mi*-ending -tten(i) at an earlier period, which would only leave the element -š- as the last trace of the original ending) resembles the PToch. 2pl. preterite-ending *-sə regarding the element -s-, which is difficult to explain as a secondary innovation. How this element *-s- can be linked to the Skt. perfect-ending 2pl. -a (which seems to reflect *-e) remains unclear.

Appendix

All attestations of -šten(i) that are known to me: *au*-ⁱ/*u*- ‘to see’: *uš-t[e-e]-ni* (KBo 7.14 + KUB 36.100, Vs. 23 (OS)), *uš-te-ni* (KBo 3.28, II 9 (OH/NS)), *a-uš-te-ni* (KUB 13.27, Vs. 26 (MH/MS)), KUB 31.105, 12 (MH/MS)), *a-uš-te-en* (KUB 24.4 + 30.12, II 14 (OH/MS)), *a-uš-ten* (HKM 86, 13 (MH/MS), KBo 12.58+, II 37 (MH?/NS)); *halzai*-ⁱ/*halzi*- ‘to cry, to call’: *hal-zi-iš-ten* (KBo 3.1, II 51 (OH/NS), KUB 28.82, I 18 (OH/NS), VBoT 58, I 27, 29, 32 (OH/NS), KUB 9.11 + 28.82 + IBoT 3.98, I 18 (OH/NS), KBo 13.98 Rs. 7 (fr.) (OH/NS)), *hal-zi-iš-te-en* (IBoT 3.89, Vs. 6 (OH/NS)), *hal-zi-eš-ten* (KBo 13.106, I 18 (OH/NS)); *hanna*-ⁱ/*hann*- ‘to sue’: *ha-an-ni-iš-ten* (HKM 60, 9 (MH/MS)), *ha-an-ni-eš-ten* (KUB 54.1, II 43 (NS)); *išhai*-ⁱ/*išhi*- ‘to bind’: *iš-ha-iš-t[e-en]* (KBo 12.22, 11 (OH/NS)); *išpai*-ⁱ/*išpi*- ‘to be satiated’: *is-pí-is-te-en* (KUB 12.17, 6 (NS)); *mai*-ⁱ/*mi*- ‘to grow’: *ma-is-te-en* (KBo 8.35, II 15 (NH)); *mēma*-ⁱ/*mēmi*- ‘to speak’: *me-mi-is-te-ni* (KUB 23.77, 28

(MH/MS)), *me-mi-iš-te-[en]* (KUB 23.77, 37 (MH/MS)), *me-mi-iš-ten* (KUB 23.72, Rs. 54 (MH/MS), KBo 15.28, Rs. 11 (MS), KUB 36.97, IV (7), 9 (NS), KUB 6.45, I 19 (NH)), *me-mi-eš-ten* (KUB 43.55, II 1 (OH?/NS), KUB 13.4, I 64 (pre-NH/NS), KUB 14.8, Rs. 36 (NH)); *naiⁱ* ‘to turn’: *na-iš-ta-ni* (KUB 23.72, Rs. 58 (MH/MS)), *na-iš-te-ni* (KUB 23.77, 94 (MH/MS), KUB 23.72, Rs. 62 (MH/MS)), *na-iš-ten* (KUB 15.34, I 50, II 2, III 16 (MH/MS), KUB 13.29, 8 (MH/NS)), *na-a-iš-ten* (KUB 17.8, IV 6 (MH?/NS)), *na-a-eš-ten* (KUB 17.8, IV 6 (MH?/NS)); *nannaⁱ/nanniⁱ* ‘to lead’: *na-an-ni-iš-ten* (KUB 31.101, 22 (NH)); *paiⁱ/piⁱ* ‘to give’: *pí-iš-te-ni* (KUB 12.63, Rs. 33 (OH/MS), HKM 58, Rs. 22, 23 (MH/MS), KUB 13.27 + 23.77, Vs. 10, 31, 51, 61, 100 (MH/MS), KUB 15.34, III 38, KUB 26.19, II 28 (MH/NS)), *pí-eš-te-e-ni* (KUB 14.15+, I 15 (NH)), *pí-eš-te-ni* (KUB 13.4, I 55, 57 (MH/NS), KUB 15.33b, III 3 (MH/NS), KBo 19.44, Rs. 55 (NH), KUB 22.70, Vs. 43 (NH), KUB 5.17, II 9 (NH)), *pí-e-eš-te-e-ni* (KBo 5.13, I 8 (NH)), *[p]í-iš-te-en* (IBoT 3.135, Rs. 10 (OS)), *pí-iš-te-en* (KUB 23.77, Vs. 58 (MH/MS), KUB 31.105, 17 (MH/MS), KBo 16.27 + 40.330, I 9 (MH/MS)), *pí-iš-ten* (KUB 23.77, 14 (MH/MS), KUB 23.72+40.10, Vs. 61 (MH/MS), KBo 17.105, II (33) (MH/MS), KUB 15.34, II 49 (MH/MS), KUB 31.119, r.col. 4 (MS?), KUB 15.32, I 55 (MH/NS), KBo 15.34, II 6 (MH/NS), KUB 26.19, I 17 (MH/NS), KUB 25.31, Vs. 52 (NS)), *[p]í-iš<-te>-en* (KUB 30.12, Rs. 15 (NH)), *pa-iš-te-en* (KUB 23.77, Vs. 31 (MH/MS), KUB 31.105, 10 (MH/MS)), *[p]a-iš-ten* (KUB 12.56, IV 7 (MH/NS)), *pí-eš-ten* (KBo 10.37, II 33 (MH/NS), KUB 41.8, III 10 (MH/NS), KBo 10.45, II 32 (MH/NS), KUB 26.29, Vs. 15 (MH/NS), KUB 36.89, Rs. 40 (NH), KUB 24.12, III 7 (NH), KBo 5.13, I 7 (NH)), *pí-eš-te-[en]* (KBo 11.14, III 17 (MH/NS)); *paraiⁱ/pariⁱ* ‘to blow’: *pa-ra-is-te-ni* (KBo 3.27, Vs. (24), 26 (OH/NS)); *pennaⁱ/penniⁱ* ‘to drive away’: *pé-en-ni-iš-ten* (KUB 26.19, II 34 (MH/NS)); *pedaⁱ/pedⁱ* ‘to take’: *pé-ti-iš-te-en* (KBo 17.14 + KUB 36.100, Rs. 9 (OS)); *šaiⁱ/šiⁱ* ‘to press, to seal’: *ša-a-iš-ten* (KUB 26.82, 9 (NS)), *še-iš-te-en* (KUB 31.74, II 9 (OH/NS)); *šunnaⁱ/šunnⁱ* ‘to fill’: *šu-u-ni-iš-ten* (KUB 13.3, II 17 (OH/NS)); *daiⁱ/tiⁱ* ‘to put’: *[t]í-iš-te-ni* (KBo 8.42, Rs. 1 (OS)), *da-iš-te-en* (KBo 8.42, Rs. 2, 3 (OS)), *da-iš-ten* (HKM 60, 15 (MH/MS)), *da-a-iš-ten* (KBo 12.18, I 3 (OH/NS), KBo 4.8, II 17 (NH)), *ta-iš-ten* (Bo 4222 (KUB 21.19), III 9 (NH)); *dālaⁱ/dāliⁱ* ‘to let in peace’: *da-a-li-eš-ten* (KBo 32.14, II 23, 39, III 6, 20, 34, 54 (MS)); *tarnaⁱ/tarnⁱ* ‘to release’: *tar-ni-iš-ten* (KUB 6.45+, I 32 (NH), KUB 6.46, I 33 (NH)); *ūnnaⁱ/ūnniⁱ* ‘to send here’: *u²-[u]n-ni-iš-te-ni* (KUB 23.77+, Vs. 104 (MH/MS)), *u-un-ni-iš-ten* (HKM 16, 10 (MH/MS)); *uppaⁱ/uppiⁱ* ‘to send here’: *up-pí-eš-ten* (KBo 18.2, Rs. 5 (NH)); *zaiⁱ/ziⁱ* ‘to cross’: *zi-iš-te-e-n[i]* (KUB 26.87, 11 (OH/NS)).