Hittite *kane/išš-*[zi] ‚to recognize' and
other *s*-extended verbs

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1. In his article on PIE *$\acute{g}neh_3$-* ‚to recognize, to know', Jasanoff (1988) tries to show that Hitt. „*kanēšzi*"[1] ‚recognizes' reflects PIE *$\acute{g}n\acute{e}h_3$-s-ti*, which form is supposed to be an *s*-present of the inchoative type with Narten *ḗ/é*-ablaut. In this form, *$\bar{e}$* would then not have been coloured by the adjacent *h_3*, a „major piece of evidence for the correctness of Eichner's non-coloration rule" (1988: 236).[2]

An important argument in favor of the archaicity of this form is, according to Jasanoff, the parallel formation that is found in TochA *kñasäṣt* ‚du kennst dich aus', which he reconstructs as *$\acute{g}n\acute{e}h_3$-s-* as well. Because Hackstein (1993: 151f.) has shown that TochA *kñasäṣt* is to be taken as a Pret. III of the present stem *knāna-* with completely regular morphological palatalisation and *s*-suffix, this argument cannot be maintained: the formation of *kñasäṣt* can easily be inner-Tocharian.

Moreover, Jasanoff's supposition that PIE possessed an ‚inchoative' formation with *s*-suffix and *ḗ/é*-ablaut is based on fairly circumstantial reasonings only. First, Jasanoff assumes that the several verbal *s*-formations as attested in the Indo-European languages (desideratives, inchoatives, iteratives) originate from a single PIE formation because „the thoroughgoing morphological parallelism of the three groups of sigmatic formations (i.e. desiderative, inchoative and iterative) provides important *circumstantial* evidence for deriving them from a common source" (1988: 236; emphasis added). Secondly, of the non-Anatolian IE languages, Jasanoff cites two verb categories with *s*-suffix in which he assumes that traces of an original acrostatic *ḗ/é*-ablaut still can be found. The first category is the Baltic *s*-future. Jasanoff (1988: 233) suggests that it originally had an acrostatic paradigm, which, according to him, can be seen in the dual and plural endings of the Baltic *s*-future, that have an *-i-* as union vowel (Lith. 1pl. *dúosime*, 2pl. *dúosite*), which he explains through false segmentation of a hypothetical 3pl. *$-sint(i) < $*-s-ṇti*. This Ø-grade ending then would imply a full grade in the root of the 3pl., which would point to an original acrostatic paradigm with *$\acute{e}/é$*-ablaut for these *s*-futures. However, as he states, „no trace of apophonic alternation is actually retained in Lithuanian, which synchronically makes its future by adding *-s-* to the infinitive stem" (1988: 233). Kortlandt (1982: 7-8) plausibly argues that the Baltic *s*-future reflects a paradigm with *e*-grade throughout the paradigm and athematic endings. The second category is the Old Irish unreduplicated *s*-future. Jasanoff thinks it must have had *ḗ/é*-ablaut originally, because „it is *suggestive* that of the six verbs for which such futures are attested, four are *associated* with lengthened-grade formations elsewhere" (1988: 233; emphasis added).[3] The citation speaks for itself.

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[1] The form in fact is *kane/išzi*, as we will see below.
[2] Cf. Eichner 1973 for Eichner's Law, which states that PIE *$\bar{e}$* did not get coloured by an adjacent *h_2* or *h_3*.
[3] See Kortlandt 1984 for an extensive treatment of the Old Irish futures.

In my opinion, Jasanoff's assumption that all verbal *s*-suffixes in the Indo-European languages originate from a single source, and that this formation originally had an acrostatic ablaut *$\acute{e}/\acute{e}$ of which Hitt. *kanešš-*[zi] (from *$\acute{g}n\acute{e}h_3$-s-ti* / *$\acute{g}n\acute{e}h_3$-s-n̥ti*) would then be the sole survivor is based on fairly rash and unconvincing, even circular reasoning only.[4]

2. If we want to make reliable statements on the origin of the verb *kanešš-*[zi], we first have to look at the synchronic facts within Hittite. I will therefore investigate all Hittite verbs that show an *s*-extension in order to establish which ablaut pattern they reflect. These *s*-extended verbs are:[5]

ḫarš-[zi] ,to till (the soil)'	< *h_2erh_3- + -s- ?
kališš-[zi] / *kališš-* ,to call'	< *$kelh_1$- + -s-
kane/išš-[zi] ,to recognize'	< *$\acute{g}neh_3$- + -s-
karš-[zi] ,to cut'	< *ker- + -s-
kuerš-[zi] ,to cut'	< *$k^w er$- + -s-
paḫš-[i] ,to protect'	< *peh_2- + -s-
pāš-[i] ,to swallow'	< *peh_3- + -s-
tamāšš-[zi] / *tame/išš-* ,to (op)press'	< *$demh_2$- + -s-

3. Because of its peculiar ablaut, I will first focus on the verb *tamāšš-*[zi] / *tame/išš-* ,to (op)press'. This verb is generally considered to be cognate with Gk. δάμνημι ,to tame, to subdue', Ved. *damáyati* ,to control, to restrain (oneself)', etc., and therefore must reflects *$dmeh_2s$-.[6] Diagnostic attestations from OH and MH texts are: 3sg.pres.act. *ta-ma-a-aš-zi* (IBoT 1.36 i 34 (MH/MS)), [*ta-m*]*a-aš-zi* (KUB 35.21 rev. 16 (MS)), 3pl.pres.act. *da-me-iš-ša-a*[*n-zi*] (KUB 29.48 rev. 19 (MH?/MS)), *ta-me-eš-ša-an-zi* (Oettinger 1979: 122 (MH)), 3sg.pret.act. *ta-ma-a-aš-ta* (KUB 24.4 obv. 15 (OH/MS)), *ta-ma-aš-ta* (KUB 24.4 obv. 16 (OH/MS)), 3pl.pret.act. *ta-me-eš-šer* (KBo 22.2 rev. 12 (OH/MS)), *da$_x$-m*[*i-i*]*š-šer₉* (KBo 3.38 rev. 29 (OH/NS)),[7] 3sg.imp.act. *ta-ma-a-aš-du* (KUB 33.66 i 16 (OH/MS)), part. *ta-mi-eš-ša-an-t-* (KUB 12.43, 10 (OS)), *ta-me-eš-ša-an-t-* (IBoT 1.36 iii 59 (MH/MS)), inf.I *ta-ma-aš-šu-u̯a-an*[-*zi* (IBoT 4.25 rev. 6 (OS?)), impf. *da-me-eš-ke/a-* (KBo 22.1 obv. 1, 19 (OS), KBo 15.32 iv 3 (OH/MS)), *ta-me-eš-ke/a-* (KBo 22.1 obv. 3 (OS)).

We see that we can establish an ablaut opposition between a strong stem *tamāšš-* and a weak stem *tame/išš-*: *tamāšzi* / *tame/iššanzi*. Because this verb is the only *mi*-conjugating verb to show such an ablaut, it requires an explanation.

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[4] Lehrman (1997) also strongly speaks against Jasanoff's circular argumentation. However, Lehrman's own explanation of *kanešzi*, regarding it as reflecting a root *$\acute{g}n\bar{e}$- alternating with *$\acute{g}n\bar{o}$-, denies all the merit that the laryngeal theory has brought us.

[5] The denominative *s*-extended verbs *ištamašš-*[zi] ,to hear' (< *$st(e)h_3men$- + -s-) and *kammarš-*[zi] ,to defecate' (< *$g^h od$-*mr* + -s-?) are left out of consideration here.

[6] The Schwebe-ablaut assumed here, *$dmeh_2$-s- (reflected in *tamāszi* << *$dm\acute{e}h_2$-s-ti*) vs. unextended *$demh_2$-, is parallelled by other cases of Schwebe-ablaut occuring in *s*-extensions of PIE verbal roots: *$m\underline{i}e\acute{k}s$- is derived from *$me\underline{i}\acute{k}$-; *$h_2leks$- from *$h_2elk$-; *$h_2\underline{u}eks$- from *$h_2e\underline{u}g$-; cf. LIV²: 278, 289, 445.

[7] A NH value *da$_x$* for the sign *dam* (HZL 298) is suggested by Melchert 1991: 126.

The most promising treatment of this ablaut thus far is by Melchert (1994: 70-1), who observes that an acrostatic paradigm 3sg. *$dm\acute{\bar{e}}h_2$-s-ti* / 3pl. *$dm\acute{e}h_2$-s-n̥ti* as implied by Jasanoff's article on *$\acute{g}n\acute{e}h_3$-s-ti* / *$\acute{g}n\acute{e}h_3$-s-n̥ti* cannot account for Hitt. *tamāšš-* / *tame/išš-*. Melchert assumes that the original *é/é*-ablaut has been supplanted by *ḗ/Ø*, yielding *$dm\acute{\bar{e}}h_2$-s-ti* / *dmh_2-s-énti*, which in his view lead to the attested Hittite paradigm. In order to derive 3pl. *tame/iššanzi* from a zero-grade form *dmh_2-s-énti*, Melchert[8] suggests that in this latter form the laryngeal is regularly lost between consonants. The resulting initial cluster *dms-* would normally vocalize its *-m-*, but, according to Melchert, in this case remains *dms-* due to „an analogical maintenance of non-syllabic sonorant after the strong stem" (1994: 71). The cluster *dms-* is eventually relieved by an anaptyctic vowel *e*,[9] resulting into attested *tamešš-* = [tmess-]. Melchert further thinks that the 3sg.-form *$dm\acute{\bar{e}}h_2$-s-ti* would regularly yield **$tamaḫ\check{s}zi$*, and proposes that the paradigm **$tamaḫ\check{s}zi$* / *tameššanzi* eventually is levelled out to attested *tamāšzi* : *tameššanzi*.

It is rather odd, however, that Melchert on the one hand assumes an acrostatic paradigm for *$dmeh_2$-s-* in analogy to Jasanoff's reconstruction for *$\acute{g}neh_3$-s-*, but on the other hand does not take the ultimate consequence of Jasanoff's theory into account, namely that through Eichner's Law *$dm\acute{\bar{e}}h_2$-s-ti* should have yielded Hittite **$tam\bar{e}ḫ\check{s}zi$*. In that case, it would be highly improbable to assume that a pre-Hitt. paradigm *$tam\bar{e}ḫ\check{s}zi$* / *$tame\check{s}\check{s}anzi$* would be levelled out to *tamāšzi* / *tameššanzi* as attested. Nevertheless, Melchert's suggestion that 3pl.pres. *tame/iššanzi* goes back to the zero-grade form *dmh_2-s-énti* is an appealing explanation of this problematic form, albeit that later on we will see that this development is not secondary, but rather the result of a regular development *CRHsV* > Hitt. *CaRe/iššV*.

In my view, the only way to account for the Hittite paradigm *tamāšzi* / *tame/iššanzi* is to assume that the 3sg.-form reflects *e*-grade, as is logically indicated by the zero-grade we find in the 3pl. An original paradigm 3sg. *$dm\acute{e}h_2$-s-ti* / 3pl. *dmh_2-s-énti* will regularly lead to **$tamaḫ\check{s}zi$* / *tame/iššanzi*, which, as Melchert stated as well, is likely to have been levelled to *tamāšzi* / *tame/iššanzi* as attested in the oldest Hittite texts.

From the Middle Hittite period onwards we find further levellings within the paradigm of *tamāšš-/tame/išš-*: the vowel *-e/i-* of the weak stem is taken over into strong stem forms as well (3sg.pres.act. [*t*]*a-mi-iš-z*[*i*] (KBo 18.69 rev. 12 (MS)), *da$_x$-me-e-eš-zi* (KUB 12.2 iii 15 (NS)), 3sg.pret.act. *da$_x$-me-eš-ta* (KBo 13.68 obv. 11 (NS))) and the vowel *-a-* of the strong stem is taken over in weak stem forms as well (3pl.pres.act. *ta-ma-*[*aš*]*-ša-an-z*[*i*] (KUB 15.34 i 44 (MH/MS)), *da$_x$-ma-aš-ša-an-zi* (KUB 59.34 iii 7 (NS)), part. *ta-ma-aš-ša-an-t-*, *da-ma-aš-ša-an-t-*, *da$_x$-ma-aš-ša-an-t-*).

To sum up, the peculiar synchronic ablaut of *tamāšš-^{zi}* / *tame/išš-* is best explained by assuming that it goes back to the PIE *e/Ø*-ablaut.

4. The verb *kallišš-^{zi}* / *kališš-* ‚to call' has since Laroche (1961: 29) generally been connected with Gk. καλέω, Lat. *calāre* ‚to call', etc., which reflect PIE *$kelh_1$-*. The correct interpretation of the Hittite forms is, however, still much debated upon. The

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[8] Following Van den Hout 1988, who derives *tame/išš-* from *dmh_2-s-* in a slightly different way.

[9] Compare Kimball 1999: 193-9, who gives many examples of anaptyctic vowels written as <e> or <i>.

attestations of this verb are:[10] 3pl.pres.act. *ga-li-iš-ša-an-zi* (IBoT 2.80 vi 4 (OH/NS)), 3sg.pret.act. *kal-li-iš-ta* (KUB 17.5, 6 (OH/NS)), 3sg.imp.act. *kal-li-iš-du* (KUB 24.1 i 12 (NS), KUB 24.2 obv. 11 (NS)), inf.I *kal-li-iš-šu-u-ụa-an-z*[*i*] (KUB 20.88 vi 22 (MS)), *kal-le-eš-šu-ụa-an-zi* (KUB 41.8 i 22 (MH/NS), KBo 10.45 i 38 (fr.) (MH/NS)). Although Oettinger (1979: 197) calls the flexion of this verb „völlig regelmäßig", the attestations do show traces of ablaut, which can be characterised by the opposition of 3sg.pret. *kal-li-iš-ta* with geminate -*ll*- vs. 3pl.pres. *ga-li-iš-ša-an-zi* with single -*l*-. The difference in quantity of -*l*- must reflect a real phonological opposition.

The etymological details of *kallišš-^{zi}* / *kališš-* are problematic. Oettinger (1979: 197) improbably interprets the verb as a back-formation from Hitt. *kalleštar* ‚invitation' < *$kalh_1$-es-tŗ*. Kimball (1999: 412) assumes that it is an extension of a stem *$kalh_1$-éh$_1$*- as also visible in Umbr. *kařitum, kařetu, carsito* < Ital. *$kalētōd$*. As the Umbrian forms that show *$kalē$*- probably are an inner-Italic innovation,[11] the postulation of a PIE formation *$kalh_1$-éh$_1$*- is incorrect.

I think it is still best to treat *kallišš-* / *kališš-* as an *s*-extenstion. We then see that 3pl.pres. *ga-li-iš-ša-an-zi* can be traced back to a preform *klh_1-s-énti*, in the same way as *tame/iššanzi* reflects *dmh_2-s-énti*, showing the development *$CRHsV$* > Hitt. *$CaRe/iššV$*.

The interpretation of the strong stem *kallišš-* (also twice attested as *kalleš-*!) is more difficult. Because of the geminate -*ll*-, this form has to be interpreted with a real vowel -*a*-, [kalle/iss-]. This requires a preform *$kVlh_1$-s-*, because a zero-grade form *klh_1-s*- would, as we saw, have yielded *kale/išš-* = [kle/iss-]. Oettinger's and Kimball's assumption that the root reflects *$kalh_1$*- besides *$kḷh_1$*- in Gk. καλέω is not satisfactory. If we apply the sound law *$eRCC$* > Hitt. *$aRCC$*,[12] we can safely assume that the vowel was *e*, which we also would expect on the basis of the fact that this verb shows the *mi*-conjugation. I therefore reconstruct e.g. 3sg.pret. *kallišta* as *$kélh_1$-s-t*. The -*e/i*- in the strong stem *kalle/išš-* can be explained as the anaptyctic vowel -*e/i*- that has emerged in the final cluster of *$kélh_1sC°$*, which is completely parallel to the development of e.g. *$demh_2sh_2ó$*- > Hitt. *damme/išḫā-* ‚violence, harm'.[13]

Summing up, also *kallišš-^{zi}* / *kališš-* must reflect the ablaut *$e/Ø$*, namely *$kélh_1sti$* / *$klh_1sénti$*.

5. Traces of ablaut may also be seen in the verb *kuerš-^{zi}* ‚to cut off'. It is connected with Hitt. *kuer-^{zi}* ‚to cut', Ved. *kṛṇóti* ‚to do', and must go back to *k^wer-s-*. The only Hittite attestation of this verb is 1sg.pret.act. *ku-e-er-šu-un* (KBo 10.2 ii 48 (NS)) which seems to reflect *$k^wérs$-ṃ*. Other attestations are all Luwian, but show the zero-grade form *kurš-*: *kuršaụar* (n.) ‚cut-off, isolated area, island', *kuršaun-ant-* (c.) ‚id.'.

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[10]   Following Puhvel 1997: 22-3.

[11]   Cf. Schrijver 1991: 399-400.

[12]   Cf. Melchert 1994: 136-7. Note that *genzu-* ‚lap, abdomen' < *$ǵenh_1$-su*- shows that *eRh_1CV* does not participate in this rule. This does not affect *kallišta* < *$kélh_1$-s-t*, however, since here we are dealing with a sequence *eRh_1CC*.

[13]   On the basis of these forms we can set up a sound law *$VRHsC$* > Hitt. *$VRRe/išC$*.

Besides *kuerš-* we also find the reduplicated verb *kuk(k)urš-* ‚to cut up, to mutilate‘ (part. *kukuršant-*, impf. *kuu̯akuu̯araške/a-*, *kukkuraške/a-*, *kukkureške/a-*) from *$\bar{k}^w$-$\bar{k}^w$rs-*.

The attested forms can give only circumstantial evidence for an ablaut pattern *kuerš-/kurš-* from *$\bar{k}^w$er-s-* / *$\bar{k}^w$r-s-*, also reflecting *$e/\varnothing$*.

6. A few *s*-presents are indeterminate as to whether they show traces of ablaut or not. The verb *pāš-^{i}* ‚to swallow, to gulp down‘ is generally connected with Ved. *píbati*, Lat. *bibō*, etc. ‚to drink‘ and reflects *peh_3-s-*. The following attestations are cited in CHD: 3sg.pres.act. *pa-a-ši* (KUB 27.29 iii 9 (MH/NS), HT 1 i 42 (MH/NS)), *pa-aš-zi* (KUB 7.1 i 30 (pre-NH/NS), KUB 60.56, 7 (NS), KUB 60.75, 5), 3pl.pres.act. *pa- ša? -a[n-zi]* (KBo 34.2, 40), *paš?*(or *piš*)-*ša-an-zi* (KUB 51.33, 4), 2sg.pret.act. *pa-aš-ta* (KUB 33.120 i 29 (MH/NS)), 3sg.pret. *pa-aš-ta* (KUB 29.7 rev. 55 (MH/MS), KUB 33.120 i 26 (MH/NS)), *pa-a-aš-ta* KUB 43.38 rev. 15 (NH)), *:pa-aš-ta* (KUB 49.2 i 14 (NH)), 3sg.imp.act. *pa-a-šu* (KBo 10.45 iv 4 (MH/MS), KUB 41.8 iv 3 (MH/MS), KUB 43.38 rev. 11, (16) (NS)), *pa-aš-du* (KUB 29.7 rev. 55 (MH/MS)), inf.I *pa-a-aš-šu-an-zi* (KBo 32.114 obv.$^?$ 6), impf.. *pa-aš-ke/a-* (e.g. KUB 8.65 i 10), *pa-a-ši-iš-ke/a-* (KBo 32.14 iii 18, rev. 32 (MH/MS)).

The strong stem, *pāš-*, could in principle reflect *peh_3-s-* or *poh_3-s-*. Note that a preform *$p\bar{e}h_3$-s-* is impossible. Because *pāš-* is *ḫi*-conjugated, I reconstruct *$póh_3$-s-*.

For determining the ablaut grade of the weak stem, we have to look critically at the attested forns. In CHD, two forms are cited as 3pl.pres.act., viz. *pa- ša? -a[n-zi]* (KBo 34.2, 40) and *paš?*(or *piš*)-*ša-an-zi* (KUB 51.33, 4). Especially the latter form is dubious. First, the reading *paššanzi*, which CHD seems to prefer over *piššanzi*, is not very satisfactory as a reading *paš$_x$* of sign HZL 244 (*piš*) has been suggested by Catsanicos (1994: 315) on rather limited grounds only. Secondly, the form occurs in such a broken context, that its meaning is unascertainable. It is indicative that CHD itself cites exactly the same form as 3pl.pres.act. *piššanzi* of the verb *peš(š)-^{zi}* ‚to rub‘. We therefore rather leave the form *paš?*(or *piš*)-*ša-an-zi* out of the discussion. Despite its bad preservation, the other 3pl.pres.act.-form that is cited in CHD, *pa- ša? -a[n-zi]*, is reliable as the context in which it occurs indeed seems to demand a translation ‚they swallow‘. The phonological interpretation of this form is ambiguous, however. It could stand for /psant^{s}i/ as well as for /pasant^{s}i/. In the former case, /psant^{s}i/ could regularly reflect a zero-grade *ph_3s-enti*, which would mean we are dealing with an ablauting paradigm *$póh_3$-s-ei* / *ph_3-s-énti*. In the latter case, however, /pasant^{s}i/ could just reflect that unaccentuated variant of the strong stem *pāš-* that was generalized, which would mean that we cannot speak of genuine ablaut anymore.

7. The case of *karš-^{zi}* ‚to cut‘ is also unclear. It is generally connected with Gk. κείρω ‚to cut‘, Lith. *skìrti* ‚to divide‘ and reconstructed as *(s)ker-s-*. Its most important attestations are:[14] 1sg.pres.act. *kar-aš-mi* (KUB 29.1 i 36), 2sg.pres.act. *kar-aš-ti* (KBo 12.30 ii 1), 3sg.pres.act. *kar-aš-zi* (often, e.g. KUB 30.22, 18), 1pl.pres.act. *kar-šu-u-e-*

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ni (KUB 23.9, 4), 2pl.pres.act. *kar-aš-te-ni* (KUB 13.4 iv 56), 3pl.pres.act. *kar-ša-an-zi* (often), etc.

Since both PIE **kers-*[15] and **kr̥s-* regularly yield Hittite *karš-*, we cannot decide whether the paradigm of *karš-*[zi] reflects ablaut or not. Note that a preform **kēr-s-* would have yielded Hitt. ***kērš-* and therefore must be excluded.

8. The verb *ḫarš-* ‚to till (the soil)' gives no information on an original ablaut either because of its poor attestation: 3sg.pres.act. *ḫar-aš-zi* (VBoT 58 i 30), 3sg.pret.act. *ḫa-a-ar-aš-ta* (KBo 34.29, 7), inf. *ḫar-šu-u̯a-an-z[i]* (KBo 6.28 rev. 22), impf. *ḫar-aš-ke-u-e-n[i]* (KBo 19.104, 7), *ḫar-ši-iš-kán-zi* (KUB 24.7 i 21), *ḫar-ši-eš-kán-[zi]* (KUB 51.74 obv. 12).

The etymology is unascertainable. Puhvel (1954: 86-8) interprets the verb as a loanword from either Akk. *ḫarāṣu* ‚to dig a furrow' or Akk. *ḫarāšu* ‚to plant'. Others[16] connect the verb with Gk. ἀρόω, Lat. *arō* ‚to plough', which implies a reconstruction **h₂erh₃-s-*.[17] Even if the latter etymology is correct and *ḫarš-* would indeed be an *s*-extended verb, it does not shed any light on an original ablaut pattern.

9. The verb *paḫš-*[i] ‚to protect' does not show traces of ablaut anymore either. It is connected with Ved. *pā́ti* ‚to protect', Lat. *pāscō* ‚to graze' and reflects **peh₂-s-*. This well attested verb inflects thus:[18] 1sg.pres.act. *pa-aḫ-ḫa-aš-ḫi*,[19] 2sg.pres.act. *pa-aḫ-ḫa-aš-ti*, 1pl.pres.act. *pa-aḫ-šu-e-ni*, 2pl.pres.act. *pa-aḫ-ḫa-aš-te-ni*, 3pl.pres.act. *pa-aḫ-ša-an-zi*, 1sg.pret.act. *pa-aḫ-ḫa-[aš-ḫu-u]n*, 3sg.pret.act. *pa-aḫ-ḫa-aš-ta*, 3pl.pret.act. *pa-aḫ-šer*, 2sg.imp. *pa-aḫ-ši*, 2pl.imp. *pa-aḫ-ḫa-aš-te-en*, 3pl.imp. *pa-aḫ-ša-an-du*, etc.

We see that synchronically the stem of the verb is /paḫs-/, which appears as *paḫš-* before vowels and as *paḫḫaš-* before consonants, the latter with an anaptyctic vowel *-a-*. The original ablaut opposition 3sg.pres. **póh₂s-ei* vs. 3pl.pres. **ph₂s-énti* should have given *paḫši* / ***pšanzi*, which apparently has been levelled to *paḫši* / *paḫšanzi*. Note that there is no indication for original acrostatic inflection.

10. None of the Hittite *s*-extended verbs that are examined up to now shows any trace of an original acrostatic or ‚Narten'-inflection whatsoever. Instead, whenever an original ablaut can be determined it can be shown to go back to **e/Ø* for *mi*-conjugated verbs and to **o/Ø* for *ḫi*-conjugated verbs. With this in mind we must now turn our attention to the verb we started our discussion with.

11. The verb *kane/išš-*[zi] ‚to recognize' synchronically shows no ablaut. Its most important attestations are:[20] 1sg.pres.act. *ga-ni-eš-mi*, *ka-ni-iš-mi*, 3sg.pres.act. *ga-ne-eš-zi* (OS), *ga-ni-eš-zi* (OS), *ka-ni-eš-zi*, *ka-ni-iš-zi*, *ka-ni-e-eš-zi*, 3pl.pres.act. *ka-ni-eš-*

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[15]　According to Melchert (1994: 136-7), PIE **erCC* > Hitt. *arCC*.

[16]　See Tischler 1977ff.: 182-3 for references.

[17]　This etymology may have become problematic as we now would expect a preform **h₂erh₃-s-t* to have become ***ḫarre/išta* (with **VRHsC > VRRe/išC*).

[18]　See CHD for a full list of attestations.

[19]　It is unclear to me why Oettinger (1979: 210) cites „*paḫš-*[mi]", while there is only one attestation 1sg.pres.act. *pa-aḫ-ḫa-aš-mi* (KUB 29.1 i 19 (OH/NS)) vs. many attestations *pa-aḫ-ḫa-aš-ḫi*.

[20]　See for an extensive list of attestations Puhvel 1997: 42-5.

ša-an-zi, ga-ni-eš-ša-an[*-zi*], *ka-ni-iš-ša-an-zi, ka-ni-e-eš-ša-an-zi*, 1sg.pret.act. *ka-ni-iš-šu-un*, 2sg.pret.act. *ka-ni-iš-ta*, 3sg.pret.act. *ga-ni-eš-ta, ga-ni-iš-ta, ka-ni-eš-ta, ka-ni-iš-ta*, 3pl.pres.act. *ga-ni-eš-šer* (OS), part. *ka-ni-eš-ša-an-t-, ka-ni-iš-ša-an-t-*.

The verb is spelled with *-ne-eš-, -ni-eš-* as well as *-ni-iš-*. Spelling with a plene vowel, *-ni-e-eš-*, is attested in one text only, KBo 22.178 + KUB 48.109, where we find *ka-ni-e-eš-zi* as well as *ka-ni-e-eš-ša-an-zi*.

Since Laroche (1961: 27) this verb is generally connected with PIE *$\acute{g}neh_3$-. As we saw above, Jasanoff (1988) explains 3sg.pres. „*kanēšzi*" (which in fact is *kane/išzi*) as reflecting acrostatic *$\acute{g}n\acute{e}h_3sti$, which view has found many followers in IE linguistics. Reconsructing an acrostatic (*ē/e*-ablauting) paradigm implies that the 3pl.pres. was *$\acute{g}n\acute{e}h_3sn̥ti$, which by regular sound laws should have given Hitt. **$kan\bar{a}ššanzi$. Apparently, Jasanoff assumes a reshaping of expected **$kan\bar{a}ššanzi$ to attested *kane/iššanzi* in analogy to 3sg.pres. „*kanēšzi*". In my view, the analogy was precisely the other way around.

The 3pl.pres.-form *kane/iššanzi* is reminiscent of *tame/iššanzi* < *dmh_2-s-énti* and *gališšanzi* < *klh_1-s-énti*. I therefore assume that 3pl.pres. *kane/iššanzi* is the regular reflex of the zero-grade form *$\acute{g}nh_3$-s-énti*, again with the development *$CRHsV$ > $CaRe/iššV$. As the other *s*-extended verbs show either *e/Ø*-ablaut (when *mi*-conjugated) or *o/Ø*-ablaut (when *ḫi*-conjugated), it is *a priori* highly probable that besides zero-grade 3pl.pres. *$\acute{g}nh_3$-s-énti*, the 3sg.pres. was in *e*-grade: *$\acute{g}n\acute{e}h_3$-s-ti*. According to our understanding of Hittite historical phonology, we would expect that 3sg.pres. *$\acute{g}n\acute{e}h_3sti$ would regularly yield Hitt. **$kan\bar{a}šzi$.[21]

The expected paradigm **$kan\bar{a}šzi$ / *kane/iššanzi* reminds us of the attested OH paradigm *tamāšzi / tame/iššanzi*. As we saw above, this latter paradigm from MH times onwards became subject to secondary reshaping, yielding the younger attestations 3sg.pres. [*t*]*a-mi-iš-z*[*i*], *da_x-me-e-eš-zi* and 3sg.pret. *da_x-me-eš-ta*. These forms must have recieved their *-e/i-* in analogy to 3pl. *tame/iššanzi*.

In my view, this analogical remodelling is completely parallel to the one found in the paradigm of *kane/išš-*: the original paradigm **$kan\bar{a}šzi$ / *kane/iššanzi* is levelled out to the attested paradigm *kane/išzi / kane/iššanzi* on the basis of 3pl. *kane/iššanzi*.[22]

12. The thus established ablaut-patterns for the *s*-extended verbs in Hittite, *$C\acute{e}C$-s-ti* / *CC-s-énti* or *$C\acute{o}C$-s-ei* / *CC-s-énti*, fit well into the picture Kuiper (1934) paints of the PIE *s*-presents. He states that originally PIE *s*-presents must have had the structure

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[21]   For loss of *h_3 in this environment compare Hitt. *lāman* ‚name' < *$h_3neh_3mn̥$ and *pāši* ‚drinks' < *$p\acute{o}h_3s$-ei*.

[22]   As I pointed out earlier, Jasanoff's theory implies a levelling as well: the alleged acrostatic 3pl.pres. *$\acute{g}n\acute{e}h_3sn̥ti$ regularly should have given **$kan\bar{a}ššanzi$, which then should have been analogically reshaped to attested *kane/iššanzi*. The levelling I propose here has the advantage over Jasanoff's one that it is supported by the parallel analogical creation of 3sg. *tame/išzi* on the basis of 3pl. *tame/iššanzi*, whereas a levelling of **$kane/išzi$ / **$kan\bar{a}ššanzi$ to attested *kane/išzi / kane/iššanzi* is unparalleled: other *e/a*-ablauting *mi*-verbs rarely end up having *e/e*. The difference in time between the levelling of **$kan\bar{a}šzi$ to *kane/išzi* (pre-Hitt.) and of *tamāšzi* to *tame/išzi* (inner-Hitt.) may be due to the fact that *$\acute{g}n\acute{e}h_3sti$ already at a very early stage lost its laryngeal and became **$kan\bar{a}šzi$, whereas *$dm\acute{e}h_2sti$ regularly yielded **$tamaḫšzi$, the laryngeal of which first had to be analogically removed, only after which the analogical development of *tamāšzi* to *tame/išzi* was possible.

*CC-és-ti / *CC-s-énti,[23] yet observing that „das alte, reiche Paradigma war schon in vorhistorischer Zeit in Verfall geraten" (1934: 241): within the PIE period it is altered to *CéC-s-ti / *CC-s-énti. This more recent paradigm is exactly the one we find in Hittite as well.

Conclusion

13. As we saw above, there is no need anymore to assume that 3sg. „*kanēšzi*" reflects an acrostatic *$ǵnéh_3$-s-ti. The form in fact is *kane/išzi*, which is perfectly explicable as an analogical creation based upon 3pl. *kane/iššanzi* which reflects *$ǵnh_3$-s-énti. Herewith an important argument in favour of Eichner's Law has disappeared.[24] The development of *kane/iššanzi* < *$ǵnh_3$sénti is regular and has parallels in *tame/iššanzi* < *dmh_2sénti and *gališšanzi* < *klh_1sénti, all according to the newly established sound law *CRHsV > Hitt. *CaRe/iššV*. This development resembles the sound law *VRHsC > Hitt. *VRRe/išC*, which can be inferred from *kallišta* < *$kélh_1$st and *damme/išḫā-* < *$demh_2sh_2ó$-*.

Excursus

14. Our findings offer an interesting etymological possibility for the verbs *ānš-ⁱ* ‚to wipe' and *ḫane/išš-ᶻⁱ* ‚to wipe'.
The verb *ānš-ⁱ* ‚to wipe' is characterised by the following attestations: 3sg.pres.act. *a-an-ši* (KBo 30.158, 9 (MS), KBo 21.80+20.44+30.158 obv. 35 (MS), etc.), *a-a-an-ši* (KUB 30.41 i 14 (OH/NS)), 3pl.pres.act. *a-an-ša-an-zi* (often), 1sg.pret.act. *a-an-šu-un* (KUB 41.19 rev. 10, 11, 12, 14 (MH/NS)), 2sg.imp.act. *a-an-aš* (KBo 21.8 ii 4 (OH/MS), KUB 33.5 ii 7 (OH/MS), IBoT 3.141 i 14 (OH/NS)), 3sg.imp.act. *a-an-aš-du* (KUB 7.1 ii 68 (OH/NS)), part. *a-an-ša-an-t-*, impf. *a-an-aš-ke/a-*, *a-an-ši-ke/a-*, *a-an-ši-iš-ke/a-*.
Melchert (1988: 211 ff.) argues that a CLuwian cognate can be seen in the verb *am(ma)šš(a/i)-* ‚to wipe', which implies that Hitt. *ānš-* goes back to older *āmš-*. In the same article (1988: 212[3]) Melchert suggests an etymological connection with Gk. ἀμάω ‚to mow, to reap', OE *māwan* and OHG *māwen, māen* ‚to mow'. At first sight, this proposal seems formally implausible, however: on the basis of the Greek and Germanic forms Melchert assumes an alternating root *am-h_1- / *m-eh₁-*, admitting that this alternation is highly unusual. Later on, Melchert (1994: 165) seems to have abandoned this etymology all together and reconstructs Hitt. *ānš-* and CLuw. *am(ma)šš(a/i)-* as PAnat. *óms-* (with *o*-grade as indicated by the *ḫi*-conjugation in Hittite).

15. The Hittite verb *ḫane/išš-ᶻⁱ* ‚to wipe, to plaster'[25] is semantically quite similar to *ānš-ⁱ*, as can be seen by e.g. the passage KBo 19.142 iii 30-31 [...]*iškiezzi nu* MUNUS *IŠTU*

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23   Based on Pedersen 1921: 26.
24   See now also Kloekhorst fthc.a § 1.4.9.2.b for the observation that in Hittite none of the alleged examples in favour of Eichner's Law can withstand scrutiny.
25   The verb is often used to describe the plastering of houses with clay, on the basis of which Puhvel (1991: 86-8) translates it as ‚to plaster: to wipe (tears)', assuming that ‚to plaster' is the primary

GAB.LÀL [... *a*]*nda ḫanišzi* ‚... salves and the woman plasters with wax' that has a striking parallel in KUB 33.5 ii 7 *nu=za* GAB.LÀL *dā n=an arḫa ānaš* ‚take wax and wipe him off'.[26]

Its paradigm is characterised by the following attestations: 3sg.pres.act. *ḫa-ni-iš-zi* (KUB 41.4 ii 21 (MH/NS), KBo 19.142 iii 31 (NS)), *ḫa-ni-eš-zi* (KBo 29.65 i 5 (NS), KUB 10.99 vi 10 (fr.), KUB 41.83 obv. 4 (fr.)), *ḫa-ne-eš*[-*zi*] (KUB 10.99 vi 7, 12), 2pl.pres.act. *ḫa-ni-iš-te-ni* (KUB 29.1 iii 32 (OH/NS)), *ḫa-ni-eš-te-ni* (KUB 29.1 iii 31, 32, 33 (OH/NS)), 3pl.pres.act. *ḫa-ni-iš-ša-an-zi* (KBo 43.61 i 3 (NS), KUB 11.3 i 5 (OH/NS)), *ḫa-ni-eš-ša-an-zi* (IBoT 3.148 iii 15 (MH/NS)), 3pl.pret.act. *ḫa-ni-eš-še-er* (KUB 40.83 obv. 15 (NS)), 2pl.imp.act. *ḫa-ni-eš-te-en* (KUB 29.1 iii 34 (OH/NS)), 3pl.imp.act. *ḫa-ni-eš-ša-an-du* (KUB 31.91 ii 6 (MH/NS)), *ḫa-ni-iš-ša-an-du* (KUB 31.86+ ii 42, KUB 31.87+88 ii 16 (fr.) (MH/NS), KUB 13.2 ii 15 (MH/NS)), part. *ḫa-ni-iš-ša-an-t-*, inf.I *ḫa-ni-eš-šu-u̯a-an-zi* (KUB 29.1 iii 29 (OH/NS)), *ḫa-ni-iš-šu-u̯a-an-zi* (KBo 18.33 obv. 6).

Not only semantically the two verbs are similar, I think we can connect them formally as well. Since a cluster *-ms-* regularly yields Hitt. -*šš*- (e.g. *ḫašša-* ‚progeny' < *h_2ems-o-, *ḫaššu-* ‚king' < *h_2ems-u-, cf. Kloekhorst fthc.a: § 1.4.7.1.a), the stem *ānš-*, when connected with Luw. *am(ma)šš(a/i)-*, points to a preform with a cluster *-mHs-*. Furthermore, if we assume with Kortlandt (2004) and Kloekhorst (fthc.b) that initial laryngeals are neutralised before *o in Anatolian, we can derive 3sg.pres.act. *ānši* from a preform *$HómHs$-ei*. As all Hitt. *s*-extended verbs reflect either *e/Ø*-ablaut when *mi*-conjugatd or *o/Ø*-ablaut when *ḫi*-conjugated, we would expect to find besides 3sg.pres. *$HómHs$-ei* a 3pl.pres.-form *$HmHs$-énti*. Because of the semantic similarity between *ānš-ⁱ* and *ḫane/išš-ᶻⁱ*, I want to propose that this reconstructed 3pl.pres.-form *$HmHs$-énti* in fact is the preform of *ḫane/iššanzi*, showing the development *$CRHsV$ > *$CaRe/iššV$* as unravelled above.[27]

This inner-Hittite connection of *ānš-ⁱ* with *ḫane/išš-ᶻⁱ* from *$HómHs$-ei* / *$HmHs$-énti* re-opens Melchert's etymological suggestion (1988: 212[130]) to compare *ānš-ⁱ* with Gk. ἀμάω ‚to mow, to reap', OE *māwan*, OHG *māwen*, *māen* ‚to mow'.[28] The Greek and Germanic forms reflect a root *h_2meh_1-*, which means that the Anatolian material must go back to an *s*-extension *h_2emh_1-s-*.[29]

It is quite understandable that a paradigm 3sg.pres. *$h_2ómh_1$-s-ei* / 3pl.pres. *h_2mh_1-s-énti* that regularly yielded Hitt. *ānši* / *ḫane/iššanzi* is not retained as such in Hittite. Both ablaut variants formed their own paradigm: *ānši* became the source of *ānši* / *ānšanzi* whereas *ḫane/iššanzi* served as the basis for *ḫane/išzi* / *ḫane/iššanzi*.

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          meaning out of which the translation ‚to wipe' has developed. This seems semantically unlikely to me: a development ‚to wipe' > ‚to coat (houses with clay)' > ‚to plaster' is much more probable.

[26]   Translations by Puhvel 1991: 86-8.

[27]   The development of *$HmHsV$* to *ḫane/iššV-* with -*n*- seemingly contradicts the development of *dmh_2sV > tame/iššV*, where we find -*m*-. In my view, the development *$CmHsV$ > Cane/iššV* is the regular one, whereas in the case of *dmh_2-s-énti > tame/iššanzi* the -*m*- was restored in analogy to the full grade forms *$dmeh_2$-s-* where -*m*- was regularly retained.

[28]   Melchert (l.c.) semantically justifies this connection by comparing Hitt. *u̯ars(ii̯a)-* ‚to reap, to harvest, to wipe' from PIE *$u̯ers$-* ‚to wipe'.

[29]   Again with ‚Schwebe-ablaut', cf. note 6.

If the scenario presented here can be justified, then the spreading of the stem *ḫane/išš-* throughout the paradigm with 3pl.pres. *ḫane/iššanzi* as the point of departure is exactly parallel to the spreading of the stem *kane/išš-* throughout the paradigm of *kane/išš-^{zi}* on the basis of 3pl. *kane/iššanzi*.

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References

HZL = Rüster, C. / Neu, E. (1989). Hethitisches Zeichenlexikon. Inventar und Interpretation der Keilschriftzeichen aus den Boğazköy-Texten. Wiesbaden: Harrassowitz.

LIV^2 = Rix, H. (ed.) (2001). Lexikon der indogermanischen Verben (zweite, erweiterte und verbesserte Auflage). Wiesbaden: Reichert.

CHD = Güterbock, H.G. / Hoffner, H.A. / Van den Hout, Th.P.J. (edd.) (1980ff.), The Hittite Dictionary of the Oriental Institute of the University of Chicago. Chicago: The Oriental Institute of the University of Chicago.

Catsanicos, J. (1994). La mise à jour du système de transcription des textes hittites. In: Indogermanische Forschungen 99, pp. 301-335.

Eichner, H. (1973a). Die Etymologie von heth. *mehur*. In: Münchener Studien zur Sprachwissenschaft 31, pp. 53-107.

Hackstein, O. (1993). Osttocharische Reflexe grundsprachlicher Präsensbildungen von idg. *ǵneh₃-* ‚(er)kennen'. In: Meiser, G. (ed.). Indogermanica et Italica, Festschrift für Helmut Rix zum 65. Geburtstag. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck. pp. 148-158.

Hout, Th.P.J. van den (1988). Hethitisch *damašš-* / *damešš-^{mi}* „(be)-drücken" und der indogermanischen sigmatische Aorist. In: Arbeitman, Y.L. (ed.). A Linguistic Happening in Memory of Ben Schwartz: Louvain-La-Neuve: Peeters. pp. 305-319.

Jasanoff, J.H. (1988). PIE *ǵnē-* ‚recognize, know'. In: Bammesberger, A. (ed.). Die Laryngaltheorie und die Rekonstruktion des indogermanischen Laut- und Formensystems. Heidelberg: Winter. pp. 227-239.

Kimball, S. (1999). Hittite Historical Phonology. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

Kloekhorst, A. (fthc.a). The Hittite Inherited Lexicon. Leiden Universtity Dissertation.

— (fthc.b). Initial Laryngeals in Anatolian. To appear in: Historische Sprachforschung.

Kortlandt, F. (1982). Innovations which betray archaisms. In: Baltistica 18 (1), pp. 4-9.

— (1984). Old Irish subjunctives and futures and their Proto-Indo-European origins. In: Ériu 35, pp. 179-187.

— (2004): Initial Laryngeals in Anatolian. In: Orpheus 13-14. Memorial Volume to Georgi Rikov, pp. 9-12.

Kuiper, F.B.J. (1934). Zur Geschichte der indoiranischen *s*-Präsentia. In: Acta Orientalia 12, pp. 190-306.

Laroche, E. (1961). Notes de linguistique anatolienne. In: Revue hittite et asianique 19/68, pp. 25-37.

Lehrmann, A. (1997). Hitt. *ga-ne-eš-+* and the Laryngeal Theory. In: Indogermanische Forschungen 102, pp. 151-155.

Melchert, H.C. (1988). Luvian Lexical Notes. In: Historische Sprachforschung 101, pp. 211-243.

— (1991). Review of: Rüster, Ch., und E. Neu: Hethitisches Zeichenlexikon. Inventar und Interpretation der Keilschriftzeichen aus den Boğazköy-Texten. In: Kratylos 36, pp. 122-126.

— (1994). Anatolian Historical Phonology. Amsterdam - Atlanta: Rodopi. (Leiden Studies in Indo-European 3).

Oettinger, N. (1979). Die Stammbildung des hethitischen Verbums. Nürnberg: Hans Carl. (Erlanger Beiträge zur Sprach- und Kunstwissenschaft 64).

Pedersen, H. (1921). Les formes sigmatiques du verbe latin et le problème du futur indo-européen. København.

Puhvel, J. (1954). Semitic Affinities of Hittite *ḫar-aš-zi*. In: Journal of the American Oriental Society 74, pp. 86-88.

— (1991). Hittite Etymological Dictionary. Volume 3 Words beginning with H. Berlin – New York.: Mouton de Gruyter.

— (1997). Hittite Etymological Dictionary. Volume 4: Words beginning with K. Berlin – New York: Mouton de Gruyter.

Rieken, E. (1999). Untersuchungen zur nominalen Stammbildung des Hethitischen. Wiesbaden: Harrassowitz. (Studien zu den Boğazköy-Texten 44).

Schrijver, P. (1991). The Reflexes of the Proto-Indo-European Laryngeals in Latin. Amsterdam – Atlanta: Rodopi. (Leiden Studies in Indo-European 2).

Tischler, J. (1977ff.). Hethitisches etymologisches Glossar. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.