

Hittite *tit(ta)nu-*, *titti-*, and Lycian *stta-*

H. Craig Melchert

Carrboro, North Carolina



ABSTRACT:

Against the standard view, there are two synchronically distinct Hittite verbs *titti-* and *tittanu-*, one meaning ‘to erect, cause to stand, install (in an office)’ related to *tiya-* ‘to stand, step’ and another meaning ‘to place (in a horizontal position); impose’, related to *dai-* ‘to place, put’. The verb **titta-* underlying the first *tittanu-* is with Jasanoff 2010 a reshaped reflex of a PIE *i*-reduplicated stem **s(t)í-sth₂-*, while the stem **titta-* ‘to place’ and both stems *titti-* are pre-Hittite innovations. Contra Jasanoff, Lycian *stta-* ‘to stand, be erected’ is either a loanword from Greek or the cognate of HLUvian *ta-* ‘to stand’.

KEYWORDS:

i-reduplication, Hitt. *titti-* and *tittanu-*, Lyc. *stta-*, HLUv. *ta-*.

Jasanoff (2010) has argued that Hittite *tit(ta)nu-* ‘to set up’ (sic) and Lycian *stta-* ‘to stand, be set up’ reflect (in different ways) a PIE *i*-reduplicated **h₂e*-present **s(t)í-sth₂-e*, **s(t)í-sth₂-nti*. This analysis is in part correct for the Hittite verb, but the derivation of the Lycian is formally impossible. Since the latter does not materially affect Jasanoff’s conclusions regarding the PIE reconstruction, its status alone would not justify further discussion, but the true picture of the Hittite verb presents unappreciated complications that deserve a thorough review.

The facts of Hittite *tit(ta)nu-* have to my knowledge been universally misapprehended: *all* attestations have been assigned either a basic sense ‘to place’ or ‘to erect’ and derived exclusively from either **dheh₁-* or **(s)teh₂-*. Most recently, Kloekhorst (2008: 884) chooses the former; Jasanoff (2010: 148) the latter. For older literature see Tischler (1994: 388–389). Tischler (2001: 177) gives the meaning of the base verb as: ‘hinstellen, hinsetzen, Platz nehmen lassen, einsetzen’, but he glosses the combination *šarā tittanu-* as ‘aufrichten; zum Aufstehen veranlassen; (Speise) auftragen’ (plus further contextual meanings). It is unclear whether the CHD Š.220 and 227–228 recognizes two verbs or not.

Attestations of the verb unequivocally require *two* separate synchronic verbs *tit(ta)nu-*, one clearly with the basic meaning ‘to place’ (used of objects of horizontal orientation where ‘cause to stand’ is excluded), the other with the sense ‘to cause to stand, erect’. The former thus is associated synchronically with *dai-* ‘to place, put’, and the latter with *tiya-* ‘to step, assume a standing position’. We may begin by reviewing the evidence for *tit(ta)nu-* ‘to place’:



- (1) KUB 2.2 ii 37–38 (Ritual for Consecration of a Temple)
mān INA É.GAL-LIM GIBIL ^{GIŠ}*ḥattalwaš GIŠ-ru tittanuwanzi*
 ‘When they install the wood of the door bolt in a new palace...’
 (Schuster [1974: 65]: “Wenn man in einem neuen Palast das Riegelholz ein-
 setzt...”)

The reference here is to the *horizontal* wooden beam that blocks the two parts of a double door or gate. See Naumann 1971: 169–170 and Weitenberg 1984: 77. One should note also KBo 4.2 i 22–23, where a puppy made of tallow is placed on the door bolt and KUB 17.10 iv 14 (Myth of Telipinu): *ḥāšta* ^{LÚ}NI.DUḪ 7 ^{GIŠ}IG *āppa ḥuittiyat 7* ^{GIŠ}*ḥat-talu* ‘The gatekeeper opened the seven doors and threw back the seven bars.’ (Hoffner 1998: 17). Neither passage makes sense if the “door bolt” referred to an object that stood vertically.

- (2) HKM 52:34–37 (Mašat Letter)
namma ammuḫ apiya šaḥḥan luzzi=ya ŪL kuit ēšta kinun=a=mu LÚ.MEŠ URU-LIM šaḥḥan luzzi=ya tittanuwer
 ‘Furthermore there was no obligatory service and payment for me then, but now the men of the city have imposed obligatory service and payment on me.’

That this usage is based on ‘place’ is confirmed by comparison with KBo 6.4 iv 16–17 (Laws, New Version), where the basic stem *dai-* ‘place’ is used instead: *nu=šši=ššan kuit šaḥḥan LUGAL-uš dāi* ‘Whatever obligatory service the king imposes on him...’

- (3) KUB 1.1 i 34–36 (Horse-training Text)
nu=šmaš 1 ŠĀTU memal [and]a immiyanda pi[a]nzi ŠA ḪA.LA.=ŠU=ya ḥ[al]kin šarā tittanuwanzi
 ‘They give them 1 *SŪTU*-measure of meal mixed in, and they pile up their grain ration.’

The object ‘grain’ forces the interpretation ‘pile up’, per Kammenhuber (1961: 109) contra *CHD* Š.227 ‘finish making their grain ration’ (wrongly listed under *šarā tittanu-* plus infinitive and misinterpreted, since there is no infinitive present). This concrete use is also the source of the following frequent extended sense:

- (4) KBo 27.67 Vo 1–2 (Birth Ritual)
mān MUNUS-za=ma ḥarnāwi ēšzi nu=za[...] ITU.ḪI.A=ya *karū šarā tittanuz[i]*
 ‘If a woman is sitting on the birth stool and [...], and she also has already piled up (i.e. completed) the months...’

As seen by Beckman (1983:219–220), the use of *šarā tittanu-* to mean ‘complete’ a stretch of time or distance (for which see *CHD* Š.228) is surely from ‘pile up’ seen in

the previous example (compare English ‘pile up hours/ miles’), whence also the use to mean ‘complete’ with infinitive (*CHD* Š.227).¹

Neither the horizontal door-bolt nor grain can possibly be construed as being ‘made to stand’, and we have seen that ‘to impose’ is derived from ‘to place’ (*dai-*) in Hittite. The derived meaning ‘to complete’ of the combination *šarā tit(ta)nu-* is also based on ‘pile up’. The verb *tit(ta)nu-* illustrated above must mean fundamentally ‘to place, set’.

On the other hand, there are also undeniable examples for a stem *tit(ta)nu-* that must be interpreted as the transitive counterpart of *tiya-* ‘to assume a standing position’:

(5) KUB 14.3 i 8–10 (Tawagalawa Letter)

nu=šši ^{LÚ}TARTENU *uiyanun it=war=an=za=an=k[a]n ANA* ^{GIŠ}GIGIR *GAM-an tittanut nu=war=an uwati*

‘I sent the *tartennu* to him (saying): “Go and station him beside you on the chariot and fetch him.”’

The entire point of this passage is that the reluctant Piyamaradu is to be persuaded to come visit the Hittite king. The instructions to the *tartennu* clearly do not mean that Piyamaradu is to be laid across the chariot, but rather that he is to stand in a place of honor beside the *tartennu*.

(6) KUB 1.1 iv 71–73 (Apology of Hattusili; contra Otten 1981):

nu URU.DIDLI.HI.A kuiēš kuiēš [Š]A ^{m.d}SIN.^dU *n=an=kan hūmanti=ya=pat EGIR-an* ^{NA4}ZI.KIN [*t*]ittanuškanzi

‘Whatever cities of Arma-Tarhunta (there are), they will set her (Ishtar) up as a cult stone behind each one of them.’

The logogram ^{NA4}ZI.KIN is standing for Hittite *huwaši-*, which refers to an upright pillar that serves as a cult object or boundary marker (see for discussion Puhvel 1991: 438–40 with references). Here a sense ‘to erect’ for an object of unquestionably vertical orientation is unavoidable.

(7) KUB 1.1 iv 65–66 (“Apology” of Hattusili)

nu=mu šallai pedi ANA KUR ^{URU}Hatti LUGAL-*eznani [(ti)]titanut*

‘You (Ishtar) installed me in the “great place”, in the kingship of Hatti.’

The Hittites clearly regarded entering an office as ‘stepping’ into it (*tiya-*) and holding an office as ‘standing’ in it (*ar*). Compare with the *CHD* P.338 the passage in KBo 1.28 Ro 12–14: *našma kuiš ŠA* ^mPiyaššili NUMUN-*aš INA KUR Kargamiš šalli pēdan tiyazi* ‘Or whatever descendant of Piyassili attains the “great place” in Carchemish.’ See also

1 Likewise with Kammenhuber (1961: 348) contra *CHD* Š.227, the hapax in the horse-training texts *šarā tiyēzzi* (KBo 3.5 iv 4) is an error for *šarā tittanu(w)anzi* (the horses are always the subject of the latter expression!).



example (14) below. It is thus certain that ‘installing’ someone in an office is likewise ‘to cause to stand (in)’.

- (8) KUB 25.1 vi 18–21 (AN.TAḪ.ŠUM^{SAR} Festival)
nu LÚ.MEŠ GIŠ.GIDRU LÚ.MEŠ UBARUTIM ašeššar ḫuman šarā tittanuanzi n=e artari
 ‘The heralds cause the foreigners (and) the entire assembly to stand up, and they stand.’

This example confirms ‘to cause to stand up’ in the physical sense.

The existence of two distinct synchronic stems *tit(ta)nu-*, one ‘to place’ and the other ‘to erect, cause to stand’, is confirmed by the parallel coexistence of two reduplicated stems *titti-* with the same respective meanings:

- (9) KBo 19.162 iv 10–11 (Ritual for Consecration of a Temple)
mān x[... ḫattalwaš] GIŠ-ru tittai ‘When one installs the wood of the doorbolt...’

The direct parallel with example (1) in a matching context assures the restoration and the reference to the horizontal door-bolt, thus ‘place’, per Kloekhorst (2008: 881–882). Jasanoff (2010: 148) posits a separate *ḫi-*verb *titta-*, which undoubtedly once existed (see below), but synchronically this is hardly credible in view of other evidence for a reduplicated verb *titti-* with the sense ‘place’:

- (10) KBo 3.1 i 19–20 (Edict of Telipinu; OH/NS)
kuišša kuwatta utnē paizzi apēll=a ŠU-i URU.DIDLI.ḪI.A GAL.GAL-TIM
tittiyanteš ešer
 ‘To whatever country each (son) went, also in his hand the great cities were placed.’

The specification ‘in his hand’ argues decisively for ‘to place’, not ‘to cause to stand’.²

- (11) KBo 14.98 i 16–17 (Ritual)
 [*-ḫ*]un GÜB-lan tēta(n)=šet [...]x DUMU.MUNUS tittiškezzi
 ‘[She ...-s] her left breast [...] and places her daughter [on it].’

See for this interpretation Kloekhorst (2008: 876) contra Oettinger (1979: 347) and Jasanoff 2003 (100–101) with cogent arguments why CLuvian *tidaïmma/i-* and Lycian *tideime/i-* ‘suckling, child’ cannot be the participle to a stem **tidi-*. Both are rather participles to a denominative verb from *tīta-/tide-* ‘teat’ (= Hitt. *tēta-*) or more likely directly denominative to the noun with possessive semantics. There simply is no compelling evidence for a reduplicated stem **dhi-dhh₁-i-* ‘to suckle’ in Anatolian!

The participle of *titti-* ‘place’ also acquires a derived sense ‘present’ (i.e., ‘at hand’):

² The duplicate KUB 11.1+ i 18 has as the object KUR.KUR.MEŠ GAL-TIM ‘great lands’. The same expression occurs in KBo 3.1 i 12, but without the specification ‘in (their) hands’.



- (12) KBo 16.97 Vo 45 (Oracular Inquiry; MS) (likewise *ibid.* Ro 42)
urnirmiš ZAG-az GÜB-laz tittian[za] ‘A “finger” is present to the right and the left.’
- (13) KUB 42.100 iii 34–35 (Cult Inventory)
[k]uit=ma=wa ammuk LÚSANGA iēr nu=wa=mu UNUTE^{MEŠ} [k]ue EGIR-pa maniyahher nu=war=at tittiyan
 ‘The implements which they remanded to me when they made me a priest are present.’

That is, the speaker is affirming that he (rightfully) has them in his possession as priest and has not illicitly disposed of them.

On the other hand, it has been overlooked that there is at least one incontrovertible example and one likely one for a homonymous *titti-* ‘cause to stand, install’:

- (14) KUB 36.114 RCol 21–23
[...ti]ttian=pat ēšdu nu mahhan DUM[U...]x.LUGAL LUGAL-uezni tittian-z[i...n]=an DUMU.LUGAL=pat []
 ‘[...]be installed. As the son [...] king they install in the kingship [...] him (as?) prince []’

Despite the broken context the reference to a prince and the combination with *LUGAL-uezni* ‘in the kingship’ make it clear that *tittianzi* must mean ‘they cause to step into’, hence ‘they install’ in an office. As already indicated above, the Hittite expressions for attaining, holding, and leaving an office are all based on ‘stand’. Compare further Bo 68/299 (Bronze tablet; Treaty with Kuruntiya) iii 11–12: *mānn=a DUMU=ŠU DUMU.DUMU=ŠU ŠA^{m,d}LAMMA kuiš INA KUR^{URU,d}U-tašša LUGAL-eznani artari* ‘Also if some son or grandson of Kuruntiya occupies (lit. stands in) the kingship of Tarhuntassa’ and iii 29 *n=aš ŠA KUR^{URU}Hatti LUGAL-eznani awan arha tiyazi* ‘and he steps away from (abdicates) the kingship of Hatti’ (alongside multiple instances of *LUGAL-eznani tittanu-* ‘to install in the kingship’).

- (15) KBo 6.3 ii 37 (Hittite Laws, §40; OH/NS)
takku LÚ^{GIŠ}[TUKUL ha]rakzi LÚ ILKI tittianza
 ‘If a man who has a TUKUL-obligation disappears/perishes, and a man owing *ILKU*-services is installed (in his place)...’

Hoffner (1997: 48) reasonably renders ‘assigned’, but the preceding example (13) and the overall evidence for ‘stand’ as the basis for expressing holding a position or office argue that this example also belongs to *titti-* ‘to cause to stand, install’. The transitive valency of reduplicated *titti-* vs. *tiya-* is not problematic: see on this point Jasanoff 2010: 149.

The evidence presented above shows that synchronically in Hittite there are two homophonous verbs *titti-* and likewise two distinct verbs *tit(ta)nu-*. In each case one means ‘to cause to stand’ or ‘to erect’, referring to people or objects with a decidedly



vertical orientation such as cult stones. The other verb means ‘to place, set’, used of objects such as a door-bolt or grain that cannot possibly be construed as ‘standing’. In the absence of any evidence for confusion of *tiya-* ‘to step, assume a standing position’ or *ar-* ‘to stand’ with *dai-* ‘to put, place’ in Hittite, we should assume that the respective stems *titti-* and *tit(ta)nu-* likewise have different sources.

Hittite *titti-* ‘place, install (einlegen)’ represents a reduplicated form of *dai-* ‘place, put’ < (virtual) **dhí-dhh₁-i*, while *titti-* ‘install (eintreten lassen)’ is a reduplicated form of **tai-* ‘stand’ < (virtual) **tí-th₂-i-*, both stems parallel to CLuvian *hišhi-* ‘bind’ < **h₂í-sh₂-i-* to the stem **sh₂i-* seen in Hittite *išhi-* (i.e., the reduplication copies the stem vowel).³ For Hittite *tiya-* ‘to assume a standing position, station oneself’ (*mi-*verb) as an indirect reflex of a *hi-* conjugation present in *-i-* (**tāi*, *tiyanzi* < **stéh₂yēi*, **sth₂y-énti*) see Jasanoff 2010: 145–146 and already 2003: 115.

Per Oettinger (1979: 350) *tit(ta)nu-* ‘to place’ is derived from *titti-* ‘to place’ with “Ausstoßung” of *-ye-*. But what is “deleted” in this case is *-i-*, not *-ye-*. In any case, this analysis is valid only as a synchronic description. Given the productivity of *i-* reduplicated *hi-* verbs with zero-grade of the root (Melchert 1984: 100 and now in detail Dempsey 2015: 293–312), the existence of a **titta-* ‘place’ parallel to *mimma-* ‘refuse’, *pippa-* ‘overturn’, etc. is unsurprising, as is its renewal with the productive transitivizing suffix *-nu-* (cf. *paḥšnu-* beside *paḥš-* ‘to protect’ and similar cases).

However, a more direct model for **titta-* ‘place’ is available in **titta-* ‘stand’, the Hittite reflex of a PIE *h₂e-* present **s(t)i-sth₂-* (~ Vedic *tīṣṭhati*, Lat. *sistō*, etc.), with renewal of the reduplication as a synchronic process: see for detailed arguments Jasanoff 2010: 148–149. The reality of the stem *titnu-* (probably to both forms of *tittanu-*) does not justify reconstruction of a **dhi-dhh₁-nu-* (pace Kloekhorst 2008: 884). Syncope of the medial vowel in *tittanu-* is perfectly in order. See in detail Dempsey 2015: 306–312.

Hittite *tittanu-* (just in the meaning ‘to cause to stand’) is thus built on a **titta-* ‘to stand’, cognate with Vedic *tīṣṭhati*, Lat. *sistō*, etc., per Jasanoff (2010: 148–149). However, his further claim (ibid. 149–150) that Lycian *stta-* (P3Sg *sttati*) ‘stands, is erected’ (of stelae and a cult stone; also once ‘remains’) reflects the same present stem **s(t)i-sth₂-* cannot be upheld.

Jasanoff’s derivation of *stta-* from reduplicated **s(t)i-sth₂-* is phonologically impossible, since it requires syncope of an *accented* vowel. Blevins (2008) has refuted claims of Blust (2001 et alibi) for the syncope of stressed vowels in Mussau, thus removing any cross-linguistic support for such a process. In any case, Lycian *pibijeti*, *pibiti* ‘give’ < **pí-bi-* (Hajnal 1995: 120 contra ibid. 32) directly refutes such a syncope in Lycian. The latter case is not explainable by a putative constraint against initial geminates, since syncope of *unaccented* reduplicated vowels does lead to such geminates: *ppuwe-* ‘write’ (see Heubeck 1985 and similarly Hajnal 1995: 121), *ttarahe/i-* ‘of the city’ < *tetere/i-* ‘city’, etc. The derivation from a reduplicated **s(t)i-sth₂-* can also not be rescued by the egregiously ad hoc assumption of a shift in the accent away

3 The geminate *-tt-* in *titti-* ‘to place (einlegen)’ < **dhi-dhh₁-i* may reflect either that the reduplicated stem was formed after the devoicing of initial voiced stops in pre-Hittite (thus Melchert 1994: 19 after Hart) or assimilation to the following **h₁* (see Jasanoff 2003: 77).

from the reduplicated syllable. There is simply no evidence anywhere in Anatolian for such an accentual shift.⁴

There are two viable alternative explanations for Lycian *sttati*. First, one should not with Jasanoff (2010: 145) summarily reject the idea that Lycian *stta-* is a borrowing from Greek (thus Morpurgo Davies 1987: 220–221, tentatively followed by Hajnal 1995: 87&112 and Melchert 2004: 599). One may object that borrowing of such a basic verb is unlikely, but in all of its clear occurrences, *stta-* is used to express the erection of stelae or other vertical structures. It is thus by no means assured that *stta-* is the ordinary Lycian verb for ‘to stand’.⁵

If Lycian *sttati* is in fact native, it may be the expected direct cognate of the Luvian *hi*-verb *ta-* ‘stand’, reshaped from a stem in *-i-* (seen indirectly in Hittite *tiya*-above) based on the ambiguous third singular /*ta:i/* < **stéh₂y-ei* (see Jasanoff 2003: 115, contra Melchert 1994: 69 and 268). Per Jasanoff (2010: 149), the *hi*-verb was regularly renewed in Lycian as a *mi*-verb with an “unlenited” ending, whence *stta-ti*. The claim of Jasanoff (2010: 143) that the development of intervocalic **sT* to Lycian *s* precludes preservation in word-initial position (similarly Morpurgo Davies 1987: 221) is arbitrary and unsupported. Nothing requires that the treatment of *heterosyllabic* intervocalic **sT* as *s* < **ss* (*esi* ‘is’ < **h₂és.ti*, *esu* ‘let be’ < **h₂és.tu*, *wasaza-* ‘priest’ < **wos.h₂o-tyeh₂-* ~ HLuvian *wa-s(a)-ha-za-*) match that of *tautosyllabic* **sT*- in an onset. In at least one Italian dialect (le Marche, zone of the Esino) intervocalic **-sti-* assimilates to *-Vši-*, while word-initial **sti-* is preserved (see Rohlfs 1966: 380 vs. 258). Voicing assimilation of obstruents to following sonorants in Catalan takes place only in *heterosyllabic*, not *tautosyllabic* (onset), sequences: onsets [p/t/kr-] vs. [b/d/gr-] and [p/kl-] vs. [b/gl-], but voicing assimilation in VT.RV: *atleta* ‘athlete’ [dl], *qui-sap-lo* ‘a lot’ [bl]. See Wheeler (2005: 145–148).⁶

-
- 4 The OH example Pres2Pl *i-iš-te-e-ni* with a long vowel in the ending shows merely analogical spread of an ending from paradigms where it was regular. The accent on the reduplicated stem *išš(a)-* ‘(iterative) do, make’ < **yí-ih₁-s-* (thus with Jasanoff 2003: 137) remained on the first syllable, as shown not only by the *i-iš-* in the form cited, but also by the continued plene spelling *e-eš-ša-* in New Hittite after the change in the vocalism (likewise including examples where endings are borrowed from other stem types, thus Pres3Sg *e-eš-ša-a-i*, with ending borrowed from monosyllabic forms such as *dāi* ‘puts’). Jasanoff (2018: 140) has now retracted his claim (2003: 36–37, note 22) that Hittite *wewakk-* ‘ask for (repeatedly)’ and *mēmi-* ‘speak’ reflect stative-resultative perfects with root accent, arguing that they are “iterative-intensive” *h₂e*-conjugation presents matching the type of Greek perfect *mémēke* ‘bleats’, shown to be distinct by its pluperfect inflection. As such, they had original accent on the reduplicant and provide no evidence for an accent shift.
- 5 The context of the occurrence in TL 93,2 is not entirely clear. If the relative clause *sttati=ti* really refers to the preceding *tideime* ‘children’, then it would mean in context ‘who remain, abide’ (that is, survive the tomb builder). This secondary sense would argue that the verb is the general Lycian verb for ‘stand’, but we cannot at present regard this as demonstrated.
- 6 Per Jasanoff (2010: 145, note 8), the attractive equation by Neumann of Lycian *-tīmata* in the personal name *esi-tīmata* ‘there shall be renown (to him)’ with Luvian *tummant-* ‘ear’ (– Hittite *ištaman-* < *(s)*temh₁-*) does not affect the equation of Lycian *stta-* and Luvian *ta-*,



In sum, Lycian *stta-* ‘to stand’ is either a loanword from Greek or is cognate with Luvian *ta-* ‘to stand’ and indirectly Hittite *tiya-* ‘to assume a standing position’, all ultimately reflecting a h_2e -present in *-i-*: **stéh₂y-ei*, **sth₂y-énti* (for which see Jasanoff 2003: 115 and 2010: 145–146). Hittite *tit(ta)nu-* in the sense ‘to cause to stand’ has replaced a **titta-* with the same meaning, itself representing a renewed reduplicated h_2e -present **s(t)í-sth₂-e*, **s(t)í-sth₂-ḫti* (thus with Jasanoff 2010: 148–149). However, one must also recognize a homophonous Hittite verb *tit(ta)nu-* ‘to place, set’ derived within the prehistory of Hittite in similar fashion to the root **dheh₁-* of Hittite *dai-* ‘to put, place’.

REFERENCES

- Beckman, G. (1983) *Hittite Birth Rituals* [StBot 29], Wiesbaden: Harrassowitz.
- Blevins, J. (2008) Phonetic explanation without compromise: the evolution of Mussau syncope, in: *Diachronica* 25, 1–19.
- Blust, R. (2001) Some remarks on stress, syncope, and gemination in Mussa, in: *Oceanic Linguistics* 40/1, 143–150.
- CHD = Güterbock, H. G.† — Hoffner, H. A., Jr. — van den Hout, T. P. J. 1980–. *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, Chicago: The Oriental Institute.
- Dempsey, T. R. (2015) *Verbal Reduplication in Anatolian*, Ph.D. dissertation, University of California, Los Angeles.
- Hajnal, I. (1995) *Der lykische Vokalismus*, Graz: Leykam.
- Heubeck, A. (1985) Konsonantische Geminaten im lykischen Wortanlaut, in: *Zeitschrift für Vergleichende Sprachforschung* 98, 36–46.
- Hoffner, H. A., Jr. (1997) *The Laws of the Hittites*, Leiden: Brill.
- . (1998) *Hittite Myths*, Atlanta: Scholars Press (second edition).
- Jasanoff, J. (2003) *Hittite and the Indo-European Verb*, Oxford — New York: Oxford University Press.
- . (2010) Lycian *sttati* ‘stands’, in: J. Klinger — E. Rieken — C. Rüter (eds.), *Investigationes Anatolicae: Gedenkschrift für Erich Neu* [StBot 52]. Wiesbaden: Harrassowitz, 143–151.
- . (2018) What happened to the perfect in Hittite? A contribution to the theory of the h_2e -conjugation, in: E. Rieken et al. (eds.), *100 Jahre Entzifferung des Hethitischen — Morphosyntaktische Kategorien in Sprachgeschichte und Forschung: Arbeitstagung der Indogermanischen Gesellschaft, Philipps-Universität Marburg, 21. bis 23. September 2015*. Wiesbaden: Reichert, 137–156.
- Kammenhuber, A. (1961) *Hippologia Hethitica*, Wiesbaden: Harrassowitz.
- Kloekhorst, A. (2008) *Etymological Dictionary of the Hittite Inherited Lexicon*, Leiden: Brill.
- Melchert, H. C. (1984) *Studies in Hittite Historical Phonology*, Göttingen: Vandenhoeck and Ruprecht.
- . (1994) *Anatolian Historical Phonology*, Amsterdam — Atlanta: Rodopi.
- . (2004) Lycian, in: R. Woodard (ed.), *The Cambridge Encyclopedia of the World’s Ancient Languages*, Cambridge — New York: Cambridge University Press, 591–600.
- Morpurgo Davies, A. (1987) ‘To put’ and ‘to stand’ in the Luwian languages, in: C. Watkins (ed.), *Studies in Memory of Warren Cowgill. Papers of the Fourth East Coast Indo-European Conference, Cornell University, 1985*, Berlin: de Gruyter, 205–228.

since both roots behave as “s-mobile” roots in Anatolian, and both shapes can occur in the same language: compare Hittite *tiya-* ‘enter a standing position’ etc. vs. *ištantāi-* ‘tarry’.

- Naumann, R. (1971) *Architektur Kleinasiens von ihren Anfängen bis zum Ende der hethitischen Zeit*, Tübingen: Wasmuth (second edition).
- Oettinger, N. (1979) *Die Stammbildung des hethitischen Verbums*, Nürnberg: Carl.
- Otten, H. (1981) *Die Apologie Hattusilis III. Das Bild der Überlieferung* [StBoT 24], Wiesbaden: Harrassowitz.
- Puhvel, J. (1991) *Hittite Etymological Dictionary*, Vol. 3: *Words Beginning with H*, Berlin — New York: Mouton de Gruyter.
- Rohlf's, G. (1966) *Grammatica storica della lingua italiana e dei suoi dialetti*, Torino: Einaudi.
- Schuster, H.-S. (1974) *Die hattisch-hethitischen Bilinguen, I: Einleitung. Texte, und Kommentar*, Leiden: Brill.
- Tischler, J. (1994) *Hethitisches Etymologisches Glossar*, Teil III. Lieferung 10: T, D/3, Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- (2001) *Hethitisches Handwörterbuch*, Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.
- Weitenberg, J. (1984) *Die hethitischen u-Stämme*, Amsterdam: Rodopi.
- Wheeler, M. W. (2005) *The Phonology of Catalan*, Oxford — New York: Oxford University Press.

