Hittite nasal presents

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Infixed verbs to roots ending in laryngeal

3.1 In this chapter I discuss Hittite verbs made from IE roots in final laryngeal that have been claimed to contain a nasal infix. The PIE reconstruction for this type, based on Indo-Iranian and Greek data, is as follows: $C(R)néH$- in the singular and $C(R)nH$-$\acute{V}$ in the plural, cf. LIV: 17.

Anatolian, including Hittite, is the only group of IE languages in which laryngeals have been preserved as consonants, although only in certain positions; in other environments, laryngeals were lost or assimilated. Thus, for instance, all three laryngeals were lost between a vowel and a stop with compensatory lengthening (e.g., Melchert 1994: 67, 69, 73, Kloekhorst 2008: 77) and after a resonant before a vowel (Kloekhorst 2008: 80); in the sequence -$VnHV$-, laryngeals were assimilated to /n/, yielding -$VnnV$-, see, e.g., Kimball 1999: 334.

The expected reflexes of PIE infixed stems in Hittite would have been as follows:

*$CaRn\bar{e}$-/$CaRn$- < *$C\mathring{R}n\bar{e}$-/$C\mathring{R}nh_1$- < PIE *CR-$né$-h_1-/CR-n-h_1-

or *$CaRn\bar{a}$-/$CaRn$- < *$C\mathring{R}n\bar{a}$-/$C\mathring{R}nh_{2/3}$- < PIE *CR-$né$-$h_{2/3}$-/CR-n-$h_{2/3}$-

If the penultimate consonant in the root was /l/, the nasal of the infix would have changed into /l/ by assimilation:

*$Call\bar{e}$-/$Call(V)$- < *$C\mathring{l}n\bar{e}$-/$C\mathring{l}nh_1$-(V) < PIE *Cl-$né$-h_1-/Cl-n-h_1-

or *$Call\bar{a}$-/$Call(V)$- < *$C\mathring{l}n\bar{a}$-/$C\mathring{l}nh_{2/3}$-(V) < PIE *Cl-$né$-$h_{2/3}$-/Cl-n-$h_{2/3}$-

Finally, in the roots of the type *$CeiH$- or *$CeuH$- the laryngeal would have been assimilated to the nasal rather than lost:

*$Ci/un\bar{e}$-/$Ci/unn(V)$- < *$Ci/un\bar{e}$-/$Ci/unh_1(V)$- < PIE *Ci/u-$né$-h_1-/Ci/u-n-$h_1(V)$-

*$Ci/un\bar{a}$-/$Ci/unn(V)$- < *$Ci/un\bar{a}$-/$Ci/unh_{2/3}(V)$- < PIE *Ci/u-$né$-$h_{2/3}$-/Ci/u-n-$h_{2/3}(V)$-

I do not know of any Hittite verb that would follow any of these patterns. Nevertheless, the reconstruction of an infixed stem for some of the verbs discussed in this chapter is strongly suggested by their etymology and/or inability to otherwise explain the peculiarities of their stem formation. Some other verbs included in this section are in my opinion not infixed. The reason they are treated here is that

etymologies according to which these verbs contain an infix have enjoyed considerable popularity.

As is illustrated by the "reconstruction forward" above, the root-final laryngeals were lost or assimilated in most of the relevant positions (*unh-* 'to empty' is an exception). Therefore, in contrast to *nin*-verbs, it is usually impossible to show, based on Hittite data only, that a given verb contains an infix rather than a suffix, and morphological analysis often depends on comparative evidence.

arsanē- 'to be angry, envy'

2sg.pres.act. *ar-ša-ne-e-ši* KBo 25.122 III 2, 4, 6, 8, 10, 12, 14 OS; *ar-ša-ni-e-še* ABoT 65 rev. 6[79] MH/MS

3sg. pres. act. *ar-ša-ni-e*[-*eš*?] ABoT 65 rev. 4 MH/MS

3sg. pret.act. *ar-ša-ni-ya-at* KUB 19.65 14 NH

3pl. pret.act. *ar-ša-ni-i-e-er* KBo 3.6 I 28 NH, KUB 1.1 I 32 (with a gloss sign)[80] NH, KUB 1.5+ I 9 NH

part. acc. sg. c. *ar-ša-na-an-da-an* KBo 34.26+ KBo 34.28 III 5` OH/MS with dupl. *ar-ša-na-an-d*[*a*] KUB 33.9 III 7 OH/NS

nom.-acc. pl. neut. *ar-ša-na-an-ta* HKM 116 32 NS

On the basis of Old Hittite *ar-ša-ne-e-ši*, Watkins (1985: 245), followed by Oettinger (1992: 225) assumes a PIE stative suffix *$-eh_1$- in this verb. This means that the original stem must have been *arsanē-*, while *arsaniya/e-* is secondary. As per Watkins, *arsanē-* goes back to *$r̥h_{1/3}sneh_1$-, which was derived from a noun *$r̥h_{1/3}s-no$-. The same root is attested in Av. *ərəši-* 'envy' and *arəšyant-* 'envious', Skt. *īrṣyā́-* 'envy', *irasyáti* 'be angry' and OE *eorsian* 'to wish ill', all derived from PIE root *HerHs- (cf. HED 1/2: 172-173).

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[79] Unless it is an erroneous spelling for 2sg. pret. *ar-ša-ni-e-eš*
[80] The gloss sign is missing in the duplicates KBo 3.6 and KUB 1.5. Remarkably, there are quite a few words that are marked with the gloss sign in KBo 1.1 but not in KBo 3.6 and KUB 1.5 – *zi-la-du-wa* (I 6), *ir-ma-la-aš*(-*pat*) (I 44), *pa-la-aḫ-ša-an* (I 57), *dan-na-at-ta* (II 63), *dan-na-at-ta* (II 66), *ku-pi-ya-ti-in* (IV 34). For the functions of the gloss sign see Yakubovich 2009: 466f.

Kloekhorst (2008: 211) does not accept this etymology, because in his phonology there must have been an anaptyctic vowel inserted to the sequence *$HrHs$-no-[81], which would have yielded **are/isna-. In his view, *arsanē-* goes back to *Hrs-ne-h_1-/*Hrs-n-h_1-, with which he compares *zinni-/zinn-* and *hulle-/hull-*.

I believe, however, that the etymological connection to Av. *ərəši-* 'envy' is viable. First of all, there is no need to reconstruct a noun *$(H)\underset{\circ}{r}h_{1/3}s$-$no$-, since there are no parallel formations with *-*no*- made from this root in the other IE languages. A better solution would be a noun with the suffix -*an*-, *$arsan$-[82], cf. *nahhan-* 'fear' from *nahh-* 'to fear', *mudan-* 'garbage' from *mudāi-* 'to remove'[83]. *Arsanē-* would then have been built straight to the noun (for denominal derivation of verbs in -*ē*-, see Hoffner, Melchert 2008: 177). Alternatively, it may have been derived from a denominative adjective *$arsanant$-. If so, the participial forms of *arsanē-* might in fact belong to this adjective[84].

The intransitive verb *arsanē-* is semantically clearly a stative rather than an infixed verb, which is supposed to be a causative (but cf. 7.2.3). Cf., e.g., the treatment of ABoT 1.65 rev. 4-6 by Hoffner (2009: 244): *nu apēdani uddanī ar-ša-ni-e*[-*eš?*] (rev. 5′) *mam=man=za=kan kuiski* É-*er tamais arnut* (rev. 6′) *man zik ŪL ar-ša-ni-e-še* "And he became upset about that matter. If someone else had relocated (your) household/family, would you not become upset?" Cf. also a passage from the Apology of Hattusili III (CTH 81). KUB 1.1 I 30 GIM-*an* UKÙ^MEŠ-*annaza* (31) *ŠA* IŠTAR GAŠAN-*YA kanissuwar ŠA* ŠEŠ-*YA-ya* (32) [*as*]*sulan austa nu=mu* :*ar-ša-ni-i-e-er* "(Als da die Leute die Gewogenheit der Ištar, meiner Herrin, mir gegenüber und meines Bruders Gunst sahen, da beneideten sie mich" (Otten 1981: 6f.).

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[81] See Kloekhorst 2008: 73.

[82] *Arsanē-* and its derivatives are consistently spelled with *ar-ša-nV-*, which to my mind points to a real vowel between /s/ and /n/.

[83] For this suffix see Hoffner-Melchert 2008: 55.

[84] A participle of a stative verb is indistinguishable from an *ant*-adjective. For example, *sullē-* 'to be arrogant' has a participle *sullant-* (so Melchert 2005: 96, but cf. Kloekhorst 2008: 779), which looks exactly like adjectives *paprant-* 'impure, unclean' and *marsant-* 'deceitful', which usually are not considered to be participles of *paprē-* 'to be proven guilty by ordeal, do smth. impure' and *marsē-* 'to be corrupt', respectively. I see no reason not to believe that the relevant *ant*-adjectives are originally participles of stative verbs, which became independent after statives/inchoatives in -*ē*- were gradually replaced with *ess*-forms. See more on Caland system in Hittite in 4.19 and 4.13.

Therefore, in my opinion, *arsanē-* is a denominative stative verb rather than a nasal infix verb.

hallanna/i- 'to trample down'
3pl. pres. act. *ḫal-la-an-ni-an-zi* Bo 3276 obv. 6 MS
3sg. pres. med. *ḫal-la-an-ni-ya-at-ta-ri* KUB 4.3 obv. 9 NH
impf. 3sg. pres.act. *ḫal-la-an-ni-eš-k*[*e-ez-zi*] KBo 19.112 17 MH/NS

Oettinger (1992b: 153f.) and Kloekhorst (2008: 271f.) argued for a translation 'to trample' against Puhvel's translation 'to lay waste, ruin' (HED 3: 13), since the object of this verb in the two well preserved contexts is grass and a field.

Hallanna/i- is only attested with the imperfective suffix *-anna/i-*, so we do not know the conjugation type of the base verb. The form *hallanniyattari* in KUB 4.3 obv. 9 (NH) shows a *ye/a*-stem, which is also attested for some other verbs in *-anna/i-*, see 5.6.

Puhvel (HED 3: 14) traces the stem **halla-* back to PIE $*A_2{}^w\!l\text{-}n\text{-}éA_1{}^w\text{-}$ and adduces a Greek cognate ὄλλυμι 'to destroy'. There is perhaps a cognate Hittite noun *halluwai-* 'violence, brawl' from an *-u-* stem **hallu-* (HED 3: 51, cf. also Kimball 1999: 349)[85]. In the standard notation, the root is **h₃elh₁-* (Gr. aor. ὄλεσσα, see LIV: 298, Harðarson 1993: 222f) or **h₃elh₃-* (thus Puhvel 1995: 178 due to Gr. οὐλόμενος). LIV: 298⁴ also considers *hallanna/i-* to be an *-anna/i-*-imperfective from the infixed stem **halla-* < **h₃l̥nh₁énti*.

The meaning 'to trample' makes the comparison of *hallanniye/a-* to Hitt. *halluwai-* 'brawl' or to Gr. ὄλλυμι, Lat. *deleō* less obvious, though still possible. Within Hittite, *hallanna/i-* may be related to *haliye/a-*, if the latter means 'to fall down, throw oneself to the ground' rather than 'to kneel'[86]; cf. the entry for *haliyanu-* in 4.1.

Haliya- and *hallanna/i-* seem to be parallel to *ša-li-i-an-zi* (KUB 58.14 rev. l. col. 24) and *sallanna/i-* 'to pull, drag', cf. CHD Š: 85, Kloekhorst 2008: 707f., 709; if so,

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[85] Melchert (1994: 82) suggested that both *halluwai-* and *hallanniye/a-* are denominal formations from **hel-nu-* and **halnatar* < **he/ol-na-* respectively.
[86] Beal (1998: 85) observes that the Akkadogram for *haliya-* is IMQUT, and Akk. *maqātu* means 'to fall down, collapse'.

haliye/a- goes back to *$*h_3lh_1$-ye/o-* and *hallanna/i-* is an imperfective stem to *$*halla-$* < *$*h_3lnh_1$-V-*. The infix is assumed merely in order to explain the transitivity of the stem *$*halla-$*; otherwise there is no evidence that *$*halla-$* in *hallanniye/a-* is an infixed stem, as it can reflect *$*h_3elh_1$-V-* as well.

harni- 'to stir, agitate'

1sg. pres. act. *ḫar-na-mi* KBo 40.272 6 MS

3sg. pret act. *ḫar-ni-it* KBo 40.272 9 MS

part. gen. sg. c. *ḫar-na-an-ta-aš* KBo 23.68 rev. 1 MS

part. acc. sg. c. *ḫar-na-an-ta-an* KUB 39.9 obv. 9 preNH/NS; *ha[r]-na-an-da-an* KBo 44.167 9 MS

part. n.-acc. sg. n. *ḫa-ar-na-a-an* KUB 7.1 I 27 MH/NS

verbal noun *ḫa-ar-na-am-ma* KUB 7.1 I 26 MH/NS, Bo 5872 I 9 MS; *ḫa-ar-na-am-mar* KUB 7.1 I 25 MH/NS; *ḫar-nam-mar* KBo 6.34 I 35 MH/NS

Puhvel (HED 3: 402f.) incorrectly attributes *ḫar-na-mi* KBo 40.272 6 and *ḫar-ni-it* KBo 40.272 9 to *harna-* 'to sprinkle'. The object in both cases is *arunan* 'sea' (unfortunately, both contexts are severely damaged), and we find the verb *harnamniya-*, derived from *harnammar* 'ferment, yeast', used with this noun in KUB 36.41 I 13-4: *nu=wa arunan* […] [*and*]*an harnamnit* 'he churned the sea', cf. HED 3: 172. The stem final *-a-* in 1sg. pres. *harnami* and *-i-* in 3sg. pret. *harnit* do not correspond to each other, since a Hittite reflex of an infixed verb is supposed to have either a consistent *-a-* < PIE *$*-néh_2$-* / *$*-néh_3$-* or a consistent *-e-* < PIE *$*-néh_1$-* in the singular. For similar examples of the alternation *-a-* and *-e-/-i-* in other infixed verbs, see *hulle-* and 3.2.1.1-5.

Puhvel (HED 3: 171ff.) argues that *harni-* continues an infixed stem *$*E_2rnE_1$-*, which is related to Gr. ἐρωή 'stir, rush' and OE *ræs* 'movement, rush'. Since the initial ε- in Greek does not correspond to initial *h-* in Hittite, this etymology is untenable. Rikov (1997: 219ff.) compares *harna(nt)-* with PIE *$*h_3er$-* (cf. LIV: 300[1]). In this case, Gr. ὄρνυμι 'to call forth, incite' could be viewed as a parallel nasal formation for

harna-. However, the universally recognized reflexes of this root in Hittite are *ar-*^{*tta*} 'to stand', *arai-*^{*i*} 'to rise, raise' and *arnu-* 'to make go, stir, deliver' (see the entry for *arnu-* in 4.1); this root connection is preferable.

While the contexts for *harni-* are limited and often damaged, its derivative, *harnamniya-* based on the verbal noun *harnamma*(*r*) 'ferment, yeast', has also meanings like 'to stir together', 'to knead', often with preverbs *anda* and *katta*, see HW^2 III: 318. If *harni-* also means 'to mix (in)' besides 'to stir, churn', it could perhaps be compared to PIE *$h_2$er-* 'sich (zusammen)fügen', Gr. ἀράρισκω 'to fit together', Arm. pres. *aṙnem*, LIV: 269f. Note that Hitt. *āra* 'right, properly' is also traditionally connected with this root, though one has to assume loss of *h_2 before *o in *$h_2$or-* (see Kloekhorst 2008: 199).

harna-, harniye/a- 'to sprinkle'

3sg. pres. act. *ḫar-ni-e-ez-zi* VBoT 58 IV 24 OH/NS; *ḫar-ni-ya-zi* KBo 10.45 II 15 MH/NS; *ḫar-ni-ya-iz-*[*zi*] KBo 22.125 II 4 NS

1pl. pres. act. *ḫar-na-u-e-ni* KUB 19.156 obv. 17 OS

3pl. pres. act. *ḫar-na-an-zi* KBo 24.46 I 6 NS, KUB 38.32 obv. 10 NH; *ḫar-ni-ya-an-zi* KBo 31.121 obv. 2 NS, KUB 9.15 III 7, 15 NH, KUB 15.12 IV 4 NS, KUB 25.24 II 8 NS, KUB 41.30 III 9 NS

3sg. imp. act. *ḫa-ar-ni-ya-ad-du* KUB 56.48 I 18 NS

verbal noun n.sg. *ḫar-ni-e-eš-šar* IBoT 3.1 29 OH/NS; *ḫar-ni-eš-šar* IBoT 3.1 31, 39 OH/NS; *ḫar-na-i-šar* KUB 58.50 III 8, 14 OH/NS; *ḫar-na-a-i-šar* KUB 58.50 III 11 OH/NS

harnu(e)- 'to sprinkle'

3sg. pres. act. *ḫar-nu-zi* KUB 47.39 obv. 12 NS; *ḫar-nu-ú-i-iz-zi* KUB 17.24 II 4 NS

3pl. pres. act. *ḫar-nu-an-zi* KUB 29.7 I 36, 46, 56 MH/MS; *ḫar-nu-wa-an-zi* KBo 13.179 II 10 NS, KBo 24.45 obv. 22 MS?

part. n. sg. c. *ḫar-nu-u-wa-an-za* KUB 30.19 + KUB 39.7 I 16 pre-NH/NS

part. n.-acc. sg. n. *ḫar-nu-wa-an* KUB 13.4 I 19, 60 MH/NS

part. n.-acc. pl. n. *ḫar-nu-an-ta* KBo 17.65 rev. 10 MH/MS

This verb is almost exclusively spelled with the sign ḪUR, which can also be read as HAR. The traditional reading /hur/ is based on the idea that it is related to *ḫu-u-ur-nu-u-wa-as* in KUB 39.6 II 14 and Pal. *ḫu-wa-ar-ni-na-i* KUB 35.165 obv. 10. The reading /har/ is, however, suggested by *ḫa-ar-ni-ya-ad-du* KUB 56.48 I 18, in a very clear context: É[MEŠ] DINGIR[MEŠ]-*ya-kán pa-ra-a ša-an-aḫ-du ḫa-ar-ni-ya-ad-du* "(he) shall clean and sprinkle the temples". In fact, the words above with the spelling *ḫu-(u-)ur-* are likely not to be related. In KUB 39.6 obv. 14: [*I-NA* UD.1]1.KAM *ḫu-u-ur-nu-u-wa-aš* "on eleventh day of *ḫūrnūwaš*", there is nothing to specifically confirm any kind of sprinkling, cf. especially Kassian, Korolev, Sidel'tsev 2002: 619f. Besides, *ḫūrnuwas* is an unlikely verbal noun to be made from *harna-* or *harnu-* as we would expect the suffix *-mar* instead, e.g., *arnumaš* from *arnu-* or *tarnumar* from *tarna-*.[87] The interpretation of Pal. *huwarninai* is also disputed[88].

According to HED 3: 397f., this verb may have a parallel infixless formation *hūrai-* which is once used next to *sanh-* 'to wash' in KUB 39.1 III 39-40 in a context, similar to those in which *harna-* is used[89]. These verbs, however, take different objects: instead of water or other liquids, *hūrai-* is used with bluecopper (KUB 6.24 obv. 6) or copper (KUB 39.1 III 39-40). A Luwoid participle *ḫu-ra-am-ma-ti* in KUB 26.43 obv. 12 is an attribute of *gimra-* 'field', which is indeed something that may be sprinkled. According to Melchert (1993: 75), *hūrai-* is rather related to CLuw. *hur-* 'to give water'; he assumes that the Luwian verb could be the source for *hūrai-*, although he admits that the meaning of *hur-* is 'quite uncertain'.

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[87] There is a handful of exceptions, e.g., *wa-ar-nu-wa-aš* KUB 12.22 16 from *warnu-*.

[88] The Palaic form was analyzed by Kammenhuber (1959: 21) as a nominal form in dative/locative, while Carruba considered *ḫu-wa-ar-ni-na-i ša-pa-u-i-na-i* to be verbs with a 3sg. ending *-i* (Carruba 1970: 56, 69, see also Eichner 2010: 44 note c). Carruba's analysis can be supported by the fact that after these words there is an erased sign TA or ŠA, either of which can indicate the 3sg. act. endings of *mi-* and *hi-*conjugations respectively. The function of the Palaic suffix[?] *-(i)na-* is likely to be a denominative, see Melchert 1984b: 37-38. As a denominative, *huwarninai* cannot be directly compared to *ha/urna-*.

[89] *nu-wa-ra-an* [*NA4ku-u*]*n-na-ni-it* (40) *ḫu-u-ra-i-ir na-an* AN.BAR-*it ša-an-*[*ḫe*]-*er* "they have "sprayed" it with copper, they have "flushed" it with iron" (HED 3: 397).

If one still wants to stick to the reading *hurna-*, one has to explain the spelling *ḫa-ar-ni-ya-ad-du* as an incorrect 'explication' of the sign HAR (thus HED 3: 403, cf. Kimball 1999: 248), which would imply that this word was not very well known to the scribe. Another possibility is to separate *harnai-* from *hurnu(wai)-* (thus Neu 1983: 55[261]). Still, the best solution is to separate the obscure forms *ḫu-u-ur-nu-u-wa-aš* KUB 39.6 obv. 14 and Pal. *ḫu-wa-ar-ni-na-i* from other attestations of *harnu(wai)-* (thus Kloekhorst 2008: 309).

Melchert (1994: 129) argues that *harnai-* is a variant of *harnuwai-*[90] in which /w/ was dropped in the position between /n/ and vowel. This is not likely, however, as almost all forms of the latter verb rather point to a *nu-*stem (thus already Kronasser 1966: 457, 562), with the stem *harnuwai-* being a late development. This is one of the few cases for which there are parallel formations in *-na-* and *-nu-* from the same root, see *walla/walluske/a-* with note 110.

Since the actual stem is *harna-*, etymologies suggested for *hurna-* are to be discarded[91]; there is no compelling etymology for *harna-* yet.

hulle- 'to smash'

2sg. pres. act. *ḫu-ul-la-ši* KUB 37.223c 7 OS or MS

3sg. pres. act. *ḫu-ul-la-az-zi* KUB 37.223a 4 OS or MS; *ḫu-u-ul-la-az-zi* KBo 6.26 II 11 OH/NS (dupl. to KUB 29.32 4); *ḫu-ul-li-iz-zi* KBo 3.22 obv. 25 OS (*ḫu-ul-li*[*-iz-zi*]), KUB 29.32 4, 5 OS, KUB 34.53 rev. 9 MS, KUB 40.54 rev. 2 NS, IBoT 3.131 5 NS, Bo 4293 6 n.a.; *ḫu-ul-li-zi* KBo 20.82 II 27 OH/NS; *ḫu-u-ul-li-ya-az-zi* KBo 6.26 II 13 OH/NS (dupl. to. KUB 29.32 5); *ḫu-ul-li-ya-az-zi* KBo 4.10 obv. 46 NH, KUB 17.28 IV 58 NS; *ḫu-ul-le/i-e-ez-zi* KUB 36.98a obv. 5 OH/NS (with dupl. *ḫu-ul-*[KBo 3.22 obv. 34 OS), KUB 47.89 III 5 NS, KUB 58.77 IV 5[92] NS; *ḫu-ul-la-i*

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[90] Melchert refers to these verbs as *hurnai-* and *hurnuwai-*.

[91] The stem *hurna-* was compared to Skt. *vā́r-*, CLuw. *wa-a-ar-*, Toch. A *wär* 'water', PIE (*(H)weh₁-r-* (EWAia II: 545). Pokorny 1959: 1182f. attributes ῥαίνω to the root *wren-* along with OHG *wrennio*, OSax. *wrēnio* 'stallion'. However, the most plausible was the connection of *hurna-* to Gr. ῥαίνω 'to sprinkle' (Peters 1980: 23[18], not accepted in LIV: 259[1]). Oettinger (1979: 151) and Kimball (1999: 248) trace *hurna-* back to PIE nasal infix stem *h₂wr̥-né-h₁-*. If Gr. ῥαίνω were related to Hittite verb, this formation could be plausibly reconstructed for PIE.

[92] So correctly García Trabazo-Groddek 2005: 200 with note 1 contra *ḫu-u-ul-li-e-iz*[*-zi* in HW² III: 686.

KBo 6.28 rev. 29 NH, KUB 31.59 III 26 NS; *ḫu-ul-la-a-i* KBo 6.29 III 42 NH, KUB 26.50 rev.9 NH; *ḫu-u-ul-la-i* HKM 47 obv. 5 MS

2pl. pres. act. *ḫu-ul-la-at-te-ni* KBo 16.98 I 6 NH, KUB 26.34 rev. 5 NS

3pl. pres. act. *ḫu-ul-la-an-zi* KBo 6.3 II 12 OH/NS, KUB 17.21 IV 19 MH/MS, KUB 35.148 IV 7 OH/NS; *ḫu-u-ul-la-an-zi* KBo 6.5 III 8 OH/NS (dupl. to KBo 6.3 II 12)

1sg. pret. act. *ḫu-ul-la-nu-un* KBo 2.5 II 11 NH, KBo 3.22 obv. 11, 15 OS, KBo 5.8 III 29 NH, KUB 23.14 III 5 MH/NS, KUB 31.64 III 10 OH/NS, KUB 33.106 IV 13 NH; *ḫu-ul-la-a-nu-*[*un*] KUB 23.21 III 28 MH/NS; *ḫu-ul-li-ya-nu-un* KBo 10.2 I 35, II 16 OH/NS, KUB 1.1 II 25 NH (with dupl. KBo 3.6 II 9), KUB 14.3 I 25 NH, KUB 23.33 5 OH/NS

3sg. pret. act. *ḫu-ul-li-it* KBo 3.1 I 29 OH/NS, KBo 3.38 obv. 15, 31 OH/NS, KBo 3.46 obv. 25 OH/NS, KBo 14.18 9 NH, KBo 22.2 rev. 8 OH/MS, KUB 12.26 II 23 NH, KUB 19.11 IV 39 NH, KUB 36.99 rev. 4 OS; *ḫu-ul-li-ya-at* KBo 2.5 + III 40 NH, KBo 14.3 IV 33 with dupl. KUB 19.18 I 28 NH, KUB 14.22 I 6 NH; *ḫu-u-ul-li-ya-at* KUB 19.8 III 30 NH; *ḫu-ul-li-i-e-et* KUB 14.15 I 29 NH; *ḫu-ul-li-iš* KBo 3.38 rev. 24 OH/NS (dupl. to *hullit* KBo 22.2 rev. 8); *ḫu-ul-la-aš* Bo 299/1986 I 98 NH

1pl. pret. act. *ḫu-ul-lu-mi-en* KUB 23.21 obv. 29 MH/MS; *ḫu-ul-lu-um-me-*[KBo 3.15 6 NS; *ḫu-u-ul-li-ya-u-en* KUB 23.16 III 9 NS

3pl. pret. act. *ḫu-ul-le-er* KBo 3.18 rev. 8 OH/NS, KBo 3.38 obv. 32 OH/NS, KUB 31.124 II 12 MH/MS; *ḫu-ul-le-e-er* KBo 3.16 rev. 2, 3, 4 OH/NS

3pl. pres. med. *ḫu-ul-la-an-ta-ri* KUB 17.28 IV 45 MH/NS

3sg. pret. med. [*ḫu-ul*]-*la-at-ta-ti* KBo 3.29 14 OH/NS; *ḫu-ul-la-ta-at* KUB 14.17 II 29 NH

3sg. imp. act. *ḫu-ul-la-ad-du* KUB 35.148 IV 8 OH/NS

3sg. imp. med. *ḫu-la-da-ru* KBo 3.29 15 OH/NS with dupl. KBo 8.41 5 OH/NS

part. n. pl. c. *ḫu-ul-la-an-te-eš* KUB 24.8 II 18 OH/NS

verbal noun n. sg. *ḫu-ul-la-tar* KUB 29.1 II 36 OH/NS; *ḫu-ul-la-a-tar* KBo 21.8 III 15 MH/MS; *ḫu-u-ul-lu-mar* KBo 14.4 I 28 NH

impf. 1sg. pret.act. *ḫu-ul-li-iš-ke-nu-un* KBo 44 III 60 NH

impf. supine *ḫu-ul-la-an-ni-wa-an* KBo 32.19 III 42 MH/MS; *ḫu-ul-li-iš-ke-u-wa-an* KBo 3.6 II 25 NH

This verb is often translated as 'to strike' or 'to defeat', but 'to smash' (cf. HED 3: 363ff.) seems to be the original meaning. In descriptions of battles, *hulle-* is often used to express an utter destruction of the enemy, cf. the following examples from the Annals of Mursili: *nu=mu* DINGIR^MEŠ *peran huyer nu* ^LÚKUR *hullanun n=an=kan kuenun* "the gods furthered me, I defeated the enemy, and I slew him" (KBo 2.5 II 10-11; *nu* ^LÚKUR *hullanun n=an=kan INA* ^ḪUR.SAG*Elluriya sarā uiyanun n=an=kan kuwaskenun* (KBo 5.8 III 29-31) "I defeated the enemy, chased him up to Mt. Elluriya, and kept slaying him" (transl. by HED 3: 364-365). The meaning 'to smash' also works well for physical destruction of seals and tablets (for examples see HW^2 III: 668) and, metaphorically, for orders and words.

Already in the texts usually dated as OS, there are two different stems, *hulla-* in KUB 37.223 (CTH 547, Liver models) and *hulle-* or *hulli-*[93] in KUB 29.32 4, 5 (CTH 292, Laws) and KUB 36.99 rev. 4 (CTH 2, Zalpa). But the most interesting distribution is in KBo 3.22 (CTH 1, Anitta), where we have *ḫu-ul-la-nu-un* in obv. 11, 15 and *ḫu-ul-li*[*-iz-zi*] in obv. 35. KUB 37.223 has been recently dated by de Vos (2013: 103ff.) to the 15th century[94]. Therefore, the original stem in the singular must have been *hulle/hull-*. As for *hullanun*, the vowel *-a-* is often found in the 1Sg. in this type, s. also *zi-in-na-mi* KBo 41.42 I 15 NS, *ḫar-na-mi* KBo 40.272 6 MS; only two *mi*-conjugation forms of 1sg. are attested with a vowel other than *-a-*: *du-wa-ar-ni-nu-un* KUB 41.19 rev. 8 MH/NS and *zi-in-ni-nu-un* (Oettinger 1979: 311, NH). The origin of this *-a-* is not clear; in my opinion, it is hardly an analogy to 3pl. As Kloekhorst points out to me, *-a-* instead of expected *-e-* is attested in other verbal types as well, e.g

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[93] The vocalism here may be either /i/ and /e/, since the sign LI may be read as /li/ as well as /le/; IZ and IT may also be read as /et/ and /ez/. In later copies of OH texts we have *ḫu-ul-li-iš* and *ḫu-ul-le-e-ez-zi*; the latter form can be also read as *ḫu-ul-li-e-ez-zi*, pointing to a stem *hullie-*. The verb *zinni-* 'to finsih', which also has an infix and must be structurally similar, regularly shows *-i-*, but that can be graphic, see further 3.2.1.3-4. In the following text I will refer to this verb as *hulle-*.

[94] Cf. also Beckman 1983b: 102 and n. 25 who calls the text "Middle Hittite in language and script".

u-wa-mi (OS) < *h_2ou-h_1ei-mi* (for the reconstruction see Kloekhorst 2008: 992). See further 3.2.1.1-5.

In New Hittite, there are several innovations in the conjugation of this verb: a secondary *ye/a*-stem and, since Hattusili III, the *hi*-conjugation endings (cf. Otten 1973: 47). On the transition of some infixed verbs of this type to the *hi*-conjugation in New Hittite see 3.2.2.

A plene spelling of the stem final -*a*- is attested in *ḫu-ul-la-a-nu*-[*un*] in KUB 23.21 III 28, a NS copy of the Annals of Arnuwandda I; this -*a*-, however, is likely to be of secondary origin, see above. A possible plene spelling of the stem final -*e*- is found in *ḫu-ul-le-e-ez-zi*, attested in KUB 36.98a obv. 5, a NS copy of Anitta-text, and also in NS texts KUB 47.89 III 5 and KUB 58.77 IV. However, due to the ambiguity of the sign LI, these forms may be read as *hulliēzzi* and belong to the -*ye/a*- stem. So there is no reliable evidence for /ē/ in the sg. of *hulle-*.

Oettinger (1979: 261ff.) argued that *hulle-* is cognate with Hitt. *walh-* 'to strike'. In his view, *hulle-* goes back to a simple thematic stem *$hwl̥H$-e/o- (ibid. 264). This is unlikely, however, since in the plural the stem is *hull-*, cf., e.g., *ḫu-ul-lu-mi-en* KUB 23.21 obv. 29 MH/MS, rather than expected *hullamen*. This connection was later rejected by Melchert (1994: 82).

According to Puhvel (HED 3: 367f.), the verb contains a nasal infix and is related to Gr. ἀλίσκομαι, aor. ἑάλων 'to be taken, conquered'. Melchert (op. cit.) presents this etymology using the standard version of the laryngeal theory: *$h_{2/3}wl̥$-né-h_1-/ $h_{2/3}wl̥$-n-h_1- > *hulne-/huln-*, arguing that the final laryngeal should be *h_1- in order to explain the stem vowel -*e*- in the OS forms. Therefore, he rejects Puhvel's etymology, since the Greek forms point to a *h_3 in the auslaut.

Yet another etymology for *hulle-* was suggested by Kloekhorst (2008: 360), who compares *hulle-* with OIr. *follnadar* 'to rule', Lat. *valeō* 'be strong' and Lith. *véldu* 'to own', Goth. *waldan* 'to rule', OCS *vladǫ* with root extension *-d^h-. The PIE root is then *h_2welh_1- (in LIV this root is presented as *$welH$-).

Most promising, however, is the connection with Toch.A *wäl-* 'to shatter', for which Hackstein (1995: 302 with n. 43) suggests the root $*h_2welh_1$-[95]; if so, it makes a perfect match for *hulle-* both formally and semantically. For a detailed discussion of the Tocharian verb, see Malzahn 2010: 893f.

The e/ø (or i/ø) ablaut of *hulle-/hull-* is similar to that of *zinni-/zinn-* 'to finish' and is best explained as $*h_{2/3}w\mathring{l}\text{-}né\text{-}h_1\text{-}(C)/*h_{2/3}w\mathring{l}\text{-}n\text{-}h_1\text{-}(V)$-, even though it is not clear whether the expected sg. stem $*huln\bar{e}$- is actually attested. Cf. further 3.2.1.1-5.

hu(wa)rni- 'to hunt'

inf. I *ḫu-ur-nu-wa-an-zi* KUB 33.121 II 8, 10, 12 NH

impf. 3sg. pres. act. [*ḫ*]*u-u-wa-ar-ni-iš-ke-ez-zi* KBo 12.59 I 7 OH/NS; *ḫu-ur*[*-ni-iš-ke-ez-zi*] KBo 12.59 I 2 OH/NS

The meaning, contexts and synonyms for *huwarni-* are discussed by Hawkins (2006: 52ff.). In KBo 12.59 I 7, *huwarniskezzzi* stands besides *siyatalliskezzi*, which is translated by CHD Š: 341 as 'spear hunts'. To my mind, this means that *huwarni-* either refers to a different kind of hunting or to a different activity, rather than to hunt in general.

The alternation *-u-/-uwa-* is a Hittite innovation (Rieken 2001: 372ff., Kloekhorst 2007: 433), so that the older stem must be *hurni-* with a zero grade of the root. The conjugation type is not clear; the form of the infinitive suggests that the plural stem was *hu(wa)rn-* and there was no laryngeal in the auslaut, but this form is NH and is not reliable. I list this verb as *huwarni-*, but it can be *huwarna-* as well.

Čop (1960: 2) compared *huwarna-* to Gr. αὐρι-βάτης 'fast-going' (Frisk 1960 I: 189 gives no etymology for this word), Serbo-Croatian *júriti* 'to chase', Latv. *vert* 'to run', Lith. *varýti* 'to drive, chase'. Puhvel (HED 3: 433) follows this etymology and reconstructs PIE $*A_1ew\text{-}r$- (without a laryngeal in auslaut). Kimball (1999: 248) analyzes *hu(wa)rne-* as $*h_2w\mathring{r}\text{-}né\text{-}h_1$- from PIE $*h_2wer(h_1)$-. This etymology is not

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[95] Hackstein did not connect *wäl-* 'to smash' with Hitt. *hulle-* and compared the latter to Toch. AB *wäl-* 'to die', for which cf. Malzahn 2010: 893.

universally accepted. For instance, according to LIV, p. 685, the Baltic verbs and OCS *variti* belong to the root 2.*wer- 'to run'. The Etymological Dictionary of Slavic languages (ESSJa 8: 179, 198f.) compares Serbo-Croatian *júriti* to OCS *jarъ* 'strong, hard', traditionally connected with Gr. ζωρός 'strong' (about unmixed wine); one, however, has to assume the loss of *-*u*- in the latter two forms (*iōur- > *iōr-), which is not convincing.

Since *huwarni*- hardly means just 'to hunt', the very connection of *huwarne*- to roots with the meaning 'to run, move fast' is questionable. Instead, one can compare *huwarni*- to TochAB *wär*- 'to practice', which has no etymology either, see Malzahn 2010: 885, Adams 2013: 645.

iskuna(**hh**)- 'stain, stigmatize'

3sg. pres. act. *iš-ḫu-na-a-an-zi* KBo 6.26 II 19 OH/NS; *iš⸢ˈ⸣- ḫu-na-an-*[*zi*] KUB 29.29 rev. 3 OS

3sg. pret. act. *iš-ku-na-aḫ-ḫi-iš* KUB 1.16 III 42 OH/NS

1pl. pret. act. *iš-ḫu-na-aḫ-ḫu-u-en* KUB 23.13 obv. 4 NS

part. n.acc. pl. n. *iš-ku-na-an-ta* KBo 4.2 I 45 OH/NS

impf. 3pl. pres. act. *iš-ku-ne-eš-kán-z*[*i*] KBo 12.19 I 6 OS

There is still no communis opinio whether *iskuna*(*hh*)- and *ishuna*(*hh*)- belong to the same verb. The possibility of reconciling these stems with each other follows from instances of the interchange of *k* and *h* after *s* (Melchert 1994: 170, e.g., *hameskant*- instead of *hameshant*- 'spring' and *ishis*- instead of *iskis*- 'back, rear').

As there have been different interpretations proposed, all the contexts are given below.

1) KBo 6.26 II 17ff. *takku* ᴸᵁ̌SIPA.UDU *našma* ᴸᵁ̌AGRIG.MUNUS-*an ELLETAM dāi* (18) *n=aš naššu < INA>* MU.2.KAM *našma INA* MU.4.KAM GÉME-*ēšzi* (19) *Ù* DUMUᴹᴱˢ̌ *išhunānzi išhuzziyašš=a* (20) *ŪL kuiški ēpzi*

Hoffner (1997: 140), in his edition of Hittite Laws, leaves this form without translation: "If a shepherd or administrator takes a free woman in marriage, she will

become a slave after either two or four years, (whereas) they shall … her children, but no one shall seize (their?) belts." Puhvel translates *ishunānzi* here as follows: "and they degrade the children" (HED 1/2: 426).

2) KUB 1.16 III 41f. (with dupl. KBo 29.29) *huhhas=mis* (42) [*Labar*]*nan* DUMU-*san* URU*Šanahuitti iskunahhiš*

This sentence is translated by Puhvel (op. cit.) as follows: "my grandfather demoted his son Labarnas to Sanahuitta". Sommer and Falkenstein (1938: 12-14), however, suggest the following translation "Hat man nic[ht]? seine Söhne abtrünnig gemacht? Mein Grossvater hatte seinen Sohn [Labar]na in Sanahuitta *als Thronfolger verkündert*. [Nachher ab]er haben seine Diener (und?) die Grossen, seine Worte zunichte gemacht(?) [und] den Papahdilmah auf den Thron gesetzt!". This interpretation has become rather common, see, e.g., Beckman in Hallo, Younger 2003: 81, Klinger in Janowski, Wilhelm 2005: 145. Puhvel admits that this translation is also possible (incidentally, it would significantly change our conception of the historical events), but notes that in this case *iskunahh-* would have to be separated from both *ishunahh-* and *iskunant-* (HED 1/2: 227f.).

3) *nu=wa=ssi :wastazza ishunahhuen* in a rather broken context in KUB 23.13 Vs 4 is translated by HED 1/2: 427 as follows: "he has not vanquished us with arms, ... and we have stigmatized his depredations". Cf. the translation by Sommer (1932: 315): "(3) [Al]s? [der Grossvater meiner Sonne] die Arzava-Länder [überwält]igte, hat er uns doch mit der Waffe (4) [nicht überwältigt!...] ... Wir haben ihm ... getrotzt (??)!" Güterbock (1992: 240), after a detailed discussion of the meaning of *ishunahh-* (ibid. 237ff.) and its possible relation to *ishunau*(*war*) 'upper arm', hesitantly translates this as "we have erased (our) transgression".

4) for KBo 4.2 I 45 GAD^HI.A *iškunanta parkunuzzi*, Puhvel's translation of *iskunanta* as 'stained' is appealing.

5) The fragment KBo 12.19 is regretfully badly broken.

All the contexts listed above allow for different interpretations and do not give any clear indication whether we deal with one or two different verbs.

Oettinger (1979: 156ff.) and Weitenberg (1984: 114) assumed two different verbs, *ishunahh-* 'treat badly' and *iskunahh-* 'to mark, stain'. The former should formally go back to an infixed stem $*sh_2uneh_2$- from PIE $*sh_2euh_2$- and the latter should formally go back to $*skuneh_2$- from PIE $*skeuh_2$-. The second root could be related to Skt. *skauti, skunā́ti, skunóti* 'to poke rake', sometimes used as a technical term for slashing ears (Oettinger 1979: 157, cf. HED 1/2: 428). Eichner (1979: 205f.) and LIV: 561 follow this connection. The presence of a laryngeal in this root is doubtful however, cf. Vedic *á-prati-ṣkuta-*; the form *skunā́ti* is only attested in the Dhātupāṭha, see EWAia II: 751. A single spelling of *-n-* in the Hittite forms may also point to the absence of laryngeal, since in the infixed verbs we usually see geminated *-nn-*, as, e.g., in *sunna-* and *zinni-*.

Puhvel (HED 1/2: 426ff.) attributes all these forms to a single verb with a meaning 'to stain, denounce, degrade'[96]. He analyzes these forms as denominative verbs with a suffix *-na-* from **isku-*, parallel to Gr. αἰσχύνω 'to make ugly, dishonor' < **αἰσχύς* (αἰσχρός 'ugly'), with *-ahh-* being yet another suffix added to this stem. Kimball (1999: 218) explains the initial vowels αι- in Greek and *i-* in Hittite as strong and weak stems of the root. But Peters (1980: 76 with note 37a) correctly notes that we would expect an initial laryngeal to be preserved in the Hittite word. He proposes an alternative cognate for αἰσχύνω, namely Goth. *un-aiwisks* 'without shame'.

According to Puhvel, *-na-* is a suffix with a causative meaning (on which cf. Kronasser 1966: 561ff.). While suffix **neH-* may be reconstructed for PIE, there are no certain instances of such formations in Hittite (see 3.6.2). Besides, if *-na-* already has a causative meaning, it is unclear why the stem would need to be enhanced with the factitive/causative suffix *-ahh-*.

Ünal (1990: 360) notes that the meaning 'to disgrace, denounce' "is guessed according to the context of the Laws §175 (cf. Sommer, Falkenstein 1938: 164, n. 1) and is not obligatory. The context would also allow the meaning 'to hurl, to shoot' and possibly the sense of 'to dismiss, to throw, to push aside (children)' as well." If so,

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[96] In HW^2 (I: 192ff.) these forms are also kept together, but they are interpreted differently – 'to mark, designate'.

ishunahh- and *ishunāi-* can be derived from a nominal stem **ishuna-*, related to *ishuwa-* 'to throw, discard'. The meaning 'to discard' is acceptable for *iskuna(hh)-* as well, so these forms may also belong to this root. Nevertheless, whatever the etymology of the discussed forms is, they are not likely to have an infix.

ista(n)h- 'to taste'

2pl. pres.act *iš-taḫ-te-e-ni* KUB 41.8 III 31 MH/NS; *iš-taḫ-te-ni* KBo 10.45 III 40 MH/NS

3pl. pres.act. *iš-taḫ-ḫa-an-zi* KUB 33.89+ 14 NS

3sg. pret.act. *iš-taḫ-ta* KBo 3.38 obv. 5 OH/NS, KUB 33.84 6 MH/NS

impf. 3sg. pres. act. *iš-taḫ-ḫi-eš-ke-ez-zi* KBo 59.98 8 NS

impf. 3sg. pres. act. *iš-ta-an-ḫi-eš-ke-et* KBo 8.41 12 OH/NS

This verb is generally believed to have a nasal before *-h-*, whether it should be a nasal infixed version of PIE root **steh₂-* 'to step' (e.g., LIV: 590, Lorenz, Rieken 2011: 92) or a part of the root (HED 1/2: 463). While /n/ is always deleted before a consonant cluster in OS texts (see Shatskov 2006 and 2.1.9), in Middle and New Hittite it is often restored. Thus, *-n-* would be expected in more than just one form out of seven. Note that it is also missing before a single consonant in *iš-taḫ-ḫi-eš-ke-it* and *iš-taḫ-ḫa-an-zi*.

It seems likely that in this case we are dealing with an intrusive nasal. For the phenomenon see Kimball 1999: 318f., who gives following examples: *ma*-AN-*za-az-zi* KUB 33.120 I 21 for usual *ma-za-az-zi*, *ḫa*-AN-*te-eš-na-az* KUB 17.5 I 6 (OH/NS) for *ḫa-at-te-eš-na-az*. All her examples have a nasal elsewhere in the word, though.

Formally this root resembles PIE **steh₂-* 'to stand, step', but the semantic development is not clear to me.

kīnāi- 'to assort'

2sg. pres. act. *ki-na-a-ši* KBo 12.124 III 20 NS

3sg. pres. act. *ki-na-iz-zi* KBo 52.26 III 30 MH/NS, KUB 7.1 I 38 MH/NS, KUB 8.38 + 44.63 III 13 NH, KUB 24.10 III 19 MH/NS, KUB 44.61 obv. 19 NS; *ki-i-na-iz-zi* KUB 44.64 II 12 NS; *ki-na-a-iz-zi* KBo 21.17 12 NS, KBo 21.74 III 9 NS, KUB 51.18 obv. 17 NS

3pl. pres. act. *ki-na-an-zi* KUB 34.65 4 NS; *ki-na-a-an-zi* KUB 51.44 rev. 4 MS?

1pl. pret. act. *ki-na-u-en* KUB 43.74 obv. 14 NS

2pl. pret. act. *ki-na-a-at-ten* KUB 13.20 IV 2 MH/NS

Part. acc. sg. c. *ki-na-an-da-an* KUB 44.63 II 17 NH; *ki-na-an-ta-an* KUB 44.63 II 18 NH

Part. n.-acc. sg. n. *ki-na-an* KUB 17.28 III 31 OH/NS, KUB 27.16 III 25 NS; *ki-na-a-an* KBo 35.157 II 4 MS?, KUB 17.28 III 44 OH/NS; *ki-i-na-a-an* KUB 42.14 I 11 NH

Part. g. sg. c. *ki-i-na-a-an-ta-aš* IBoT 1.31 obv. 21, 22 NH; *ki-na-a-an-da-aš* KUB 42.23 obv. I 9 NH

Part. acc. pl. c. *ki-na-an-du-uš* KBo 21.20 I 17 NS

Part. n.-acc. pl. n. *ki-na-an-ta* KUB 58.107 I 6 MH/NS; *ki-na-a-an-ta* VBoT 58 IV 23 OH/NS; *ki-na-an-da* KUB 22.70 rev. 34 NH

Part. d. pl. c. *ki-i-na-an-ta-aš* KUB 47.73 obv. 9 MH/NS

The meaning of this verb has been a matter of a discussion. Oettinger (1979: 162f.) translated it as 'to grind, crush'. He compares it to Hitt. *kīnu-* 'to break, open', assuming them to be parallel formations *ki-nā-* and *ki-nu-* from *kineh₃- and *kinew- respectively. Puhvel (HED 4: 181f.) argues that the meaning is 'to sift, sort' and compares *kīnai-* to Greek δια-ττάω 'to sift', σῶσι <*kyeA₂- (but cf. Frisk 1960 I: 386, who provides a different etymology for the Greek verb). CHD P: 369 translates *kinai-* as 'mixes[?]'.

In CTH 402, *kīnāi-* is replaced with *sarra-* 'to separate' in a duplicate: *kinaizzi* in KUB 24.10 III 19 and KBo 52.26+ III 30 vs. KUB 24.11 III 26 *sarra*[*nzi*][97]. Yet

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[97] Note that there is also a difference between sg. and pl. In the following sentence we see *lahuwai* in KUB 24.10 III 20, whereas KUB 24.11 III 27 and KBo 21.8 III 9 have *lahuwan*. This may point to a slightly different version in general.

another duplicate KBo 21.8 III 8 has *sessaranzi* 'to sieve'. Puhvel translates these phrases as "she sifts everything separately", "she divides everything separately" and "they strain everything apart" (HED 4: 180).

The interchange of *kīnāi*- with *sarra*- 'to separate' supports the meaning 'to sift' (cf. Jacob-Rost 1972: 46) against CHD's translation 'to mix'. However, in KUB 44.63 II 18-9, in the phrase *kinantan* [*h*]*assuwangazzi* it is *hassuwangai*- that means 'to sift'. Perhaps, the most appropriate translation would be 'to sort'. The connection of *kīnāi*- to δια-ττάω 'to sift' is still valid. However, the single -*n*- and plene in the root in *kīnāi*- is unparalleled for verbs with a nasal infix. In fact, *kīnāi*- rather seems to be a denominal formation, from *kih_2-no-*, which would explain the plene spelling of the -*i*- in the root, single -*n*- and the conjugation type better. Cf. similar arguments in Kloekhorst 2008: 477.

munnāi- 'to conceal, hide'

1sg. pres. act. *mu-un-na-m*[*i*] KBo 25.196 8 OS; *mu-un-na-a-mi* KUB 36.44 IV 5 OH/NS; *mu-na-a-mi* KUB 26.33 III 14 NH

2sg. pres. act. *mu-un-na-a-ši* KBo 5.3+ I 30, II 56 NH, KBo 5.4 obv. 9 NH, KBo 16.46 obv.? 17 MS, KUB 6.48 II 7 NH, KUB 13.9 III 14 MH/NS, KUB 14.1 obv. 35 MH/MS, KUB 19.26 I 25 NH

3sg. pres. act. *mu-un-na-a-iz-zi* KUB 13.4 ii 48 MH/NS, KUB 21.41 IV 12 Šupp. I, KUB 23.72 rev. 50 MH/MS, KUB 36.127 Rs 13 MH/NS, *mu-un-na-iz-zi* KBo 16.25 I 14, 58 MH/MS, KUB 8.81 II 14, III 3 MH/MS, KUB 21.42 I 18, l.Rd. 5 NH; *mu-un-na-a-zi* KUB 26.1 IV 2 NH

2pl. pres. act. *mu-un-na-at-te-ni* KBo 16.27 IV 18 MH/NS, KUB 23.77 58 MH/MS, KUB 31.115 22 OH/NS; *mu-u*[*n-n*]*a-it-te-ni* KUB 26.1 III 56 NH

3pl. pres. act. *mu-un-na-a-an-zi* KBo 24.18 I 6 MS; *mu-un-na-an-zi* KBo 3.1 II 29 OH/NS, KUB 13.20 I 4 MH/NS, KUB 40.102 I 9 NS

3sg. pret. act. *mu-un-na-a-it* KBo 16.16 III 9 NH, KUB 14.1 rev. 42, 49 MH/MS, KUB 36.127 rev. 12 MH/MS; *mu-un-na-it* IBoT 1.33 6, 7, 8 et passim NS; *mu-ú-un-na-a-it* KUB 17.5 I 4 OH/NS

3pl. pres. act. *mu-un-na-a-er* KUB 33.121 II 14 NH

3sg. pres. med. *mu-un-na-at-ta-ri* VBoT 24 II 17 MH/NS; *mu-un-na-it-ta-ri* KBo 13.71 rev. 3 NS, KUB 43.55 IV 15 pre-NH/NS

3sg. pret. med. *mu-un-na-it-ta-at* KUB 18.5+ I 27 MS, KUB 33.120 I 38 MH/NS; *mu-un-na-a-i-it-ta-at* HKM 47 rev. 53 MH/MS

3pl. pret. med. *mu-un-na-an-da-at* KBo 25.18 rev. 9 OH/NS, KUB 18.5 I 38 MS; *mu-un-na-an-t*[*a-at*] KUB 18.5 II 47 MS

2sg. imp.act. *mu-un-na-a-i* KBo 2.3 II 36 MH/NS

3sg. imp.act. *mu-un-na-a-id-du* KBo 39.8 III 28 MH/MS

2pl. imp.act. *mu-un-na-at-ten* KUB 43.71 obv. 16 NS

3pl. imp.act. *mu-un-na-an-du* KUB 48.1 III 12 OH/NH

part. n.-acc. sg. n. *mu-un-na-an* KUB 14.18 5 NH

part. d.-l. sg. *mu-un-na-a-an-ti* KBo 12.122 11 NS

impf. 2pl. pres. act. *mu-un-na-eš-kat-te-ni* KUB 43.71 obv. 14 NS

The verb *munnāi-* is a synonym of *sanna-* 'to hide', and they are used in similar contexts in New Hittite. In earlier texts, the objects of *munnāi-* are people or things, while *sanna-* is also used to refer to information, see Puhvel 2004 for details.

The stem *munnāi-* with a geminated nasal is similar to undoubtedly infixed verbs, such as *sunna-* 'to fill' or *zinni-* 'to finish'. It is the conjugation type in *-āi^{mi}* that makes *munnāi-* unusual, as *mi*-verbs with the *-āi/ā-* ablaut are generally denominatives, cf. Oettinger 1979: 357, Kloekhorst 2008: 132f. Thus, *munnāi-* is expected to be derived from a nominal stem **munna-*, which theoretically could in turn be derived from **mun-no-* or from **munH-o-*; I, however, do not know of any reasonable etymology for such a stem[98]. The infixed stems, on the other hand, should not end up in the *hatrāi*-type.

To my mind, the only plausible option to connect *munnāi-* with an infixed stem is to assume a **h_2* in the auslaut, to which the suffix **-ye/o-* was added. The problem

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[98] It can hardly go back to **muH-no-* The development **-VHnV- > *-VnnV-*, for which see Kimball 1999: 337, is uncertain, cf. Melchert 1994: 162, Kloekhorst 2008: 493, 957. Note that we see a different development in *kīnāi-* 'to assort', which is very likely to go back to **kih_2-no-* (see the entry for *kīnāi-* above and 3.4.1).

with this suggestion is that hypothetical *mu-ne-h₂-ye/o- should have joined the taiē-class. We know, however, that some verbs, e.g., istantāie/a- 'to linger', shifted to the hatrāi-class in the history of Hittite. Munnāi- must have completed this shift earlier, prior to its first attestations.

There are several etymologies for munnāi- on the record. It was compared to Gr. ἀμύνω 'to ward', implying a semantic development 'to conceal' > 'to ward off' (see HEG 5-6: 232), also to Lat. moveō 'to move' (e.g., Eichner 1975: 84 and 1988: 135, assuming munnai- <*mu-né-h₁- 'to set in motion', also Kimball 1999: 415), and finally to Gr. μύω, Hom. μύσαν 'to close (eyes)' (Oettinger 1979: 161, HED 6: 192f.). The first etymology is formally impossible, as the initial *h₂ of ἀμύνω should have been preserved in Hittite.

Lat. moveō is usually compared to Skt. mī́vati 'to push' and PIE *m(i)euh₁- 'to move' (LIV: 445f.). Hitt. mau(ss)- 'to fall' and Toch.AB musk- 'to disappear' are also believed to belong to this root. Semantically, the comparison of munnāi- and Toch.AB musk- is especially appealing, as the meaning of the Hittite verb looks like a causative to the meaning of Tocharian verb. However, the direct comparison of munnāi- and Toch.AB musk- is difficult, as the latter cannot go back to *m(i̯)euh₂-, since *uh₂/₃ is likely to yield *-wa- in Tocharian (see the discussion in Hackstein 1995: 17ff.); on the other hand, *h₁ is hardly possible for munnāi-, since the shift of *mu-ne-h₁-/mu-n-h₁- to the hatrāi-type would be difficult to explain.

The remaining connection of munnāi- to Gr. μύω 'to close (eyes)' is then the best option, as it is possible both formally (cf. Beekes 2010: 988) and semantically. There are three passages where munnāi- is used with šakuwa- 'eyes', and at least in Madduwatta it certainly means 'to close eyes (on something)', cf. KUB 14.1 + KBo 19.38 rev. 49 sākuwa=pat munnāit "(The first time Madduwatta [placed himself] under the oath. [Later he transgressed the oath]. He still did not attack them), but rather hid his eyes" (CHD L-N: 331).

Puhvel (HED 6: 193) argues that munnāi- contains a transitivizing suffix -nā-, seen also in sunna-, iskuna- and some other verbs. This, however, is hardly correct, since the gemination of -nn- cannot be explained in this way; see further 3.6.2.

sanna- 'to hide, conceal'

1sg. pres. act. *ša-an-na-aḫ-ḫi* KBo 10.37 I 34 OH/NS

2sg. pres. act. *ša-an-na-at-ti* KBo 4.14 III 70 NH, KBo 5.3 I 28, II 53, 65 Supp. I, KBo 5.9 II 49 NH, KBo 19.43 II 55 Supp. I, KUB 14.1 obv. 35, 38 MH/MS

3sg. pres. act. *ša-an-na-a-i* KUB 13.4 III 82 pre-NH/NS, KUB 21.37 obv. 49 NH, KUB 26.1 IV 40, 41 NH

2pl. pres. act. *ša-a-na-at-te-e-ni* KUB 13.3 III 18 MH/NS; *ša-an-na-at-te-e-ni* KBo 12.39 rev. 17 NH; *ša-an-na-at-te-ni* KUB 13.4 IV 19 pre-NH/NS, KUB 26.55 rev. 5 MS?

3pl. pres. act. *ša-an-na-an-zi* KUB 14.3 I 65 NH

2sg. pret. act. *ša-an-na-aš* KUB 6.3 22 NH

3sg. pret. act. *ša-an-né-eš-ta* KUB 14.4 III 10, IV 35 NH, KUB 19.55 obv. 18 NH; *ša-an-ni-iš-ta* KBo 9.144 2 NH

3pl. pres. act. *ša-an-né-er* KUB 16.83 obv. 45 NH

3sg. pres. med. *ša-an-na-at-ta* KUB 36.127 rev. 10, 13 MH/NS

part. n.-acc. sg. n. *ša-an-na-an* KUB 60.43 obv. 3 NS

verbal noun *ša-an-nu-um-mar* KUB 26.1 IV 19 NH

impf. 2sg.pres. act. *ša-an-na-aš-ke-ši* KUB 14.1 rev. 17 MH/NS, *ša-an-ni-iš-ke-ši* IBoT 1.33 102 NH

On the semantic difference between *sanna-* and *munnāi-* 'to hide', see above and Puhvel 2004. According to Oettinger (1979: 159) and Kimball (1999: 415), *sanna-* reflects a PIE nasal infix stem *$sn̥$-n-h_2- from the root *$senh_2$-, which is also seen in Lat. *sine*, Gr. ἄνευ, cf. HEG S: 809. This etymology, including semantics[99], is accepted by Kloekhorst (2008: 719), who follows Schrijver (1991: 218) in reconstructing the root as *$senh_1$-. The problem is that this root is attested elsewhere only in adverbs or their derivatives. So a better solution is to derive *sanna-* from the adverb *$sanna$- 'isolated', seen in *sannapi sannapi* 'scattered, here and there' (Melchert 2009:

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[99] If *$senh_1$- means 'inaccessible, far', then a factitive to it could well mean 'to conceal'.

336ff.)[100]. The root etymology remains essentially the same. The New Hittite form *šannummar* in KUB 26.1 IV 19 is analogical to similar forms of *sunna-* 'to fill' and *tarna-* 'to let, let go'.

sunna- 'to fill'

1sg. pres. act. *šu-un-na-aḫ-ḫi* KBo 3.38 rev. 17 OH/NS, KUB 33.70 III 10, 11 OH/NS

2sg. pres. act. *šu-un-na-at-t*[*i*] KUB 15.22, 14 NS

3sg. pres. act. *šu-un-na-a-i* e.g., KBo 19.129 obv. 8 NS, KUB 10.91 III 7' NS; *šu-un-na-i* e.g., KUB 6.3 IV 51 NH, KUB 54.85 obv. I 6' OH/MS, ABoT 21+ rev. 49 MH/MS; *š*[*u*]-*un-ni-e-ez-zi* KBo 24.4 + IBoT 4.14 rev.12/17 NS; *šu-un-ni-ez-zi* KBo 40.67 II 6, IV 4 MH/NS; *šu-un-ni-ya-zi* KUB 6.45 + IV 9, 14, 19, 24 NH with dupl. KUB 6.46 I 46, 50, 54, 58, 62 NH

1pl. pres. act. *šu-un-nu-me-ni* KBo 32.15 II 16 MH/MS

2pl. pres. act. *šu-un-na-at-te-ni* KUB 13.4 IV 18 OH/NS

3pl. pres. act. *šu-un-na-an-zi* KUB 11.30 obv. III 11vOH/NS', KUB 25.32+ II 33 OH/NS, KUB 35.165 rev. 21 OH/MS; *šu-un-ni-an-zi* KUB 9.32 I 40 NH, KUB 55.58 obv. 30, 32 MH/NS, IBoT 3.148 III 21, 22 MH/NS; *šu-un-ni-ya-an-zi* KBo 15.24 II 44 MH/NS, KUB 7.47 obv. 13 NS, KUB 20.35 IV 3 NS, IBoT 4.30 OBV. 4 NS

1sg. pret. act. *šu-un-na-aḫ-ḫu-un* KBo 10.2 I 21, II 23 OH/NS; *šu-un-ni-ya-nu-un* KBo 10.2 I 37 OH/NS

2sg. pret. act. *šu-un-ni-eš-ta*! (Oettinger 1979 158[50])

3sg. pret. act. *šu-un-na-aš* KBo 3.57 II 9' OH/NS; *šu-un-ni-eš* HT 21+ 15 Supp. I; *šu-un-ni-iš-ta* KUB 1.1+ II 79 NH; *šu-un-ni-ya-at* KBo 19.111 4 MH/NS

3pl. pret. act. *šu-un-ni-ir* KBo 20.114 V 9 MH/NS, KUB 18.39 obv.? 5' NH

2sg. imp. act. *šu-un-ni* KUB 6.45 III 37 NH

3sg. imp. act. *šu-un-ni-ed-du* KUB 12.58 IV 13 NH

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[100] Melchert (ibid.) notes that the choice of "the largely recessive *hi*-conjugation for such secondarily created verbs may seem surprising". However, there are suffixed stems, e.g., factitives in *-ahh-* and imperfectives in *-anna/i-* that follow the *hi*-conjugation, and there are verbs that shift to the *hi*-conjugation in the New Hittite period (e.g., *zinni-* 'to finish'), so this type was not eclipsed even at the latest stages of Hittite.

2pl. imp. act. *šu-u-<un->ni-iš-tén* KUB 13.3 II 27 NS

3pl. imp. act. *šu-un-na-an-du* KBo 39.15 III 9 MS?

Inf.I *šu-un-nu-ma-an-zi* KBo 21.34+ IV 37 MH/NS, KUB 21.17 III 10 NH

Verbal noun n.sg. *šu-un-nu-mar* KBo 1.42 III 51 NH, KUB 55.31 rev. 2 MS

Verbal noun g.sg. *šu-un-nu-ma-aš* KUB 59.29 III 17 NS

A secondary stem *sunniya-* follows the *mi*-conjugation. According to Laroche (1973: 91ff., cf. Melchert 1994: 73), a stem *sūniya-* also belongs to this root, but Oettinger (1979: 159) and Kloekhorst (2008: 786f., with a detailed discussion) are certainly correct that *sūniya* is a distinct verb that means 'to dip'.

The verb *sunna-* is related to *sū-* 'full' and *suwai-* 'to fill'[101]. The adjective *sū-* is an *u*-stem adjective (see Kloekhorst 2008: 794) and is likely to be deverbative. The spellings *šu-u-ú* and *šu-u-ú-un* (KBo 25.72 20 OS?) point to a disyllabic stem (HEG S: 1127, Kloekhorst ibid.), which means that there was a laryngeal in this root. Oettinger (1979: 158f.) assumed that the root contained a root final $*h_2$, but it would have been preserved in *sū-*, cf. Melchert 1994: 72. Alternatively, the root $*seuh_3$- '(to be) full' (LIV: 539) has been reconstructed based on the shape of Palaic form *sūnat* 'filled' (this form allegedly reflects a generalized full grade of the root $*sunéh_3$-*t*, see Melchert 1994: 73, Kimball 1999: 416). Further, in my view, it was the $*h_3$ in $*sunóh_3$-*ti* (< $*sunéh_3$-*ti*) that triggered the shift to the *hi*-conjugation, since the vocalism *-o-* was typical for *hi*-verbs. According to Eichner (1975: 97), *sunna-* and *tarna-* 'to let, let go' also originally belonged to the *mi*-conjugation, but he assumed a different trigger for their shift to the *hi*-conjugation and reconstructed $*h_2$ in the auslaut. For details, see note 104 below.

There have been several attempts to find reflexes of this root outside Anatolian. Oettinger (1979: 159) adduced Skt. *sū́te* 'gebiert' (LIV: 538, $*seuH$-), assuming a semantic development 'be full' > 'to give birth' (cf. Weitenberg 1984: 139f.), while Sturtevant connected *sunna-* to Skt. *sunóti* 'to squeeze, press' (LIV: 537f. $*seu$- 'to squeeze', cf. EWAia II: 713). The most immediate and plausible etymon, however, is

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[101] On the relation between *sū-* and *suwai-* and on the derivation of *sunna-* cf. Weitenberg 1984: 138f.

Slav. *sy̆tъ 'satiated' < *'filled' (Rikov 1994, Young 2007), which then goes back to *suh₃-to-.

The geminated -nn- in šunna- is generally explained as a result of assimilation of a nasal and laryngeal between vowels in the plural *sunh₃-énti > sunnanzi, which was later generalized throughout the paradigm. Note that the Palaic form has a plene spelling in the root and a single nasal. The Hittite and Palaic forms must be parallel formations, and the difference between them is yet to be explained. Melchert (1994: 202) argues that /u/ in Pal. sūnat was lengthened under accent in an open syllable, in which case we have to assume a rather unexpected shift of accent to the first syllable.

tarna- 'to let, let go, release'

1sg. pres. act. *tar-na-aḫ-ḫé* KBo 17.1 IV 38 OS, KBo 17.3+ III 3 OS; *tar-na-aḫ-ḫi* KBo 17.1 III 3 OS, KBo 18.123 rev. 3 MS

2sg. pres. act. *tar-na-at-ti* KUB 41.23 obv. II 16, 17 NS; *tar-na-a-ši* KBo 19.70 rev. III 42 NH; *tar-na-ši* KB 4.2 I 25, II 21, III 8 OH/NS

3sg. pres. act. *tar-na-a-i* KBo 17.43 I 11 OS, KUB 14.8 rev. 27 NH, KBo 20.60 rev. V? 13 NS; *tar-na-i* KBo 17.43 I 3 OS, KBo 22.1 22 OS, KBo 25.36 III 11 OS, KBo 27.137 rev. III 19 NS; *tar-na-iz-zi* KUB 28.4 I 25b NS

1pl. pres. act. *tar-nu-um-me-ni* KBo 16.8 III 14 NH, KBo 18.135 obv. 8 NS; *tar-nu-um-me-e-ni* KUB 14.16 rev. III 37 NH; *tar-nu-um-ma-ni* KBo 2.8 I 15 NS

2pl. pres. act. *tar-na-at-te-ni* KUB 31.105 14 MS; *tar-na-te-ni* VBoT 30 rev.? 5 NS

3pl. pres. act. *tar-na-an-zi* KBo 25.31 obv. II 15, rev. III 2, 5 OS, KUB 21.29 II 40 NH

1sg. pret. act. *tar-na-aḫ-ḫu-un* KBo 6.29 obv. II 27 NH, KBo 17.3+ III 4 OS, KBo 31.221+ 8 MS

3sg. pret. act. *tar-na-aš* KBo 17.1 III 5 OS, KBo 22.2 obv. 3 MS; *tar-ni-eš-ta* KUB 13.34 IV 4 NS, KUB 21.33 11 NH; *tar-ni-iš-ta* KUB 1.1 + rev. IV 49 NH

1pl. pret. act. *tar-nu-mi-en* KBo 3.45 10 OH/NS; *tar-nu-en* KBo 3.60 rev. III 7 OH/NS; *tar-nu-um-me-en* KUB 43.76 obv. 6 NS; *tar-nu-me-en* KUB 42.102 r. Kol. 11 NS

2pl. pret. act. *tar-na-at-te-en* KUB 14.10 obv. I 7 NH, KUB 24.4+ obv. 22 MS

3pl. pret. act. *tar-ni-ir* KBo 3.34 obv. II 19 OH/NS, KUB 33.106 II 10 NS, ABoT 1.65 obv. 10 MS; *tar-nir* KBo 3.36 obv. 24 OH/NS, KUB 23.79 obv. 2 MS?

2sg. imp. act. *tar-na* KUB 17.10 III 24 OH/MS, KUB 33.49 II 1 NS; *tar-ni* KBo 10.45 obv. I 45 MH/NS, KBo 15.2 IV 19 NS

3sg. imp. act. *tar-ni-eš-du* KBo 26.131+ rev. 4 NS, KUB 36.87 rev. IV 17 NS; *tar-na-ú* KBo 38.154 I 5, 6, 7 MS; *tar-na-a-ú* KUB 7.13 I 19 NS; *tar-na-ad-du* HKM 45 obv. 17 MH/MS

2pl. imp. act. *tar-na-at-tén* KUB 15.34 obv. II 25 MS; *tar-na-at-te-en* VSNF 12.32 5 NS

3pl. imp. act. [*tar*]-*na-<<aš->>an-du* KUB 31.108 obv. I 9 MH/NS

3sg. pres. med. *tar-na-at-ta-ri* KBo 27.176 obv. 3 MS?; *tar-na-ta-ri* KBo 23.93 rev. IV 10 NS

3pl. pres. med. *tar-na-an-ta-ri* KUB 34.11 rev. 3 NS

3sg. pret. med. *tar-na-at-ta-at* KBo 5.8 obv. I 22 NH

verbal noun n.sg. *tar-nu-mar* KUB 5.1 rev. III 69, 75 NS

verbal noun g.sg. *tar-nu-um-ma-aš* KUB 13.20 I 11 MH/NS; *tar-nu-wa-aš* IBoT 2.66 rev. 9 NS, KUB 58.96 rev.? 5 NS

inf.I *tar-nu-ma-an-zi* KUB 5.6 II 58 NS; *tar-nu-wa-an-zi* KBo 46.130 11 NS

part. n.sg. c. *tar-na-an-za* KBo 19.132 rev. 11 NS, KUB 9.28 III 24 NS

part. n.-acc. sg. n. *tar-na-an* IBoT 3.26 7 NS

part. n.-acc. pl. n. *tar-na-an-ta* KBo 32.224 obv. 13 MS

Impf. 1sg. pres. act. *tar-ši-ik-ke-mi* HKM 46 rev. 27 MS

Impf. 3sg. pres. act. *tar-ši-ik-ke-ez-zi* KUB 23.28 + obv. I 14 OH/NS; *tar-ši-kán-zi* KBo 3.29 I 20 OH/NS; *tar-ni-eš-ker* KUB 21.29 II 5 NH

The alleged stem *tarnahh-*, which would entail a reconstruction of $*h_2$ (thus Oettinger 1979: 155) is based on one form in KBo 3.45 obv. 2, which is actually to be read as *w[ā]tarnahhan* (Kloekhorst 2008: 847), participle of *watarnahh-* 'to instruct'.

Kloekhorst argues (2008: 847) that the imperfective forms *tar-ši-ke/a-* (KUB 23.72 II 41, HKM 46 rev. 26) and *tar-aš-ke-et-tén* (KUB 24.9 II 42) in fact reflect the uninfixed stem **terk-*, where /k/ is dropped between consonants. However, a loss of /n/ in **tarn-ske/a-* seems more likely, compare *hassike-* from *hanna-* 'to judge', see Hoffner, Melchert 2008: 43.

Several scholars connected *tarna-* to Hitt. *tarh-* 'overcome, excel' and further to the PIE root $*terh_2$-, Skt. *tárati* 'to excel', Lat. *intrāre* (cf., e.g., HEG T: 195). This comparison is to be abandoned on semantic grounds, since a much more compelling semantic fit is found in Toch. AB *tärk-*, pres. *tärnā-* 'to release'[102], and perhaps in Arm. *daṙnam* 'to turn'[103].

As for the PIE root, assumed for Hitt. *tarna-* and TochAB *tärk-*, LIV: 635 gives $*TerKh_2$-, where T may be $*t$ or $*d^h$, and K cannot be a labiovelar. According to Melchert (1994: 81), the Hittite verb reflects $*t\mathring{r}(K)neh_2$-. Kloekhorst (2008: 847) argues that the laryngeal here could not be $*h_2$, as it would have yielded 3sg. pres. **tarnahhi*; in his view, a voiced guttural cannot be reconstructed for this root, since it would not have been dropped between consonants. So his reconstruction is $*terk/\acute{k}h_{1/3}$-. In order to explain the *hi*-conjugation of *tarna-*, it is better to assume $*terKh_3$-, since the $*o$ in $*terKn\acute{o}h_3$- (< $*terKn\acute{e}h_3$-) could trigger the shift of *tarna-* to the *hi*-conjugation, see further the entry for *sunna-* above and 3.2.2. Eichner (1975: 97) also argued that *sunna-* and *tarna-* originally followed the *mi*-conjugation; he, however, reconstructed $*h_2$ in the auslaut[104].

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[102] This etymology was suggested by Benveniste (1932: 142).

[103] Attempts have been made to bring together these etymologies. Schmidt (e.g., 1989: 311) argued that $*h_2$ in Tocharian can be reflected as *-k-*. He also pointed out (1992: 104f.) that a sequence *-rkn-* should not necessarily have been simplified to *-rn-* (which is implied for *tärnā-*), as it did not happen in *kärkñä*, 3 Sg. Conj. of *kärk-* 'to bind'. Therefore, in his view, *-k-* in *tärk-* is the result of 'hardening' of $*h_2$. In this case, Toch. *tärk-* may also belong to the root $*terh_2$-, and Hitt. *tarna-* is related to Hitt. *tarh-*. The issue of laryngeals hardening in Tocharian is, however, very controversial, see Malzahn 2010: 460[1].

[104] He argued that 1pret. act. *tarnahhun* could have been parsed by the speakers both as a *mi*-conjugarion form *tarnahh-un* and as a *hi*-conjugation form *tarna-hhun*, and it was the ambiguity of this form and the similarity of 1pl. *tarnummeni* to

duwarni- 'to break'

1sg. pres. act. *du-wa-ar-na-aḫ-ḫi* KBo 22.137 III 4 NS, KBo 32.19 II 28 MH/MS, *du-wa-ar-na-a-aḫ-ḫi* Oettinger 1979: 308

2sg. pres. act. *du-wa-ar-na-at-ti* KUB 15.19 obv. 7 NS

3sg. pres. act. *du-wa-ar-ni-iz-zi* KBo 2.3 I 25 MH/MS, KBo 6.4 I 27, 30 OH/NS, KBo 30.2 7 NS, KBo 35.156+ III 3 NS, KBo 39.258 11 NH, KBo 53.27 II 55, III 44 MH/NS, KUB 7.53+ II 53 NH, KUB 9.28 III 26 MH/NS, KUB 12.34 I 24 MH/NS, HKM 60 rev. 24 MH/MS; *tu-wa-ar-ni-iz-zi* KBo 39.8 IV 13 MH/MS; *du-wa-ar-ni-zi* KBo 6.3 III 70 OH/NS; *tu-wa-a[r-n]i-iz-zi* KBo 6.3 I 29 OH/NS; *tu-wa-ar-na-zi* KBo 6.3 I 31 OH/NS; *du-wa-ar-na-i* KBo 39.8 II 11 MH/MS, KUB 24.9 II 43 MH/NS, KUB 48.118 13 NH; *tu-wa-ar-na-i* KBo 24.1 I 8, 12 MH/MS; *du-wa-ar-na-a-i* KBo 52.26+ II 36 MH/NS, KUB 26.1 III 64 NH; *du-wa-ar-ni-ya-az-zi* KUB 17.27 II 36 MH?/NS; *du-wa-ar-ni-ya-zi* KUB 17.28 II 49 MH?/NS; *du-wa-ar-ni-ya-iz-zi* KUB 30.15 I 35 MH?/NS; *du-wa-ar-ni-e-ez-zi* ; *du-wa-ar-na-a-iz-zi* ; *tu-wa-ar-na-a-iz-zi*

3pl. pres. act. *tu-wa-ar-na-an-zi* KBo 39.8 IV 14 MH/MS; *du-wa-ar-na-an-zi* KBo 2.3 III 37 MH/MS, KBo 6.34 II 43, III 38 MH/NS, KBo 13.146 I 17 OH/NS, KUB 9.6+ III 23 MH/NS; *tu-wa-ar-ni-ya-an-zi* KBo 20.34 obv. 10, 12 OH/NS; *du-wa-ar-ni-ya-an-zi* KUB 30.19+ IV 27 MH?/NS

1sg. pret. act. *du-wa-ar-ni-nu-un* KUB 41.19 rev. 8 MH/NS;   *du-wa-ar-na-aḫ-ḫu-un* KUB 13.35 IV 25, 30 NH

3sg. pret. act. *du-wa-ar-ni-it* KBo 10.45 III 33 MH/NS, KBo 34.24+ obv. I 18, KUB 17.10 I 33 OH/MS; *du-wa-ar-na-aš*

3pl. pret. act. *tu-wa-ar-ni-er* KBo 3.34 I 9 OH/NS, KUB 36.104 obv. 7 OS, *du-wa-ar-ner* KUB 40.95 II 13 NH

3sg. pres. med. *du-wa-ar-na-at-ta-ri* KBo 5.1. I 4 NH, KBo 32.14 II 48, III 43 MH/MS; *du-wa-ar-na-ad-da-ri* KBo 5.1 IV 40 NH

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corresponding forms of some *hi*-verbs (e.g., *dummeni* of *da-^{hhi}* 'to take') that caused the transfer of *tarna-* to the *hi*-conjugation.

3sg. pret. med. *du-wa-ar-na-at-ta-at* KBo 32.14 lower edge 71 MH/MS; *du-wa-ar-na-ad-da-at* KBo 5.1 I 45 NH

3sg. imp. act. *du-wa-ar-na-ad-du* KBo 53.27+ II 53 MH/NS; *du-wa-ar-na-du* KBo 2.3 II 42 MH/NS *du-wa-ar-na-a-ú* KBo 6.34 III 41 MH/NS;

3pl. imp. act. *du-wa-ar-na-an-du* KBo 6.34 II 52 MH/NS, HKM 66 obv. 19 MH/MS

3sg. imp. med. *tu-wa-ar-na-at-ta-ru* KBo 39.8 III 34, IV 15 MH/MS; *du-wa-ar-na-at-ta-ru* KBo 53.27+ III 47 MH/NS, Bo 6166 II 10 n.a.

part. n.sg. c. *du-wa-ar-na-an-za* KUB 5.7 rev. 29 NS, KUB 22.70 rev. 49 NH

part. n.pl. c. *du-wa-ar-na-an-te-eš* KUB 5.7 rev. 29 NS

part. n.pl. n. *du-wa-ar-na-an-da* KBo 10.34 I 24 NS

verbal noun n.sg. *du-wa-ar-nu-wa-ar* KUB 3.95 8 NS

verbal noun g.sg. *du-wa-ar-nu-ma-aš* KUB 26.92 16 NH

Inf. I :*du-wa-ar-nu-ma-an*[-*zi*] KUB 44.4+ rev. 23 NH

Impf. 3sg. pres. act. *tu-wa-ar-ni-iš-ke-ez-zi* KBo 39.8 III 33, 36 MH/MS; *du-wa-ar-ni-eš-ke-ez-zi* KBo 53.27+ II 52 MH/NS; *du-wa-ar-ni-iš-ke-ez-zi* KBo 9.106+ II 48, 51 MH/NS; *du-wa-ar-n*[*i*]-<*iš-*>*ke-ez-zi*[105] KBo 2.3 II 41 MH/NS

Hitt. *duwarni-* displays forms of several verbal types. The only OS attestation *tu-wa-ar-ni-ir* does not help us with the conjugation type. In MS texts, we have a *hi*-conjugation 1sg. *du-wa-ar-na-aḫ-ḫi* and 3sg. *t/du-wa-ar-na-i* as well as a *mi*-conjugation 3sg. *t/du-wa-ar-ni-iz-zi* and *du-wa-ar-ni-it*. *Hi*-forms of the 3sg. must be an innovation since in the copies of the Old Hittite texts we usually see *mi*-forms. A secondary stem *duwarniya/e-* appears first in NS. All things considered, *duwarni-* must have originally belonged to the same type as *zinni-*, but *hi*-forms must have arisen quite early.

In one instance, there is an interchange of active and middle forms in different copies of the same passage: *tuwarnattaru* (KBo 39.8 III 34), [*duwa*]*rnittaru* KBo

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[105] So Miller 2004: 88, HEG T: 495. The reading *du-wa-ra-aš-ke-ez-zi* (for which cf. Oettinger 1979: 311) is possible, but unlikely in view of *du-wa-ar-ni-eš-ke-ez-zi* in the duplicate KBo 53.27+ II 52 (MH/NS).

9.106 + KBo 8.75 + KBo 42.87 II 49 obv. *duwarnadu* (KBo 2.3 II 42), *duwarnaddu* (KBo 42.15 + Bo 68/11+ 896/z(+) II 53) and *duwarna*[*ndu*] (KBo 44.19 + 1306/ III 7') (Miller 2004: 89f., cf. Neu 1968b: 76).

Oettinger (1979: 151) included *duwarni-* in the list of verbs that contain a nasal infix and are derived from the roots ending in *-h_1-*. It is usually compared to Skt. *dhvárati* 'to hurt, damage'. The assumed PIE root is *$d^h wer(H)$-* (Pokorny 1959: 277, LIV: 159f.; HEG T: 492ff.). Within Anatolian, *duwarni-* was compared to CLuw. *lawarr-* 'to despoil, strip' (thus CHD L-N: 49) or 'to break' (Carruba 1966: 17f., HEG T: 494), but Kloekhorst (2008: 521) is correct in rejecting this connection since the first *-a-* in *lawarr-* cannot be explained if the root was *$d^h werh_1$-*, and for a graphic vowel we would expect the spelling **lu-wa-*.

Oettinger traced *duwarni-* back to *$d^h w\r{r}-né-h_1-/d^h w\r{r}-n-h_1$-*. He grouped it together with verbs in *-h_1-* along with *zinni-* 'to finish' and *harna-* 'to sprinkle' (Oettinger 1979: 151), to which later other scholars added *hu*(*wa*)*rni-* 'to hunt?' (Kimball 1999: 248) and *hulle-* 'to defeat' (HED 3: 367f., Melchert 1994: 82).

The main problem with this analysis is that the Sanskrit data does not support the existence of the laryngeal in this root. While some Sanskrit forms point to the presence of a laryngeal (e.g., pres. *dhū́rvati*, aor. *ádhūrṣata*, noun *dhū́rvaṇ-*), other show no traces of it (e.g., *adhruta-* or *satya-dhvŕ̥t-*). In order to reconcile these forms, an *anit* root is often assumed; the long vowel in *dhū́rvati* is explained via analogy to *tū́rvati* 'to overcome' (Gotō 1987: 191). Lubotsky (1997: 143) also considers the long vowel to be secondary in this form. LIV: 159f. also presents this root as *$d^h \underset{\circ}{u}er$-*, though it notes that there could have been a variant *$d^h \underset{\circ}{u}erh_1$-* because of the Hittite verb.

Another peculiarity of *duwarni-* is that it seems to have a full grade of the root, in contrast to the zero grade expected in nasal stems, as in, e.g., *hulle-* 'to smash' (on the zero grade see Szemerényi 1996: 270ff., especially note 2 on page 272, Meier-Brügger 2003: 170). This full grade can nevertheless be secondary. As Rieken (2001) has shown, there are instances, where *-u-* changes to *-*(*u*)*wa-* in certain environments. This development is suggested for attested variants *huhhurta-* and *huwahhurti-* 'throat' or

for the *huwarniske-/ hurniske-* discussed above. But the full grade *-wa-* has been attested for *duwarni-* since the earliest texts (e.g., *tu-wa-a*[*r-* …] KBo 6.2 I 20 (OS)) and it never alternates with *-u-*. Therefore, it is highly unlikely that *-wa-* in *duwarni-* is a result of the same phonetic development of *-u-* as in *huwarniske-/ hurniske-*. Kloekhorst's idea (2007: 455f.) that the sequence **CuRCC-* developed into **CuwaRCC-* would be more compelling, and the stem *duwarni-* could reflect a plural stem **dʰwr̥-n-h₁*, but it is not applicable here, since this root is unlikely to have had a laryngeal in the auslaut.

Summing up, there are two indications that *duwarni-* is not a reflex of a PIE infixed stem – the full grade of the root and the likely *aniṭ* character of this root in Sanskrit.

Eichner (1973: 75) suggested that *duwarni-* is a denominal formation **dʰwor-ne-yé-* from deverbal adjective **dʰwor-no-*. Melchert (1984: 36, 114[71]) corrects it to **dʰwer-ne-yé-*, as *-w-* is lost between dental stop and *-o-*, cf. *idālu-* 'bad' < **h₁edwol-* and *dān* 'twice' < **dwoyom*. This adjustment was accepted by Schulze-Thulin (2001: 390 and note 10) who argued that it was *e*-vocalism of the root that did not allow *duwarni-* to change to the *hi*-conjugation. Later, Melchert (1997: 134f.) compared this type to Luwian verbs that have the endings *-īti/-idi* in 3sg. pres. and *-ainti/-eidi* in 3pl. pres.; in order to explain lenition in Luwian endings, he assumed analogical displacement of accent to the root after the iterative deverbal type in **-ó-eye-*. These adjustments lead to a reconstruction **dʰwér-ne-ye-*.

There are several objections to this analysis as well. First, there are counterexamples to the development **érC- > árC-*, e.g., *merzi* 'to disappear' (cf. the discussion in Melchert 1994: 136-7, Kimball 1999: 161-3). Second, there are no other certain examples for this type of verbal formation. Melchert (1984: 36f.) suggested that *usniye/a-* 'to offer' (< **usna-* < **us-no-*, cf. Skt. *vasná-* 'price, wealth', Lat. *vēnum dare* 'to put up for sale', Hitt. *wās-* 'to buy') did not belong to the *-ye/a*-type in Old Hittite. This assumption is based on the *e*-vocalism of the only OS attestation *uš-**ne**-eš-kat-ta* (KUB 29.29 II (8), 12, 15, Laws). Indeed, in OS texts all *-ye/a*-verbs consistently have *-i-* before the suffix *-ske/a-*, cf. [(*e-et-r*)]*i-iš-ke-ez-zi* KUB 6.2 IV 59

(OS, Laws), *ḫa-az-zi-iš-k[án-zi]* KBo 25.35 II 5 (OS?, KI.LAM festival), *pí-iš-ši-iš-ká[n-zi]* KBo 17.36 III 8 (OS, CTH 665), whereas *-e-* is attested for *hatrāi-* (*ha-at-re-eš-ke-ez-zi* KBo 22.1 rev. 22, OS), *iskuna-* (*iš-ku-ne-eš-kán-z[i]* KBo 12.19 I 6', OS), and *palwāi-* (*pal-ú-eš[-kan-zi]* KBo 20.13 rev. 17 (OS), ?[*pa*]*l-ú-e-eš-kán-zi* KBo 17.28 9, OS)). Therefore, *usniye/a-* could belong to the *hatrāi-* type, but it could also continue **usneyé-*, a formation parallel to **dʰwer-ne-yé-*[106]. The latter option is less likely, but if correct, it may provide some support for the existence of denominatives in *´-(*n*)*e-ye-*; however, in my opinion, the existence of this type remains hypothetical.

An alternative etymology was suggested by Barton (1993: 554f.) who argued that *duwarni-* is not related to the Sanskrit words. He claimed that the present stem *dhū́r-va-* in fact reflects PIE **dʰr̥h₂-wé-*, in the same manner as *tū́rvati* reflects **tr̥h₂-wé-* (PIE **terh₂-*, Hitt. *tarh-* 'be able, overcome', cf. LIV: 633; for similar Sanskrit examples see Pinault 1987-88: 329[39]). The vocalism *-u-* in *dhur-* is conditioned by the vocalism of the present stem, *dhū́r-va-,* in the same way as for the root **terh₂-* along with variant *tira-* (e.g., thematic Present *-tiráti*) there are allomorphs with *-u-*, such as *tura-* (caus. *turayante*). Barton traced Skt. forms back to **dʰerh₂-*, to which he also compared Gr. θραύω 'to break'[107]. If so, *duwarni-* does not have any cognates in other languages at all[108]. As to the etymology of *duwarni-*, Barton accepts Forrer's comparison with Hitt. *dudduwar 'numbness' (*dudduwarant-* 'paralyzed, lame', *dudduwares-* 'to become paralyzed'). In his view, *duwarni-* is derived from **duwar-*, which is in turn consists of *du (<**dʰeu-* 'run'?) + *-*ar-* (as -*ar-* in *nahsar-att-* 'fear', *tusgar-att-* 'joy'). This etymology is very unlikely and has not received much acclaim, cf. HEG T: 485.

Summing up, since the root was **dʰwer-* rather than **dʰwerh₁-* (as the cognate Vedic forms show), *duwarni-* did not have an infix. This verb may go back to a

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[106] In Melchert 1997: 135 a Proto-Anatolian retraction of accent is assumed for this type. It is not clear if this retraction can be applied to *usniye/a-*.

[107] In Pokorny 1959: 274 θραύω and deverbative adjective θραυστός are traced back to **dhreu-s-* (cf. LIV: 158), where also Goth. *driusan* 'to fall', Welsh *dryll* 'fraction, scrap', Latv. *druska* 'crumb' belong to.

[108] EWAia I: 802 distinguishes **dʰru-* 'to deceit' as a separate root. If so, Lat. *fraus* belongs here and is not related to *duwarni-*.

denominative formation *$d^hwér$-ne-ye- < *d^hwer-ne-yé-, but the existence of this type in Hittite is uncertain as there are no unambiguous examples for it.

All in all, *duwarni*- is likely to be an Anatolian or pre-Hittite formation, but its internal structure remains unclear. The stem final -*ni*- must be a (complex) suffix. The reason *duwarni*- is often believed to be infixed is that *duwarni*- resembles *zinni*- both in stem final -*ni*- and the conjugation type. Perhaps, -*ni*- in *zinni*- 'to finish' (and other similar infixed verbs) was reinterpreted as a suffix, which was added to the stem *$dwar$-. This, however, remains highly hypothetical. Cf. also 3.4.4.

ūnh- 'to release, empty'

3sg. pres. act. *u-uḫ-zi* KBo 40.343 4 MS; *u-un-ḫa-zi* KUB 35.79 obv. ? I 5 MS;

3pl. pres. act. *u-un-ḫa-an-zi* KBo 17.74+ rev. IV 23 OH/MS, KBo 25.61+ obv.? II 3 OS, KBo 29.92 obv. II 12 MS, KUB 30.40(+) obv. I 18 NS, KUB 39.57 obv. I 9 NS

1sg. pret. act. *u-un-ḫu-un* KUB 31.77 obv. I 16 NH

3sg. pret. act. *u-uḫ-ta* KUB 31.77 obv. I 12 NH; *u-un-Vḫ-da* KBo 18.180 rev. 10 NS

3pl. pret. act. *u-un-ḫe-er* KUB 42.20 9 NH

3pl. imp. act. *u-un-ḫa-an-du* KBo 60.313 3 NS

part. n.-acc. sg. n. *u-un-ḫa-an* KUB 56.14 obv. I 11 NS

impf. 3sg. pres. act. *u-un-ḫe-eš-ke-ez-zi* KUB 31.77 obv. I 12 NH

This verb has been interpreted differently by various scholars, cf. HEG U: 57. In a recent article, Lorenz and Rieken (2011) convincingly argued that it means 'to empty, release', which was suggested earlier for one of the contexts by Otten. They also proposed a new etymology, namely that it is an infixed stem from the root *h_1weh_2-, seen also in Lat. *vānus* 'empty', Gr. ἐάω 'to allow, release' etc. For the root see Nussbaum 1998: 81ff.

If *ūnh*- reflects an infixed stem with a zero grade of the root *h_1unh_2-, a consistent plene in the root syllable would be quite unusual. The initial *u-uC*- may reflect /o/,

which is lowered from /u/ in certain environments, including in front of nasals, for which see Rieken 2005, Kloekhorst 2008: 52ff.

As for the preservation of /h/, the laryngeal was not assimilated between a syllabic resonant and a vowel, e.g., in *palhi* 'broad' < $*p\l{h_2}$-*i*- (Melchert 1994: 55, cf. also Melchert 1984: 44[91]). The case of of *unh*- shows that the assimilation of laryngeals preceded the resyllabification /wn̥/ > /un/, as the plural stem $*h_1w\n{h_2}$-*énti* yielded $*h_1unh_2$-*énti* and eventually *unh-anzi* rather than **unn-anzi. The stem *unh*- was subsequently generalized through the paradigm[109]. For the rule $*w\R > uR$ between consonants see Melchert 1994: 126f., Kimball 1999: 247ff.

walla-, walliye/a- 'to praise'

1sg. pres. act. *wa-al-la-aḫ-ḫi* KUB 31.127 III 37 OH/NS

3pl. pres. act. *wa-li-[y]a-an-zi* KUB 6.46 IV 28 NH

impf. 3sg. pres. act. *wa-al-li-eš-ke-ez-zi* KBo 5.6 I 4 NH

walluske/a- 'to praise?'

impf. 1sg. pres. act. *wa-al-lu-uš-ke-mi* KUB 29.1 I 26 OH/NS

impf. 3sg. pres. act. *wa-al-lu-uš-ke-zi* KBo 32.16 III 6 MS, KUB 35.53 II 12 NS

impf. 3pl. pres. act. *wa-al-lu-uš-ká*[*n-zi*] KUB 34.53 II 13 MS

impf. 2pl. pret. act. *wa-al-lu-uš-ke-et-te-n=a-an* KUB 23.77 79 MH/MS

impf. 2pl. pret. med. *wa-al-lu-uš-ke-ed-du-ma-at* KUB 36.44 IV 14 MS

The verbal stems *walla*- and *walluske/a*- are usually grouped together, even though *walluske/a-* is mostly attested in poorly preserved contexts, so it is not absolutely certain that they are related (cf. Kloekhorst 2008: 952). The 1sg. form *wallahhi* (KUB 31.127 III 37 OH/NS) seems to point to the stem *walla*-; note though that 1sg. in *-ahhi* may occur in some other verbal types, e.g., *zinnahhi* from *zinni*-[mi] 'to finish'.

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[109] The generalization of the weak stem is typical for the Hittite infixed stems made to roots of the type *C(R)eRH*-, see 3.5 below.

The interpretation of the stem *walluske/a-* is also disputed. Kimball (1999: 421) considers *wallu*(*ske/a*)- to be a phonetic variant of *walla-* and argues that the root-final laryngeal was vocalized between consonants in $*walh_1$-*ske/o-*, which resulted in *walluske/a-*. This is unlikely, since similar forms would be expected for, e.g., *hulle-* and *zinni-*, but are not attested. According to Melchert (1994: 81), the verbs *walla-* and *walluske/a-* reflect parallel formations $*wal$-*neh$_2$- and $*wal$-*neu-ske/o-* (cf. also Oettinger 1979: 490f. with note 82) [110].

Within Hittite *walla-*, *walliye/a-* is related to *walliyatar* '(the song of) praise' and perhaps to a hapax *walli-* 'praise?'. In my opinion, the most probable source for these words is a root with a laryngeal in the auslaut[111]. Theoretically, *walla-*[hhi] may go back to an infixed stem $*wl$-*n-H-* as well as to a stem $*wolH$- (cf. 3sg. pres. *mallai* 'to grind' < $*mólh_2$-*ei*).

Oettinger (ibid.) compared *walla-* to Lat. *valēre*[112] 'be strong' ($*welH$- 'to be strong', LIV: 617f.), Toch.A. *wäl*, Toch. B *walo* 'king'. Melchert (1993: 252) connected *walla-* to CLuw. *walliya-* 'to lift, raise' and HLuw. *waliya-* 'to exalt'. Semantically, the connection to Luwian verbs is preferable, but I do not know of any plausible cognates for a root $*welH$- with a meaning 'to raise, exalt' or similar outside Anatolian. If *walla-*, *walliye/a-* is indeed related to $*welH$- 'to be strong', it is very likely to go back to the infixed stem $*wl$-*n-H-*, which is reconstructed for PIE on the basis of OIr. *follnadar* 'to rule' (LIV ibid.). This etymology is possible, but uncertain.

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[110] The coexistence of both -*na-* and -*nu-* stems for one root is at best very rare. Kronasser (1966: 560) gives a list of several verbal roots with suffixes -*na-* and -*nu-*; in my opinion, most of Kronasser's examples can be explained differently. The stems *iyantniya-* and *iyatnu-* are implied by participle *iyatniyant-* and adjective *iyatnuwant-*; the latter is better analyzed as *iyatn*=(*u*)*want-* (see HED 1/2: 351). The stems *kuennu-* and *tarnummeni* must have been assumed by Kronasser on the grounds of 1pl. *kuennummeni, kuennummen* and *tarnummeni*, as well as deverbative *kuennumar*; however, a similar connecting vowel /u/ is also attested in 1pl. forms in other verbs, e.g., *tumeni* for *dā-* 'to take', which is conditioned phonetically. The form *tarnuzi* KBo 2.8 III 21' is explained by Oettinger (1979: 58[45]) as a back formation from *tarnummeni* after the model of *arnuzi : arnummeni*. *Lap*(*pa*)*nu-* is a causative form with a suffix -*nu-*, but *lappinai-* is derived from *lappina-* 'wick'. It is not clear why *hahlanesk-* 'to make yellow' is compared to *SA$_5$-nusk-* 'make red', these are two different stems. The variants *dankunu-* and *dankunesk-* are both real, but the latter is attested only once and may be an ad hoc formation. The only possible parallel for $*wal$-*na-* : $*wal$-*nu-* is *harna-* and *harnu-* 'to sprinkle'. However, the internal structure and etymology of *harna-* and *harnu-* are not clear as well. Besides, there is no solid evidence for the verbal suffix -*na-* < $*$-*neh$_{2/3}$- in Hittite, see 3.6.2. Nevertheless, the interpretation of *walluske/a-* as a *nu*-verb is very attractive.

[111] The geminate -*ll-* in these words must reflect $*$-*lH-* or -*ln-*. The latter option is unlikely as $*weln$- would be quite unusual for a PIE root; it is also hardly possible that *walla-*, *walluske/a-* and *walli-* each have a different nasal suffix ($*$-*na-*, $*$-*nu-* and $*$-*ni-*[?]).

[112] Kloekhorst (2008: 360) compares Lat. *valeō* to Hitt. *hulle-* 'to smash'; on the strength of this comparison de Vaan (2008: 652) suggests a final $*h_1$ for this root.

zinni- 'to finish'

1sg. pres. act. *zi-in-na-aḫ-ḫi* KBo 15.25 obv. 12 MH/MS; *ze-en-na-aḫ-ḫi* KBo 35.180 11 NS; *zi-in-na-aḫ*[-*ḫi*] KUB 57.3 obv. 16 NH; *zi-in-na-mi* KBo 41.42 I 15 NS

2sg. pres. act. *zi-in-ni-ši* KUB 29.1 I 5 OH/NS

3sg. pres. act. *zi-in-ni-zi* KBo 20.10 + I 5 OS, KBo 29.65 obv. I 9 MS?, KBo 44.92 rev. 9' MS; *zi-in-iz-zi* KUB 7.41 IV 42 MH/MS?, Bo 8366 2 MH?/NS; *zi-ni-iz-zi* KUB 9.31 I 42 MH/NS; *zi-in-ni-iz-zi* KUB 25.36 V 12 OH?/MS, KUB 58.74 rev. 21 MH?/NS, KUB 60.41 III 20$^?$ OS ([*zi-*]*in-ni-iz*[-*zi*]); *ze-en-ni-iz-zi* KBo 10.45 rev. IV 42 MH/NS; *zi-in-na-i* KBo 15.48 II 5 MH/NS, KUB 29.8 II 17 MH/MS; *zi-in-na-a-i* KBo 13.245 VI 20 OH/NS, KUB 15.31 I 27 MH/NS, KUB 15.32 + obv. I 29 MH/NS, KUB 22.70 rev. 67 NH, KUB 27.59 I 24 MH/NS; *ze-en-na-i* KBo 4.2 I 61 pre-NH?/NS, KBo 9.148 + rev. 11 NH, Bo 3220 rev. III 5 NS; *ze-en-na-a-i* KBo 41.159 rev. 43 NH

1pl. pres. act. *zi-in-na-ú-e-ni* KBo 17.25 II 2 OS; *zi-in-nu-um-me-e-ni* KUB 13.35 + IV 3 NH

2pl. pres. act. *ze-en-na-at-te-ni* KUB 43.22 IV 15 NS

3pl. pres. act. *zi-in-na-an-zi* KBo 20.37 I 4 OS, KBo 24.45 obv. 31' MS?, KUB 1.11 rev. III 58 MH/MS; *ze-en-na-an-zi* KBo 10.92 I 16 NS, KUB 17.18 II 10', III 14, 18 MH/NS

1sg. pret. act. *zi-in-ni-nu-un* Oettinger 1979: 311, NH; *ze-en-na-aḫ-ḫu-un* KUB 1.1 obv. I 60, IV 47 NH

3sg. pret. act. *zi-in-ni-it* KBo 3.21 II 2 OH or MH/MS, KBo 5.6 I 6 Supp. I, KUB 36.83 I 8 NS; *ze-en-ni-it* KUB 40.102 VI 6 NS

3pl. pret. act. *zi-in-ni-ir* KUB 29.54 IV 12 MH/MS

3sg. imp. act. *ze-en-ni-eš-du* KUB 58.78 obv.$^?$ 10 NS; *zi-in-na-a-ú* KBo 4.4 II 13 Murš. II

2pl. imper. act. *zi-in-na-at-tén* KUB 31.64 III 20 OH/NS, HKM 72 obv. 15 MH/MS

3sg. pres. mid. *zi-in-na-at-ta-ri* KBo 13.18 r. Kol. 6 NS, KUB 22.70 rev. 22, 65 NH; *ze-en-na-at-ta-ri* RS 17.109 12 NH

3pl. pres. mid. *zi-in-na-an-ta-ri* IBoT 1.36 III 51 MH/MS

3sg. pret. med. *zi-in-na-at-ta-at* HKM 80 obv. 8 MH/MS

part. nom. **sg. c.** *zi-in-na-an-t-* KUB 27.59 IV 21 NS, KUB 32.123+ III 18 NS

part. nom.-**acc**. **sg. n.** *zi-in-na-an* KBo 19.128 VI 34 NH

verbal noun n.sg. *zi-in-nu-*[*mar*] KBo 1.31 rev. 10' NS

?inf.I *zi-in-ni-u-an-*[*zi*] KUB 34.9 4 OH/NS

impf. 2pl. pres. act. *zi-in-ni-iš-ke-ši* KUB 24.7 II 15 NH, KUB 33.120 I 36 MH/NS

The verb *zinni-* can be used both with an object (usually an infinitive) and without it, cf. KUB 15.31 I 27 *nu mahhan zinnai* "(She pours the fine oil and speaks the words of the d.-bread.) When she finishes, …".

The etymology of *zinni-* is disputed. See HEG W-Z: 735ff. for the full list of suggested etymologies. I will discuss only a few of them.

Quite often, *zinni-* has been compared to Lat. *sinō* 'to leave alone, let, allow' (Oettinger 1979: 152, Melchert 1994: 80, Kimball 1999: 453). Reflex of initial *s may in fact sometimes be spelled *z-* in Hittite; examples are collected in Kimball 1999: 452f. There are, however, two objections to this etymology. First, all reliable instances in which a sign of the Z-series stands for the etymological *s seem to occur in initial consonant clusters (*zakkar* 'excrement', cf. Gr. σκῶρ 'id.', *zama*(*n*)*kur* 'beard', cf. Skt. *śmáśru-* 'id.'), and they do not provide support for the assumption that signs of the Z-series could represent *s before vowels, as would be the case for *zinni-*[113]. Second, Lat. *sinō*, as is clear from its supinum *situs* 'placed', belongs to the root *$tḱei$-* 'to dwell' (LIV: 643f., on development of the initial consonantal cluster in Latin see Leumann, Hofmann, Szantyr 1977: 177)[114].

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[113] For this reason Bader's comparison (1981) of *zinni-* to Lat. *senis* 'old' is improbable as well.

[114] Note, however, that Sihler (1995: 534) acknowledges that there could be two PIE roots merged in Lat. *sinere*.

Barton (1993: 552ff.) proposed to connect *zinni-* with Lat. *fīniō* 'to mark out the boundaries, limit', assuming **Dw- > z-* in Hittite. Semantically it is attractive, but this development is hardly possible as we do not see it in, e.g., *tuekka-*, ^{LÚ}*duyanalli-* (cf. Kimball 1999: 291, Melchert 1994: 118). Besides, the etymology of Lat. *fīniō* and *fīnis* 'boundary, limit' is disputed. According to Walde, Hofmann (1938 I: 502), *fīnis* was derived from *fīgō* 'to drive in, insert, fix', i.e. *fīnis < *fīg-s-ni-* 'driven in'. Alternatively, *fīnis* has been connected with Lat. *perfinēs* 'you must break' and PIE **bʰeiH-* 'to hit' (see de Vaan 2008: 222). Neither of these etymologies makes the comparison of Lat. *fīniō* with Hitt. *zinni-* possible.

In my opinion, *zinni-* is derived from *zē-^{ari}* 'to be ready' (Oettinger 1979: 151f., LIV: 617f., Kloekhorst 2008: 1037). Semantically, this connection is not as apparent as in case of *sū-* 'full' : *sunna-* 'to fill', but is quite plausible, even though *zē-^{ari}* is used exclusively in relation to food (e.g., KBo 5.1 obv. I 28f. *mahhan=ma* ^{UZU}Ì *zēari* "but when the fat is ready").

According to LIV, p. 617f., *zē-^{ari}* and *zinni-* go back to PIE **teih₁-* and are related to OIr *tinaid* 'to melt, disappear', OE *ðīnan* 'to wet' (with full grade of the root due to paradigm levelling). The laryngeal in the auslaut is supported by ON *þiðr < *tiH-to-*. Other cognates are presented in Pokorny 1959: 1053f. OIr. *tinaid* 'disappears' (glossed as *euanescit*) is poorly attested, but is considered to contain a nasal infix (Thurneysen 1946: 474) and could be a parallel formation to *zinni-*. However, in my opinion, the Old Irish and Old English verbs are rather cognate to OCS *tajo* 'to melt', Arm. *t'anam* 'to make wet, become wet'[115], going back to an extended PIE stem **teh₂i-* of the root **teh₂-* 'to melt', for which see Klingenschmitt 1982: 113f., LIV: 616[116].

Nevertheless, if *zinni-* is connected with *zē-^{ari}* 'to be ready', a further comparison with Lat. *tītiō* 'fire-brand' (cf. HEG W-Z: 687f) can be made. If so, *zinni-* was originally used in reference to cooking, but subsequently broadened its meaning from 'to make ready (about food)' to 'to make ready' and further to 'to finish'. The stem *zinni-* is then best explained as containing an infix and going back to **ti-né-h₁-ti* /

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[115] Note that Arm. *t'anam* may contain a suffix **-naH-* rather than an infix, see Kocharov 2011: 272f.

[116] The structure of this root is similar to PIE **kreh₁(i)-* 'to sift' (LIV: 366f.), **seh₂(i)-* 'to be satisfied' (LIV: 520f.) etc.

ti-n-h₁-énti, with the subsequent generalization of the weak stem. Theoretically, *-nni-* could be a suffix as well, but both the origin of this suffix and the gemination of the nasal (cf. 3.6.4 and 5.9) are difficult to explain in this scenario. As for the meaning of *zinni-*, it seems to be a causative to *zē-*^{ari} 'to be ready'. Since the main function of the infix was to form causatives (see 7.2.3), interpretation of *zinni-* as an infixed stem accounts also for its causative semantics.

Instead of the expected **zinnē-* (< **ti-né-h₁*) in the singular, *zinni-* consistently shows *-i-* (e.g., *zi-in-ni-zi* KBo 20.10 + I 5 OS). The *i*-vocalism might be graphic, as there was a tendency to replace the sign NE with NI when not in the root syllable, see 3.2.1.3. If *-i-* was nevertheless phonetically real, one has to assume retraction of accent to the root, see further 3.2.1.4. The origin of the vocalism *-a-* in the 1sg. is unclear to me; a similar distribution is found in other verbs of this type, cf. further 3.2.1.1, 3.2.1.5.

Note that *zē-*^{ari} has another derivative with a causative meaning: *zanu-* 'to cook'. Since a simultaneous derivation of two different causatives is unlikely, I assume that *zanu-* is a more recent formation.

Conclusions

3.2 The verbs discussed in this chapter fall into several verbal classes in Hittite.

3.2.1.1 The verbs *harni-*, *hulle-*, *duwarni-*, *zinni-* and perhaps *huwarni-* belong to Oettinger's I 2a class/Kloekhorst's I a I class. In 1sg., there is often an *-a-*, as in *zinnami* or *harnami*, while in 3sg., it is *-i-*. In 1pl., there is often an *-u-* used as a connecting vowel, e.g., *ḫu-ul-lu-mi-en*, *zi-in-nu-um-me-ni*, which means that the plural stem is *hull-* and *zinn-*, s. Kloekhorst 2008: 360, 1037. Summing up, the ablaut is as follows: *-a-* in the 1sg., *-e-* or *-i-* (after /n/) in the 2 and 3sg. and Ø in the plural. The zero-grade in plural is expected for an infixed stem (< **Cu/i(R)nH-énti*), whereas the variation *a/e* or *a/i* in the singular is not. The unexpected *-a-* in 1sg. act. is attested in

other verbal types as well, e.g., *u-wa-mi* (OS) (Kloekhorst, p.c.), but its origin is not clear.

Note that after Old Hittite, these verbs are gradually shifting to Oettinger's II 2 a class (*tarna-*) and I 2 c class (*wemiye-*), cf. Oettinger 1979: 313. In fact, in some New Hittite texts we find *zinni-* exclusively with *hi*-endings, and *harna/iya-* predominantly has forms of the *wemiye*-type.

3.2.1.2 A root-final $*h_1$ has been assumed for *hulle/hull-* and *zinni/zinn-* on the basis of their etymology. The expected infixed stems of these roots should have looked like $*h_2ul\text{-}né\text{-}h_1\text{-}ti/*h_2ul\text{-}n\text{-}h_1\text{-}énti$ and $*ti\text{-}né\text{-}h_1\text{-}ti/*ti\text{-}n\text{-}h_1\text{-}énti$, respectiely. The 3pl. forms *hullanzi* and *zinnanzi* are very likely to descend directly from $*h_2ul\text{-}n\text{-}h_1\text{-}énti$ and $*ti\text{-}n\text{-}h_1\text{-}énti$. The singular forms are problematic, however. The $*\acute{\bar{e}} <*\text{-}éh_1\text{-}$ in a non-initial syllable should have remained *-ē-* in Hittite, according to Melchert 1994: 142; Kimball 1999: 146f.). Kloekhorst (2014: 197ff, 212) argues that $*\acute{\bar{e}}$ in an open non-initial syllable merged with $*é$; the resulting half-long vowel /é·/ still was spelled plene in about half of its attestations. Whereas, in Middle Hittite, /é·/ was shortened to /é/ and was virtually always spelled without plene.

If the strong stems *hulle-* and *zinni-* actually reflected $*h_2ul\text{-}né\text{-}h_1$ and $*ti\text{-}né\text{-}h_1\text{-}$, one would expect to have some plene spellings (e.g., **zi-in-ne-e-ez-zi*). There are only a few OS forms of *hulle-* and *zinni-*[117], and plene spellings are absent. In later texts and copies, we only have one ambiguous plene spelling *ḫu-ul-le-e-ez-zi* (KUB 36.98a obv. 5), which can be read as *hulliezzi* as well. In my opinion, this is not a coincidence; the lack of plene spellings shows that the singular of these verbs does not go back directly to the full grade of the infix *-né-h_1-* (as well as *-néH-* with any other laryngeal).

3.2.1.3 It is important that *zinni-*, *duwarni-* and *harni-* always have an *-i-* in the auslaut (e.g., *zi-in-ni-ši* KUB 29.1 I 5 OH/NS, *zi-in-ni-iz-zi* KBo 20.10 I 5 OS? or

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[117] Singular forms in OS: *ḫu-ul-li-iz-zi* KUB 29.32 4, 5; *ḫu-ul-la-nu-un* KBo 3.22 obv. 11, 15; *ḫu-ul-li-it* KUB 36.99 rev. 4; *zi-in-ni-zi* KBo 20.10 + I 5 OS; KUB 60.41 III 20 ([*zi-*]*in-ni-iz*[*-zi*]).

MS?)[118], whereas stative verbs or *-we/a-* verbs have *-e-*, cf. *ar-ša-ne-e-ši* KBo 25.122 2, 4, 6, 8, 10, 12, 14 (OS), *šu-u-ul-le-e-et* KBo 32.14 II 4 (MS).

If the singular of *zinni-* does not reflect *$tinéh_1ti$, what would be the origin of *-i-* in *zinnizzi*? Melchert (1984: 114f.) attributed the vocalism *-i-* in these forms to analogy to the stems with suffix *-anna/i-*, but none of the forms of *zinni-* actually look like those of *anna/i*-type imperfectives. Kloekhorst assumed there might have been a special development here (2008: 1037), though he does not specify which one.

Oettinger 1979: 135[3] suggested that the sign NI was regularly used instead of NE in positions other than the beginning of a word. An extensive study of MS and OS forms by Sideltsev (2002: 32ff.) supports this[119]. If so, the spelling *zi-in-ni-* actually stands for /tsinne-/. This would also explain the spelling of the 3pl. form *zi-in-ni-ir* for /tsinn-er/, where the ending /er/ was added to the weak stem /tsinn-/. An additional argument for a possibility of reading NI as *-né-* is given by Kloekhorst (2014b: 62[11]), who argues that *ma-a-ni-za* in KBo 6.2 III 7 (OS) stands for *mān=e=za* "they stand for themselves", with the nom.pl.c. *-e* of the enclitic third-person pronoun *-a-* .

Nevertheless, the replacement of NI by NE was rather a tendency than a rule without exceptions, and there still are rare forms with NE, cf. nom. pl. com. *iš-ḫi-ma-a-NE-eš* KBo 17.15 obv. 10 (OS?) as compared with a more typical *iš-ta-na-NI-iš* KUB 17.10 IV 22 (OH/MS), as well as *uš-NE-eš-kat-ta* in KUB 29.29 12 (OS) and [(*an-na-*)]NE-*ku-uš* KUB 29.36+ IV 5[120]. Therefore, if *-ni-* is only graphic in *zinni-* and *duwarni-*, one would expect at least a few occurrences of NE signs. Since such spellings are missing, it cannot be excluded that *-i-* is phonetic rather than graphic.

3.2.1.4 Since the singular forms of *hulle-*, *zinni-* etc. are unlikely to go back to the strong stem *$CR(R)$-né-H-*, as was argued above in 2.3.1.2, where do they come from? It is probable that a 3pl. stem *-nH-enti* was generalized in these verbs, as is suggested

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[118] Due to ambiguous reading of signs LI and IT that may read also as /le/ and /et/d/, the stem vowel of the relevant forms of *hulle-* may have been either /i/ or /e/. The forms of the type *ḫar-ni-e-ez-zi* VBoT 58 IV 24 reflect a secondary stem in *-iya/e-*.

[119] Sideltsev (op. cit.) notes only one exception, *hannessar*, where NE is used more often than NI, as, e.g., in *ḫa-an-ne-eš-na-aš* KBo 6.2 II 14 (OS).

[120] *an-na*-NI-*ku-uš* in NS copies KBo 6.26 III 44 and KUB 29.34 IV 22, see Hoffner 1997: 152f.

by the geminate *-nn-* in *zinni-*. The distribution *-a-* in the 1sg. : *-e/i-* in the 2sg. and 3sg. resembles the distribution of *-a-* and *-e-* in a very productive 'thematic' suffix *-ye/a-* (see Kloekhorst 2008: 129ff.), so perhaps new 'thematic' forms were made to the 3pl. *zinnanzi*, *hullanzi* etc.

Alternatively, Kimball (1999: 415) suggests that the accent shifted to the root in these forms[121], and unaccented *-eh₁-* shortened to *ĕ*. This is also possible, even though the conditioning of the accent shift and *-a-* in 1sg. remain unexplained.

3.2.1.5 There is a possibility that *-i-* in *zinni-* and other verbs of this type is phonetic rather than graphic, see 3.2.1.3. If Kimball is correct that the accent in the singular forms was retracted to the first syllable[122], the new post-tonic short /e/ was raised to /i/ in closed syllables and lowered to *-a-* in open syllables (Melchert 1994: 139, Kloekhorst 2008: 97). The *i*-vocalism in some forms of *zinni-*, like 3 Pret. *zinnit*, is then regular. For the present forms we would expect a regular outcome 3Sg. ***zinnazi* <*tˢínetˢi*. In fact, there is only a rare form *zinnami* (though for *hulle-* we have *hullasi* and *hullazzi* in a 15ᵗʰ century text as well, see the respective entry). Alternatively, it could be assumed that post-tonic *-e-* changed to *-i-* after *-n-* and before a dental even in closed syllables.

3.2.2 Quite a few verbs display *hi*-conjugation endings from the earliest texts on (*tarna-* 'to let', *sunna-* 'to fill', *sanna-* 'to conceal', perhaps *walla-* 'to praise'), though some have late *mi*-conjugation forms as well (e.g., *tar-na-iz-zi* KUB 28.4 I 25b).

Among the verbs of this type, *tarna-* is certainly of PIE age, while *sunna-* is rather proto-Anatolian and *sanna-* is likely to be a Hittite innovation, see the respective entries. The etymology of *walla-* is not certain, but it may also be old. The roots of *tarna-* and *sunna-* had a laryngeal in the auslaut, and in *sunna-*, it should have been either *h₁* or *h₃*. In my opinion, the latter option is preferable as it helps to explain the

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[121] She mentions analogy as a possible cause for the shift, but does not specify what the source of the analogy may have been.

[122] Cf. the assumed retraction of accent in Pal. *sūnat* (Melchert 1994: 202). It is hardly possible to explain the *-i-* in the stem auslaut and lack of plene if the accent was on the second syllable. The conditions of the accent shift are, however, not clear.

transition of these verbs to the *hi*-conjugation – in the singular *trKnéh₃-ti* and *sunnéh₃-ti* resulted in *trKnóh₃-ti* and *sunnóh₃-ti*, and the vocalism **o*, being typical for the *hi*-conjugation, triggered the change[123].

3.2.3 The verb *munnai-* belongs to the *hatrai-*class, which was very productive; most verbs of this class are denominal or deajectival, cf. Hoffner, Melchert 2008: 206f., Kloekhorst 2008: 132. As I argue in the respective entry, the likeliest source of *munnāi-* is hypothetical **mu-ne-h₂-ye/o-* > Hitt. **munāie/a-*, which shifted to the *hatrāi-*class in the prehistory of Hittite.

Finally, it is impossible to determine the conjugation type for *halla-* in *hallanna/i-*, and *harna-* 'to sprinkle', as there are no relevant forms attested.

3.3 Oettinger argued that conjugation types of the Hittite infixed verbs depended on the laryngeals in auslaut (e.g., 1979: 314). The verbs with **-h₁-* got into the 'thematic' (in his terminology) class, the verbs with **-h₂-* changed to the *hi*-conjugation, while verbs with **-h₃-* followed the *hatrai-*class. This suggestion seems to be correct in principle, though it were the verbs with **-h₃-* that shifted to the *hi*-conjugation, whereas the verb with **-h₂-* entered the *hatrāi-*class.

3.4 Quite a few verbs discussed in this chapter do not have a good etymology, and there might be alternatives to the reconstruction of the infix. Let us take a closer look at such alternatives.

3.4.1 Some of the verbs can be plausibly analyzed as denominative verbs from **no*-stem nouns, as it is suggested for *ishuna*(*hh*)- and *kīnai-*. The verbs derived from such nouns should theoretically have joined *hatrāi-*type (I 2 d according to Oettinger). *Kīnai-* does belong to this class; the attested forms of *iskuna-* do not permit to establish

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[123] Eichner (1975: 97) also considered *tarna-* to belong originally to the *mi*-conjugation, though his account of the conditions for the shift to the *hi*-conjugation is different from mine, see further the entry for *tarna-* in 3.1.

their conjugation type, but it could belong to the *hatrāi*-type as well. In my opinion, these verbs are denominatives.

3.4.2 Another possibility is a Hittite verbal suffix *-na-* that presumably continues PIE *$-neH_{2/3}$-*. Puhvel (2002) lists 3 verbs (*iskuna-*, *sanna-*, *sunna-*) that contain this suffix without giving further details; in HED 6: 192 he also adds *munnāi-* to the list. This type, however, was quire rare in PIE, and LIV: 18 reconstructs only two stems with the suffix *-neH-* for PIE.

Kronasser provides quite an extensive list of Hittite verbs with the suffix *-na-* (1966: 561ff.). Most of them are now believed to contain either a nasal infix (*harna-*, *harni-*, *munnai-*, *sunna-*, *tarna-*, *duwarni-*) or an imperfective suffix *-anna/i-* (*hallanna/i-*, *hattanna/i-*, *sallanna/i-*). In other cases, either a nominal suffix *-no-* is assumed or *-n-* is thought to belong to the stem (*harwanai-*, *huwappana-*, *impanai-*, *kīnai-*, *lappinai-*, *sarganiya-*, *ušnie-*). Among the remaining verbs, only *hahharsna-*, *hahhlana-* and *dankuna-* seem to have a causative/factitive function. The forms *dankuna-* and *hahhlana-* are both attested only once, in the same text: KUB 12.58 II 5 *kuyes=an dankunesker hahlan[esk]er* (6) *paprah<h>er* "those who have made him black, made him yellow, made him polluted" (HED 3: 5). *Dankunesk-* also has a parallel variant *dankunu-* with the same meaning (HEG T: 110). So *dankunesker* and *hahlanesker* are likely to be nonce formations; one might also accept Oettinger's explanation (1979: 247) that *dankunu-* and *dankuna-* are analogical to *impanai-* (Med. 'to be depressed', < *(a)impan-ai-*) and *aimpanu-* 'to burden, weight down'. The only other example for a 'causative' suffix *-na-* is *hahharsna-* 'to ridicule' from *hahhars-* 'to laugh', but assuming the causative meaning of *hahharsna-* is not necessary[124]. Summing up, there are no plausible independent instances for a Hittite causative suffix *-na-*.

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[124] 'To ridicule' is the translation in HED 3: 7, which, however, is not beyond doubt. There are only 3 forms attested, *ḫa-aḫ-ḫar-ša-na-an-za* (x2) and *ḫa-aḫ-ḫar-aš-na-ta*. The participle is found twice in lexical lists. In KUB 3.99 II 8, it is compared to damaged Sum. x.*hul*[124] and Akk. *su*[-, while in KBo 26.20 II 33 it is compared to Sum. *ka* x *ud* and Akk. *°ú-uḫ-ḫu*, which means 'laugh'. Güterbock translated the Hittite forms as 'laughing?' and 'laughing at?' (1985: 108, 121). Besides there is *ḫa-aḫ-ḫar-aš-na-ta* in Bo 4952 I 13, which is interpreted by Puhvel as nom.sg. from *hahharsanatar* 'mockery' (at a wizard, *ANA* LÚAZU).

3.4.3 Another reason why *munnāi-*, *sunna-* and *zinni-* are unlikely to contain the alleged suffix *-na-* is the geminated *-nn-*. Puhvel (HED 6: 1092) suggests that *munnāi-* goes back to **mu-nā-ye-*, but he does not specify the conditions for the gemination of /n/. There are several proposals in favor of gemination of resonants, which usually involve accent, but none of them is convincing, see 5.9.

3.4.4 Nevertheless, even though there is no evidence in support of the alleged suffix **-na-*, the existence of the suffix **-ni/n-* in *harni-*, *huwarni-* and *duwarni-* cannot be completely excluded, as they either have no secure etymology or are unlikely to have a laryngeal in the auslaut. This suffix would not necessarily be of PIE origin and could perhaps result from reinterpretation of *-(n)ni-* in *zinni-* as a suffix. For this process cf. Szemerényi 1996: 271.

3.5 All in all, of the verbs discussed in this section only *tarna-* 'to let, let go' is certain to go back to a PIE infixed stem. Several other verbs (*halla-* in *hallanna/i-* 'to trample', *hulle-* 'to smash', *munnai-* 'to conceal', *sunna-* 'to fill', *walla-* 'to praise', *zinne-* 'to finish') are infixed or are likely to be infixed, but they may also well be post-PIE formations, since they do not have either any infixed counterparts in the other Indo-European languages or a reliable etymology.

Note that plene spellings in the singular of *munnai-*, *sunna-* and *tarna-* are conditioned by their conjugational types, and there is no unambiguous plene spelling in the singular for the other infixed verbs (see especially 3.2.1.2); this, and the geminated *-nn-* in *munnai-*, *sunna-* and *zinne-*, suggests that these verbs (and, by extension, other verbs of these types) generalized the weak stem **-n-(H)-* of the infix. In other words, in Hittite, there is no indication for the ablaut in the infixed stems made to roots of the type **C(R)eRH-*.