Dispersals and Diversification

*Linguistic and Archaeological Perspectives
on the Early Stages of Indo-European*

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Contents

Hittite ḫandā(i)- 'to Align, Arrange, etc.' and PIE Metaphors for '(Morally) Right'

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1 Introduction

Ziegler (2014) has explained Hittite ḫandā(i)- 'to arrange, etc.' as a denominative verb from PIE *$h_2$ent-o-* '(that which is) woven; start of weaving' to a root *$h_2$ent-* 'to set the warp, begin to weave' attested in Greek ἄττομαι 'idem' and Albanian *end* 'to weave' < *h_2ṇt-ye/o-*. Janda (2016) has adduced further support in Greek ἀντίον '(upper) loom beam'. Ziegler's etymology is highly illuminating for the Hittite verb, but many aspects of the handbook treatments of ḫandā(i)- (*HW²*: 3.163–167, Puhvel 1991: 96–107, Kloekhorst 2008: 289–291) are inaccurate. The true basic meaning of the word strongly reinforces Ziegler's account.

2 ḫandā(i)- as 'to Align (Oneself)'

The oldest and most fundamental sense of active and medio-passive ḫandā(i)- is 'to align', (m.-p.) 'to align oneself' in both a concrete and moral sense. Examples (1) and (2) illustrate the concrete use:

1   KBo XVII 21 + Ro 9 (KI.LAM Festival; OH/OS):
    [LÚ ᴳᴵˢB]ANŠUR ᴺᴵᴺᴰᴬ*zippulašne* ᴳᴵˢ*arimpi ḫantāizzi*
    "The tab[le-man] aligns/arranges the *z.*-bread on the *a.*"

See the correct translation (*HW²*: 3.163), whose basic meaning 'ordnen' is close to the mark.

2   KUB 17.10 iv 22 (Myth of Telipinu; OH/MS):
    ištananiš DINGIR.MEŠ-*naš ḫandantati*
    "The altars of the gods were put in order/alignment' or 'The altars were put in order for the gods."

It is important to note that in this text *ḫandantati* expresses the opposite of *we/išuriyantat(i)* "became twisted, disordered" (Melchert 2016: 215 with multiple references).

The verb is also used metaphorically to refer to the state of the mind or soul. In the following example the metaphor is made explicit:

3   KUB 17.10 ii 31–32 (Myth of Telipinu; OH/MS):
     GI-*az lazzaiš māḫḫan ḫandānza zik* ᵈ*Telipinuš QATAMMA ḫandaḫḫut*
     "As a/the *l.* reed is well-aligned (i.e., straight), so may you, Telipinu, become well-aligned!"

The outstanding characteristic of a reed is that it is *straight* because its individual sections are all *aligned* in a straight line. Likewise the out-of-sorts soul of the angry Telipinu is to again become well aligned and hence also order in the world restored (see further Melchert 2016: 216–219).

The medio-passive is also used to mean 'to draw even with, line up with':

4   KBo 25.31 ii 8–12 and duplicates (Festival with the NIN.DINGIR-priestess; OH/OS)
     NIN.DINGIR-*aš* LÚ ᴳᴵˢGIDRU-*aš pēran ḫuwāi* N[(IN.DINGIR-*aš uezzi* 2 DUMU.MEŠ É.GAL ŠÀ-*BA kētt=a*)] 1-*iš kētt=a* 1-*iš ḫarzi* 15 ᴸᵁ·ᴹᴱˢ*ḫā*[(*pieš* ᵁᴿᵁ*Ḫatti* EGIR=ŠU*)] *išgaranteš ḫaššan=kan* 1-ŠU [(*ḫuwāi*)] § *mān=ašta* LUGAL-*i* NIN.DINGIR-*aš ḫandāētta* L[Ú x (LÚ ᴳᴵˢGIDRU)] *āppianzi ta* A.ŠAR=*ŠUNU appanzi*
     "The staff-bearer of the NIN.DINGIR-priestess precedes. The NIN.DINGIR-priestess comes. There are two palace officials of whom one keeps to one side, one keeps to the other. Fifteen *hapiya*-men are lined up behind her. She proceeds (around) the hearth once. When the NIN.DINGIR-priestess draws even with the king, the [ ] (and) the staff-bearer step back and take their places."

Puhvel (1991: 97) and Goedegebuure (2014: 281–282) understand the passage correctly (against *HW²*: 3.163–164).[1]

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1   Correct, however, and very important is the finding (*HW²*: 3.805) that contrary to a widespread misconception *ḫuwai-* means simply 'to move, proceed', with *no* implication of speed or haste. The Hittite verb 'to run' is *piddai-⁻ʰʰⁱ*.

5   IBoT 1.36 ii 29 (Royal Bodyguard Instructions; MH/MS)
     nu=šši=kan māḫ[ḫa]n LÚ.MEŠ *MEŠEDI* DUMU.MEŠ.É.GAL=*ya ḫan-dāntari*
     "And when the bodyguards and palace officials draw even/are lined up with him …"

The context of a procession assures this meaning (Güterbock and van den Hout 1991,17 and *passim*). The older medio-passive is already replaced in this sense by the active intransitive ibid. iii 45 and 48, and becomes normal in New Hittite:[2]

6   KBo 14.3 iv 29–30 (Deeds of Suppiluliuma; NH)
     nu=kan edani pangawi LÚ.[(KÚR 1-*anki=pat anda ḫ*)]*andaizzi*
     "And he (my father) drew even/caught up with that entire enemy all at once."

(compare similarly Güterbock 1956: 76). The duplicate KUB 19.18 i 24–25 has a present plural: *anda ḫandānzi* "they caught up" (historical present).
     Intransitive *ḫandā(i)-* may also mean 'to align oneself with' in the sense of 'to ally oneself with':

7   KBo 4.14 ii 75 (Treaty/Protocol of Suppiluliuma II; NH)
     zik=ma=šmaš=kan anda ḫandāši
     (Or some lords desert/defect on me,) "and *you* align yourself with them."

Likewise ibid. ii 49. This usage is equivalent to 'to join (up with)' (thus Puhvel 1991: 96).

3   Other Meanings of *ḫandā(i)-*

All other genuine senses of *ḫandā(i)-* are also derivable from 'to align'. It may be used to mean 'to equate/compare with' (compare German 'gleichstellen, vergleichen'):

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2   This is also the sense in KUB 28.99:5 (against Puhvel 1991: 97): "When the king draws even with the huwaši-stone …", where we cannot tell whether the incomplete verb is active or medio-passive.

8   KUB 21.38 Ro 13 (Puduhepa Letter to Ramses II; NH)
     n=an=kan kuedani ḫandami ANA DUMU.MUNUS KUR ᵁᴿᵁ*Kara-*ᵈ*duni-*
     ya[*š KUR*] ᵁᴿᵁ*Zulapi KUR* ᵁᴿᵁ*Āššur ḫandam*[*i*]
     (The daughter of heaven and earth that I give to [my] brother,) "to whom
     shall I equate/compare her? Shall I equate/compare her to the daughter
     of the land of Babylon, of the [land] of Zulapi, of the land of Assur?"

This is clearly the correct interpretation (Edel 1994: 217, Hoffner 2009: 283, et
al.). A meaning 'to betroth' for *ḫandā(i)-* does not exist (against Puhvel 1991:
97).
    We also find the verb used to mean 'to match up', first in a physical sense:

9   KUB 55.20+9.4 i 2–3 ("Ritual of the Ox"; ?/NS)
     12 ᵁᶻᵁ*ÚR.ḪI.A=ya anda ḫandāmi* SAG.DU-*aš=kan* SAG.DU-*i ḫandanza*
     ...
     (Now I am treating him throughout this day.) "I also match the twelve
     body parts: the head is matched with the head ...". (that is, that of the
     patient and that of the ram serving as ritual substitute)

Puhvel (1991: 96) thus renders the ritual usage optimally. Beckman (1990: 45)
less accurately translates "arrange together." We find likewise ibid. i 19 *ḫanda-*
nun "I have (also) matched up."
    Better attested is 'to make a match' or 'to be a match' in the sense of spiritual
or psychological compatibility, like-thinking, or harmony:

10   KUB 1.1 iii 2–3 ("Apology" of Hattusili III; NH)
     nu ḫandāwen [(*nu=nn*)]*aš* DINGIR-*LUM ŠA* ᴸᶸ*MUDI* D[A]/M *āššiyatar*
     pešta
     (I took as my wife the daughter of the priest Pentipšarri, Puduhepa, at the
     word of the deity,) "and we were a match/compatible, and the deity gave
     us the love of a husband and wife."

Otten (1981: 17) renders the example freely "wir hielten zusammen", glossing
the verb (ibid. 86) as '(sich) fügen'. Güterbock (1983: 160) likewise translates
correctly "we were in harmony." Puhvel (1991: 100) again falsely invents a non-
existent "we got married."[3] The same sense is found at KUB 24.7 i 19–21 (Güter-
bock 1983: 156 and 160 against Puhvel 1991: 100).

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3 Puhvel's repeated understanding of the verb as expressing 'to get married' is quite impossible,
   for among other reasons because we know that, as expected in an ancient society, marriage

11   KUB 21.38 Ro 58 (Puduhepa Letter to Ramses II; NH)
      nu=mu ITTI ŠEŠ=*KA ḫandait nu=za* DUMU.NITA.MEŠ DUMU.MUNUS
      .MEŠ DÙ-*nun*
      (My personal deity, who had also done that, when the Sun-goddess of
      Arinna, the Storm-god, Hebat, and Šaušga made me queen,) "made me
      compatible with your brother, and I produced sons and daughters."

Much less likely is the interpretation of "hat mich gleichgestellt" (Edel 1994:
221). Certainly false is "married me off to your brother" (Puhvel 1991: 99).
Puduhepa's entire line of argument to Ramses is to boast of how she and
her husband Hattusili are soul-mates, thanks to divine arrangement—and to
assure him that the same will be true for him and his Hittite bride.

12   KUB 30.56 iii 10–11 (Tablet Inventory; NH)
      Mān ÙKU-*ši* ARAD.MEŠ=*ŠU* GÉME.ME[Š=*ŠU=ya ŪL*] SIxSÀ-*anzi*
      našma LÚ-*LUM* MUNUS-*TUM=ya ŪL ḫandanzi*
      "If a man's male and female slaves do not get along, or a man and woman/
      husband and wife do not get along …"

Dardano (2006: 213) properly translates "übereinstimmen" (likewise *HW*²:
3.165). False once again is "marry" (Puhvel 1991: 98). The same objection applies
as that given in footnote 3 regarding example (10).
     The participle *ḫandānt-* is used predicatively in the technical sense 'in align-
ment with' (a model/archetype), hence 'corresponding/true to':

13   KUB 31.143 ii 17 (Invocation of Hattic Deities; OH/OS) (and *passim*)
      [ ]x ᵈ*Inaraš maltešnaš ḫandān*
      "[This is] true to/corresponds with the recitations/ritual of/for Inara."

14   KUB 2.6 vi 3–4 (Winter Festival; OH/NS)
      ANA GIŠ.ḪUR *ḫandān*
      "True to/corresponding with an archetype."

This expression is often found in colophons. It is surely from this usage that the
attributive use 'true, accurate' developed: hence KBo 3.23 iv 12 (OH/NS) *ḫandān*
memian "true word" (Puhvel 1991: 102), "mot juste" (Archi 1979: 42). Likewise

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      for the Hittites was not a joint act of a man and woman. A man married a woman, who became
      his wife.

probably also EME-*aš ḫandanza* and EME-*an ḫandan* 'true speech', literally 'true tongue' (Güterbock & Hoffner 1980: 23).[4]

The final step is that the participle acquires the *moral* sense of 'just, loyal':

15   KUB 24.8 iv 4 (Tale of Appu; pre-NH/NS)
      [LÚ Ḫ]UL-*aš* ŠEŠ-*aš* LÚNÍG.SIxSÁ ŠEŠ=*ši* mem[*iškewan dāiš*]
      "Brother Bad [began to sp]eak to his brother Just."

The righteous brother is thus consistently characterized throughout this text (Siegelová 1971: 12, 18, and 24 with references). See also ibid. iii 14–15: NÍG.SIxSÁ-*an* KASKAL-*an* "the right/just path/way."

16   KUB 31.127 i 51 (Prayer/Hymn to Sun-god; pre-NH/NS)
      n=an ḫantantan ARAD=*KA* dUTU-*uš kišar*[*t*]*a ēp*
      "And may you, Sun-god, take him, your just/loyal servant, by the hand!"

Compare "your just servant" (Singer 2002: 37) and "deinen treuen Diener" (Rieken et al. 2016). Puhvel (1991: 103) offers further examples of the moral usage.

That the fundamental meaning of *ḫandā(i)-* is 'to align' should by now be clear. It is also not difficult to derive from it two uses of the verb that have often wrongly been taken to be basic. It is a short step from 'to align, arrange' physical objects to 'to arrange' events, hence 'to ordain, determine'. This sense is seen especially in *parā ḫandānt-* and *parā ḫandantātar*, freely translatable respectively as 'providential' (of deities and humans) and 'providence', but literally '(favorably) pre-ordaining' (of a deity), '(favorably) pre-ordained, blessed' (of a human) and '(favorable) preordination, predetermination' (well treated by Puhvel 1991: 105). Note the archaic use of *p(a)rā < *pró* in a locatival temporal sense 'before', not the synchronic directional 'forth, out' (Melchert 2008: 202).

For the further development from 'to determine, fix, ordain' to 'to determine, ascertain' one may compare English 'to determine' and French *determiner*. Due to the nature of our extant texts, this last use is prominently attested in the specific sense 'to determine by an oracular inquiry' (Puhvel 1991: 98–100, *HW²*: 3.164–165).

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4   While "just/loyal speech" cannot be excluded (see immediately below), that seems less likely than 'true' in the sense 'accurate, honest'.

4   Hittite ᴳᴵˢ*ḫanzan-* '(Upper) Loom Beam'

The true fundamental meaning of *ḫandā(i)-* 'to align' clearly strengthens Ziegler's derivation of the word. Further support comes from a rare Hittite noun whose genuine sense has also not been fully appreciated. As shown by Tanaka (2008), ᴳᴵˢ*ḫanzan-* (a neuter *n*-stem) does not refer to a cutting tool (against Hoffner 1997: 119–120), but to some type of beam, as in the following ritual passage:

17   KUB 7.13 Ro 5–8 (purification ritual; ?/NS)
        andurzi=ya=kan […] ᴳᴵˢ*kattal*[*uz*]*ziyaš* ᴳᴵˢÙR.MEŠ ᴳᴵˢ*ḫanza* GIŠ-*ru*[(-)
        …] *arḫa* [*ḫašḫ*]*aššanzi ANA* É.MEŠ.ŠÀ=*ya=kan da*[*pia*(*nt*)- ᴳᴵˢ] ÙR.MEŠ
        ᴳᴵˢAB.ḪI.A=*ya arḫa ḫašḫaššanzi*
        "Also inside […] they scrape off the beams of the lintel(s), the *hanzan* (pl.),
        the wood[enʔ …]. Also inside the house they scrape off a[ll] the beams and
        the windows."

This example shows that the better-known passage in the Hittite Laws refers to unlawful removal of a partially woven cloth from a loom beam:

18   KBo 6.10 iii 11–13 (Laws § 144; OH/NS; restored after KUB 29.29 ii 4; OS)
        takku TÚG.SIG ᴳᴵˢ*ḫanzan*[*i ku*(*iški tuḫšari*)] 10 GÍN.GÍN KÙ.BABBAR *pāi*
        t[*akku* …] *kuiški tuḫšari* [(5 GÍN.GÍN KÙ.BABBAR *pāi*)]
        "If someone cuts off/removes fine cloth from a *hanzan*, he shall pay ten
        shekels of silver. If someone cuts off/removes […], he shall pay five shekels
        of silver."

Hoffner (1997: 119–120) restores an instrumental ᴳᴵˢ*ḫanzan*[*it*] and assumes that the reference is to a tool with which cloth is cut. However, as argued by Tanaka (2008: 740), it would be odd to have a provision against cutting cloth with a particular instrument. Furthermore, as she correctly emphasizes, Hittite *tuḫš-* means not merely 'to cut', but implies 'to cut off, separate', suggesting that ᴳᴵˢ*ḫanzan-* in the Laws refers to that from which the fine cloth is cut off.[5] Based

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5   The traces of the broken sign at the end of the word show a clear ⟨ni⟩, not ⟨na⟩, so restoration of an ablative ᴳᴵˢ*ḫanzan*[*az*] is excluded (against Tanaka 2008: 742). However, a dative–locative ᴳᴵˢ*ḫanzan*[*i*] is entirely in order. Although it is still not fully acknowledged, use of the dative–locative to express the place from which something is taken (in competition with the ablative) is already attested in Old Hittite texts in Old Script (Hoffner and Melchert 2008: 259, § 16.69).

on the evidence from example (17) that ^{GIŠ}ḫanzan- referred to a kind of interior house beam, Tanaka (2008: 742–744) convincingly argues that in the Laws the reference is either to an interior house beam used to support a vertical warp-weighted loom or by extension to a freestanding warp-weighted loom. In any case, ^{GIŠ}ḫanzan- confirms that Hittite did inherit a base *$h_2$ent- 'to set the warp, begin to weave' in the context of weaving.

5   Tentative Morphological Analysis[6]

As argued by Kloekhorst (2008: 132–135), Old Hittite still distinguishes between denominative verbs in *-o-ye/o- (reflected as *mi*-conjugation verbs with present third singulars in -āizzi beside third plurals in -ānzi) and those in *-eh₂-ye/o- (reflected as *mi*-conjugation verbs with present third singulars in -āyezzi and third plurals in -āyanzi). Within the history of Hittite the latter class is merged into the former.[7] The evidence presented by Kloekhorst precludes derivation of all verbs of the -āizzi. -ānzi class from a single source, either *-o-ye/o- (Oettinger 1979: 357–358) or *-eh₂-ye/o- (Melchert 1994: 122 and 130). However, the very limited evidence from Old Script and the productivity of the class make it hard to determine the prehistorical source of a given stem.

In the case of our verb the Old Script evidence is in fact conflicting. The neuter nominative-accusative participle ḫandān (attested eleven times in four manuscripts, but all belonging to a *single* composition) argues for derivation from a *$h_2$ento-, but the present third singular medio-passive *ḫa-an-da-a-e-et-ta* (KBo 25.31 ii 11, cited in example (4) above) can hardly be read other than as /xanda:yet:a/, thus pointing to derivation from a collective *$h_2$enteh₂.[8] The fact that elsewhere in Old Script the medio-passive present third singular appears as *ḫa-an-da-a-it-ta* (KBo 20.26 (iii) 22, 17.9 i 8, and 25.33 i 13)[9] and the active present third singular as *ḫa-an-ta-a-iz-zi* (KBo 20.33 Ro 9) plus the absence of any spellings †*ḫa-an-d/ta-(a)-i-e-ᵒ* together suggest that *ḫa-an-da-a-e-et-ta* is a

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6   I am much indebted to Alan Nussbaum for invaluable references and discussion of the issues treated in this section, but responsibility for the analysis presented here is entirely mine.

7   For example, in the Old Script version of the Hittite Laws 'looks at' consistently appears as *šu-wa-i-ez-zi* (four syllables), but in the New Script copies one finds contracted *šu-wa-a-iz-zi* (three syllables). This reading of the latter and new inflection in the -āizzi, -ānzi class is confirmed by examples like imperative second plural *šuwātten* (OH/NS).

8   For my interpretation of -a-e-et-ta as /-a:yet:a/ with a glide see the arguments of Kloekhorst (2014: 158–159) regarding similar spellings, with extensive preceding documentation.

9   The last two examples are partially restored, but context and spacing make the restorations secure.

nonce form and thus favor derivation from $*h_2ento$-, but it is hard to be certain. In any case, since $*h_2enteh_2$ may easily be taken as the plural of a neuter noun $*h_2ento$-, the ambiguity has no serious impact on the further prehistoric analysis.

As a minimalist scenario we may, slightly modifying previous accounts (Ziegler 2014: 212 and *LIV*[2]: 269), assume a primary PIE root $*h_2ent$- 'to align', already with a specialized use 'to set the warp threads, (begin) to weave', attested in a primary present $*h_2nt\text{-}ye/o$- in Greek ἄττομαι 'idem' and Albanian *end* 'to weave'. We may derive Hittite *ḫandā(i)*- 'to align' (originally in the context of weaving) from an adjective $*h_2ent\text{-}o$- or $*h_2nt\text{-}o$- 'aligned (like the warp threads)' (compare *kappā(i)*- 'to diminish' from *kappi*- 'small' or *šarlā(i)*- 'to exalt' from **šarla*- 'exalted') or from a substantivized $*h_2ent\text{-}o$- '(the vertically aligned) warp threads, (start of) a woven fabric' (Ziegler 2014: 213)—or less likely from the plural thereof. From the same $*h_2ent\text{-}o$- Greek derived a secondary noun $*h_2antí(y)on$ 'that pertaining to aligning the warp threads' > ἀντίον '(upper) loom beam' (compare formally πέδον 'ground' → πεδίον 'plain').

From an original adjective $*h_2ent\text{-}o$- 'aligned (like the warp threads)' Hittite may have derived a substantive $*h_2ent\text{-}i$- 'the aligned warp threads/fabric on the loom' (compare arguably Latin *antēs*, *antium* 'rows' < **'aligned things'), whence $*h_2enty\text{-}o$- 'of alignment' > $*h_2entyo\text{-}Hon$- 'the aligning thing' > ᴳᴵˢḫanzan- '(upper) loom beam'. The productivity of the Hittite type in -*anzan*- makes it likely that not all the supposed steps of this idealized derivational chain actually existed (cp. Melchert 2003: 136).

One fact raises at least some doubt about the derivation just presented. It is far from assured, based on example (17), that Hittite ᴳᴵˢḫanzan- referring to an interior house beam took its name from its use in weaving. One might instead suppose for $*h_2ent$- a primary meaning 'to fix (in a position)', a suitable source for Latin *antae* (feminine plurale tantum) 'rectangular columns, wall posts of a temple' and/or Sanskrit *ánta*- (masculine) 'end, border, edge' and Germanic **andija*- 'end' (Old Norse *endir* etc.). The usual assignment of the latter to $*h_2ent$- 'front, face' hardly imposes itself semantically. Under this account, the sense 'to align' would have arisen specifically in the context of weaving, where aligning the warp threads by fixing/attaching them to an existing horizontal beam would have been carried over to a free-standing warp loom.[10] At least Hittite ᴳᴵˢḫanzan- and probably Greek ἀντίον would thus reflect 'fixed thing'.

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10   I forgo here an extended discussion of the prehistory of such a putative $*h_2ent$- 'to fix (in position)', in part because, as some readers will have already seen, it raises the very complex issue of whether one should in fact posit a root $*h_2en(H)$-, from which a series of

What matters for our immediate purposes is that by either scenario regarding the presumed PIE root *h_2ent- (or even *$h_2en(H)$-), the demonstrated basic sense 'to align' for Hittite ḫandā(i)- (not 'to fix in position'!) and the existence of ^{GIŠ}ḫanzan- fully vindicate Ziegler's immediate etymology of the Hittite verb, which makes sense only in the context of weaving terminology.

6   Indo-European Metaphors for Moral Order/Propriety

The interest of this finding for our overarching theme concerns the dialectal distribution and relative chronology of various Indo-European metaphors expressing morality or propriety. The two most widespread metaphors are based either on the idea of fitting together in a harmonious fashion or on the notion of what is aligned and thus straight (versus crooked or twisted).

The first metaphor '(what is) fitting, proper' < 'to fit together' (transitive or intransitive) is multiply attested. One instance is illustrated by Hittite āra 'moral order' < PIE *$(h_1)ar$- 'to fit together' (Puhvel 1984: 120, following already Hrozný), cognate with the adverb seen in Sanskrit áram = Avestan arəm 'fittingly', Sanskrit r̥tá- 'universal Order' and other Indo-Iranian reflexes.[11] An exhaustive treatment of Hittite āra (Cohen, 2002) has reaffirmed its clear sense of universal morality versus mere local custom. The matching moral sense in Hittite and Indo-Iranian plus the very weak attestation of the verbal root in Indo-Iranian and its apparent complete absence in Hittite suggests that the metaphor is an inheritance. Based on the derivatives for 'joint (of the body)', the root was probably intransitive (LIV²: 269).

Weiss (2015, especially 190–194) has argued that PIE *$(h_x)reith_2$- 'to join, blend, unite' (transitive) is the source of Latin rīte 'correctly, properly' and Tocharian AB rittwatär/rittetär, which in Tocharian B also has the sense 'is fitting'. The Tocharian verb also preserves the sense 'to attach, blend'. Whether the moral sense is in this instance an archaism (Randerscheinung) or reflects independent developments is hard to determine. There is no trace of the base verb in Latin or Italic, but the frequency of the metaphor (compare, e.g., the moral sense of English 'fitting' or German mit Fug (und Recht) 'justly, rightly') easily allows for the Latin and Tocharian B uses to be independent developments.

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t-stem nominals were derived. A reasoned consideration of just how and how far such an analysis should be pursued is not possible in the present context.

11   See also the demonstration of Massetti (2013–2014) that various collocations and figurae confirm that Greek ἀρετή 'excellence' reflects the same metaphor of 'proper order' from 'fitting together'. I thank Matilde Serangeli for this reference.

The second metaphor deriving '(morally) proper' from 'aligned, straight' is famously attested in the PIE adjective *$h_3reĝ$-to- '(physically) straight' < *$h_3reĝ$- 'stretch out straight, draw straight', which has the moral sense 'aligned, in proper order', hence 'right, proper' in Latin *rēctus* and Germanic *rehta-*. Other derivatives of the root show the same moral sense in multiple branches (Pokorny 1959: 854–857), and the metaphor is surely in this instance inherited.

Ziegler (2014: 213–214) cogently cites from the specific context of weaving the case of Proto-Italic *ord-ye/o-* 'to set the warp, begin to weave', that is 'to align the warp threads', whose derivative *ord-n-* comes to be used in Latin *ordō, ordinis* both for 'order, alignment' in various physical senses and 'proper order, morality'.

As we have seen, whatever the ultimate derivation of PIE *h_2ent- 'to set the warp, begin to weave' may be, the true basic sense of Hittite *ḫandā(i)-* 'to align' confirms her derivation of it from a *h_2ent-o- 'the aligned threads of the warp'. The noun ᴳᴵˢ*ḫanzan-* 'upper loom beam' strongly suggests that the weaving sense of *h_2ent-o- was inherited into Anatolian. Like the moral sense of Latin *ordō*, so also that of the Hittite participle *ḫandānt-* 'just, moral, right(eous)' is surely a specific Hittite development. What we cannot know is whether at least the Latin and Hittite extension of 'to align' from weaving to other contexts, non-physical as well as physical, reflects an already PIE usage that has undergone lexical renewal.[12]

References

Archi, Alfonso. 1979. L'humanité des hittites. In *Florilegium anatolicum: mélanges offerts à Emmanuel Laroche*, 37–48. Paris: Bocard.

Beckman, Gary. 1990. The Hittite "Ritual of the Ox" (*CTH* 760 I.2–3). *Orientalia NS* 59. 34–55.

Cohen, Yoram. 2002. *Taboos and prohibitions in Hittite society*. Heidelberg: Winter.

Dardano, Paola. 2006. *Die hethitischen Tontafelkataloge aus Ḫattuša* (*CTH* 276–282). Wiesbaden: Harrassowitz.

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12   Ziegler (2014: 213) also cites Hittite *takšeššar* 'arrangement, constellation' as an example of 'order, alignment' that arose in a weaving context. However, as shown by Olsen (2017: 192), Armenian *tʿekʿem* means 'to forge, hammer into shape, whet' in the context of metallurgy and has nothing to with weaving (despite the misleading translations found in many handbooks). Likewise, all attested uses of Hittite *takš-* are derivable from a core meaning 'to *fit* together, unite', but none of these involve weaving (Melchert 2018). It is thus very unlikely that the specific sense 'to weave' of Latin *texō* is inherited from PIE.

Edel, Elmar. 1994. *Die ägyptisch-hethitische Korrespondenz aus Boghazköi in babylonischer und hethitischer Sprache*. Band 1. *Umschriften und Übersetzungen*. Opladen: Westdeutscher Verlag.

Goedegebuure, Petra. 2014. *The Hittite demonstratives: studies in deixis, topics and focus*. Wiesbaden: Harrassowitz.

Güterbock, Hans G. 1956. The deeds of Šuppiluliuma I as told by his son, Muršili II. *Journal of Cuneiform Studies* 10. 41–68, 75–98, 107–130.

Güterbock, Hans G. 1983. A Hurro-Hittite hymn to Ishtar. *Journal of the American Oriental Society* 103. 155–164.

Güterbock, Hans G. & Harry A. Hoffner. 1980. *The Hittite dictionary of the Oriental Institute of the University of Chicago*. Vol. 1. Fascicle 1. Chicago: The Oriental Institute.

Güterbock, Hans G. & Theo P.J. van den Hout. 1991. *The Hittite instruction for the royal bodyguard*. Chicago: The Oriental Institute.

Hoffner, Harry Angier Jr. 1997. *The laws of the Hittites: A critical edition*. Leiden: Brill.

Hoffner, Harry A. Jr. 2009. *Letters from the Hittite kingdom*. Atlanta: Society of Biblical Literature.

Hoffner, Harry A. Jr. & H. Craig Melchert. 2008. *A grammar of the Hittite language*. Vol. 1. *Reference grammar*. Winona Lake: Eisenbrauns.

HW² = Johannes Friedrich & Annelies Kammenhuber. 1975–. *Hethitisches Wörterbuch*. Zweite, neubearbeitete Auflage auf der Grundlage der edierten hethitischen Texte. Heidelberg: Winter.

Janda, Michael. 2016. Indogermanisch **h₂ant-* 'anzetteln'. In Henning Marquardt, Silvio Reichmuth & José Virgilio García Trabazo (eds.), *In honorem Johannis Tischler septuagenarii dedicata*, 121–126. Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.

Kloekhorst, Alwin. 2008. *Etymological dictionary of the Hittite inherited lexicon*. Leiden: Brill.

Kloekhorst, Alwin. 2014. *Accent in Hittite: A study in plene spelling, consonant gradation, clitics, and metrics*. Wiesbaden: Harrassowitz.

LIV² = Martin Kümmel & Helmut Rix. 2001. *Lexikon der indogermanischen Verben*. Zweite, erweiterte und verbesserte Auflage. Wiesbaden: Reichert.

Massetti, Laura. 2013–2014. Gr. ἀρετή, ved. ṛtá-, av. aša e l'eccellenza come ordine aggiustato. *Münchener Studien zur Sprachwissenschaft* 67(2): 123–148.

Melchert, H. Craig. 1994. *Anatolian historical phonology*. Amsterdam: Rodopi.

Melchert, H. Craig. 2003. Hittite nominal stems in *-anzan-*. In Eva Tichy, Dagmar S. Wodtko & Britta Irslinger (eds.), *Indogermanisches Nomen: Derivation, Flexion und Ablaut. Akten der Arbeitstagung der Indogermanischen Gesellschaft / Society for Indo-European Studies / Société des Études Indo-Européennes, Freiburg 19. bis 22. September 2001*, 129–139. Bremen: Hempen.

Melchert, H. Craig. 2008. Hittite *duwān* (*parā*). In Claire Bowern, Bethwyn Evans &

Luisa Miceli (eds.), *Morphology and language history in honour of Harold Koch*, 201–209. Amsterdam: Benjamins.

Melchert, H. Craig. 2016. Marginalia to the myth of Telipinu. In Šárka Velhartická (ed.), *Audias fabulas veteres. Anatolian studies in honor of Jana Součková-Siegelová*, 210–220. Leiden: Brill.

Melchert, H. Craig. 2018. Semantics and etymology of Hittite *takš-*. In Lucien van Beek, Alwin Kloekhorst, Guus Kroonen, Michaël Peyrot, Tijmen Pronk & Michiel de Vaan (eds.), *Farnah. Indo-Iranian and its Indo-European origins: in honor of Sasha Lubotsky*, 209–216. Ann Arbor: Beech Stave.

Oettinger, Norbert. 1979. *Die Stammbildung des hethitischen Verbums*. Nürnberg: Carl.

Olsen, Birgit. 2017. Armenian textile terminology. In Salvatore Gaspa, Cécile Michel & Marie-Louise Nosch (eds.), *Textile terminologies from the Orient to the Mediterranean and Europe, 1000 BC to 1000 AD*, 188–201. DigitalCommons@University of Nebraska—Lincoln.

Otten, Heinrich. 1981. *Die Apologie Hattusilis III. Das Bild der Überlieferung*. Wiesbaden: Harrassowitz.

Pokorny, Julius. 1959. *Indogermanisches etymologisches Wörterbuch*. Bern: Francke.

Puhvel, Jaan. 1984. *Hittite etymological dictionary*. Vol. 1. *Words beginning with A*; Vol. 2. *Words beginning with E and I*. Berlin: Mouton.

Puhvel, Jaan. 1991. *Hittite etymological dictionary*. Vol. 3. *Words beginning with H*. Berlin: Mouton de Gruyter.

Rieken, Elisabeth et al. 2016. CTH 372—Hymne und Gebet an die Sonne (Šamaš). Accessed May 13, 2018. E. Rieken et al. (ed.), hethiter.net/: CTH 372 (INTR 2016-01-18).

Siegelová, Jana. 1971. *Appu-Märchen und Ḫedammu-Mythus*. Wiesbaden: Harrassowitz.

Singer, Itamar. 2002. *Hittite prayers*. Atlanta: Society of Biblical Literature.

Tanaka, Terri. 2008. GIŠ*ḫanza(n)-* in the Hittite laws. In Alfonso Archi & Rita Francia (eds.), *VI Congresso Internazionale di Ittitologia: Roma, 5–9 settembre* 2005, 739–744. Rome: CNR.

Weiss, Michael. 2015. The rite stuff: Lat. *rīte*, *rītus*, TB *rittetär*, TA *ritwatär*, and Av. *raēϑβa-*. *Tocharian and Indo-European Studies* 16. 181–198.

Ziegler, Sabine. 2014. Die Ordnung als Gewebe: Kann eine andere etymologische Erklärung für heth. *ḫandai-ᶻⁱ* "(durch Semantik) festgestellt werden"? In Cyril Brosch & Annick Payne (eds.), *Na-wa/i-VIR.ZI/A MAGNUS.SCRIBA: Festschrift für Helmut Nowicki zum 70. Geburtstag*, 211–215. Wiesbaden: Harrassowitz.