

Garnier, Romain: *Sur le vocalisme du verbe latin: étude synchronique et diachronique*. Innsbrucker Beiträge zur Sprachwissenschaft, 134. Innsbruck, 2010. 519 Seiten. Gebunden, 72,00 EUR. ISBN: 978-3-85124-720-6.

The verbal system has seen tremendous change since the days of Proto-Indo-European (PIE) into attested Latin. It has lost a number (the dual) and two moods (the optative and injunctive), merged two of its preterits (the aorist and perfect), and created new inflectional suffixes, categories and stem classes that never existed within the proto-language, such as the imperfect subjunctive¹ and the four (and a half) verbal conjugations. Moreover, all of the PIE ablaut classes ceased to be productive in their original state, with new types arising through the forces of sound change and the whims of analogy. This monograph, a revision of Romain Garnier's 2006 Sorbonne dissertation, takes important steps in reaching a deeper understanding of these changes. G's primary goals are (1) to disentangle the synchronic system of ablaut within the verb; (2) to gain a better understanding of the diachronic changes within Latin and its position within Italic; and lastly, (3) to find a place for 'les éléments fossiles' of the Latin lexicon within our understanding of the PIE language (33-34). G makes great strides in each of these goals, though the primary focus of the book falls squarely on the second, resulting in for the most part a traditional diachronic analysis of the Indo-European characteristics of the Latin verb.

G divides the book into four parts, each containing multiple chapters devoted to a particular ablaut pattern within the verbal system. Each section therein follows the same basic and effective format. First, G grounds the root or stem in question within the broader synchronic landscape, discussing related forms, noteworthy aspects of the morphology and usages of the verb. He then turns his attention to diachrony, carefully considering the lexeme's own internal history within Italic as well as its relationship to distant cognates in other IE languages. Helpful tables are almost always included at the end of each section, which present the reader with a succinct overview of the prehistory of the form in question, providing her with a broader understanding of the IE or Italic context from which it derives.

As its title suggests, part 1, "Apophonies viables ou productives" (39-156), is dedicated to the productive ablaut types within the Latin verbal system and is for the most part focused on the alternation between the infectum (present, imperfect, future) and perfectum (perfect, pluperfect, future perfect) stems of the verb. Most commonly, one finds the alternation between CVC in the infectum and CVC in the perfectum; thus, CeC/CēC (*edō, ēdī* 'eat'), CiC/CīC (*uideō, uīdī* 'see'), CaV/CāV (*caueō, cāuī* 'be

¹ Also seen in Oscan **fusīd** (Cm 1 A 19) 'foret', **patensīns** (Cm 1 B 24) 'panderent' (Weiss 2009:420)

aware of'), CoV/CōV (*foueō*, *fōuī* 'keep warm') CoC/CōC (*fodiō*, *fōdī* 'dig'), CaC/CēC (*faciō*, *fēcī* 'make'), Ci(n)C/CīC (*uincō*, *uīcī* 'conquer'), and Cu(n)C/CūC (*fundō*, *fūdī* 'pour'). As has been recognized long ago (see Benveniste 1949:17, with references) in many instances the lengthened vowel of the preterit is the result of sound change: straightforward examples include loss of laryngeal with subsequent compensatory lengthening in reduplicated perfects ($*h_1e-h_1(e)m-$ > $\bar{e}m-$ 'take') and root aorists ($*d^heh_1k-$ > $*fēcī$) and the monophthongization of original diphthongs within full-grade aorists ($*uej_d-$ > $uīd-$) and full-grade imperfections ($*g^hej_d-$ > $fūd-$).² However in a number of instances, such as *fōuī* and *fōdī*, the attested Latin form must be attributed to analogy, as we expect $*fūuī$ (< *u*-perfect $*uouē-uī$ [62]) and perhaps $*fēdī$, if one were to assume the continuation of the *s*-aorist $*b^hēd^h_2s-$ (cf. OCS *basъ* ← $*bēsъ$ < $*b^hēd^h_2sm$), as G has suggested (60). Thus, as the author demonstrates with meticulous finesse, the productivity of the CV̄C/CV̄C pattern is the result of two primary factors: sound change and later analogical spread.

That said, G is too dismissive of previous scholars who explain particular lengthened preterits as having originally been Narten imperfections (such as Weiss (1993:178-81, 2009:412-3) and Jasanoff (1998)), shrugging aside excellent candidates such as $*sēd-$, $*h_1ēd-$, $*h_2ēg-$ 'drive', $*lēg-$ 'collect', and $h_3rēg-$ 'rule'. He does so by discrediting the importance of lengthened vowels in sister forms. For instance, he prefers to derive Lat. *sēdēs* 'seat' from a reduplicated $*se-zd-i-$, comparing Skt. (AV) *sedī-* 'exhaustion' (< $*sa-zd-i-$) and Goth. *andaset* 'repulsive' (< $*sēdiz$). While the etymology of the Sanskrit form is likely (cf. EWAi II 692), the Germanic is not, as the $*ē$ found in the preterit *setun* 'they sat' is in all probability due to analogy and not sound law (Ringe 2006:186-7). G must also invoke Winter's Law to explain the lengthened vowel in a form such as OCS *spsēdŭ* 'nearby' (< $*sēd-$), though note this law is not universally accepted given the large number of counterexamples, for which see Patri's recent negative treatment (2005). G does not even mention Eng. *soot* and its cognates (Lith. *súodziai*, Bulg. *sázda*) which must derive from PIE $*sōd-$ with lengthened *o*-grade, originally meaning 'that which settles' (IEW 886). Of course phonologically Lat. *sēdī* **can** go back to a form $*se-zd-$ (cf. *nīdus* 'nest' < $*nizdo-$, p. 41), but this does not completely eliminate the possibility of a Narten imperfect within PIE.

G cleverly explains away the lengthened $*ē$ of *ēst* '(s)he eats' through analogy with the second singular *ēs* (< $*et-s$; cf. $*mīlets$ > *mīle(s)s*, whose second syllable scans heavy in Plautus [Weiss 2009:170]), and as with *spsēdŭ* above attributes the leng-

² p. 141, contra LIV 179.

thened vowel in Lith. *úodas* 'mosquito' to Winter's Law.³ Lat. *ēdī* would in turn derive from a reduplicated **h₁e-h₁d-h₂a(i)*, as suggested by Benveniste (1949). Jasanoff (1998:307) has proposed that Lat. *ēgī* 'drove' continues an earlier Narten imperfect, asserting that because the reduplicated perfect **h₂e-h₂eġ-h₂a* never existed in PIE, it is difficult to posit an analogical replacement of *āgī*. However, if such a perfect had been created within the prehistory of Latin, it is conceivable that its vocalism was remade in the model of *faciō*, *fēcī*, given its frequency and related meaning, as Benveniste suggests (*ibid.*; see also LIV 256). I am, however, quite skeptical about G's rejection of **lēg-* 'collect' and **h₃rēg-* as original Narten roots. The triad Lat. perf. *lēgī*, Alb. aor. *mb-lodha* 'gathered', and TA imperf. *lyāk* 'saw' as well as the full-grade of Hom. *λέκτο* (Jasanoff 1998:306) are difficult to refute, G's objections notwithstanding (67-68). Moreover, it is doubtful that Lat. *lēgī* is the regular phonological outcome of an inherited **le-lg-* (66, with references), as an apparent example of inherited **-lg^(h)-* may lie in *algor* 'frost' (< **h₂elg^hes-*, cf. ModIce. *elgur* 'snow flurry'; see LIV 263 for citation, with reference). Even if the cluster **-lg-* had *not* been tolerated within the prehistory of Latin, we have no solid examples of its outcome, and it seems equally possible that **lelg-* > **lell-*, as has occurred with the similar sequence **-ld-*; cf. *sallō* 'I salt' < **saldō*. Even less likely is the simplification of a sequence **re-rg-* to **rēg-* (< **h₃rēg-* 'to rule'), a consonant cluster continued faithfully by Lat. *uergō* 'bow' (< PIE **h₂uerg-e-*; LIV 290). Furthermore, I find it hard to believe that *surēgit* 'he stood up' was created on the model of *lēgit*, and as per Weiss 1993:179-80 and Meiser 2003:153n7 seems much more likely to reflect an archaic imperfect whose Narten properties are all but assured by Ved. *rāṣṭi* 'rules' (< **h₃rēg-ti* 'to rule'; see LIV 304-5, with references).

At this point G turns his attention away from productivity and to the more isolated patterns of ablaut within the Latin verbal system. Part 2, "Résorptions apophoniques et resyllabations" (157-306) is divided into seven chapters, which are respectively concerned with (VIII) *-scō* verbs such as *crēscō* 'grow', (IX) verbs of the type *parō*, *parāvī*, (X) original **Cuh_x-īe/o-* formations such as *fīō*, (XI) the replacement of inherited **CRēC-* ~ **CoRC-* verbs by *CaRC-* / *CRaC-*, (XII) nasal-infixed verbs of the shape **Cṛneh_xti* such as *tollō* 'carry away' (< **tḷn(e)h₂-*), (XIII) compound verbs of the class **CeLh_x-d^hh₁-e/o-* and lastly (XIV) the athematic verbs continued into Latin. The motivation behind these ablaut types is much more varied and disparate than in section I, with analogy more frequently playing a role. Thus, paradigm levelling has made the past passive participle of *parāre* 'prepare' (< **p^hh₃-īe/o-*) *parātus* and not

³ With the 'mosquito' originally being 'the biter' (cf. Oettinger 1986:34). For the long vowel of this form deriving from the underlying Narten root property of **h₁led-* 'eat', see Isebaert 1992:204.

expected **prātus* (cf. *grātus* < **g^wrh_x-tó-*; see 195ff.) and Thurneysen's Law (**CūiV-* > **CūiV-*) was often ignored in verbs such as *suō* 'sew' and *spuō* 'spit' due to paradigmatic pressures from forms such as *sūtus* and *spūtus*. Particularly noteworthy is G's discussion of the prehistory of verbs of the shape **CRnéh_xti*, **CéRh_xt*, **CRh_xtó-* (ch. XII), whose original structure is maintained only by the archaic *tollō*, (*te-*)*tulī*, (*t*)*lātus* 'lift up' (< **tlnéh₂-*, **té-t(o)lh₂-*, **tlh₂tó-*). G convincingly demonstrates that the unexpected root vocalism in presents such as *sternō* 'spread out', *spernō* 'kick' and *pellō* 'push' reflects the widespread tendency in Latin to simplify its ablaut patterns: **sterh₃-* 'spread out', whose inherited *stornō*, *spornō* and *pollō* (< **st_l-n-h₃-*, **sp^(h)_l-n-h₂-*, and **p_l-n-h₂-*, respectively) exhibit over-generalization of the *e*-grade from the aorist into the present in the first two instances and of the unattested supine **pelatu-* (< **pelh₂-tu-*) in the third, whose existence is inferred by G through the archaic frequentative *pultāre* 'push' (262).

G (182-3) contends that Hitt. *ganēšzi* derives from **gñh₃sti* (via **ganšzi*), with anaptyxis of *i/e* in the cluster **C-s-C*; cf. *tak-ki-iš-zi* '(s)he assembles' besides 3rd pl. *tak-ša-an-zi*. However, the cluster in **ganšzi* (< **gñsti*) is not equivalent to the one in **takšzi*, and as such G's derivation is phonologically problematic. While to my knowledge the outcome of the sequence **-ñst-* has no examples in Hittite, note that the sequence **-VnsV-* > *-(š)š-* (cf. *dénsu* > *dassu-* 'strong, heavy'; Melchert 1994:135), and so perhaps a similar loss of nasal would have occurred within the sequence **-VnsCV-*. Now one might argue that such problems may be solved through relative chronology, with **-ns-* > **-ss-* first and then **gñsti* > **gansti* (cf. Melchert 1994:55-6), with later anaptyxis. However, we find frequent deletion of *-n/-m-* in Hittite (both historically and synchronically): cf. *awiti-* 'sphinx' (< **ñ-uid-*) and *kueyen* 'we slew' < *kūenūen* (Puhvel 1984:247). Likewise the inherited sequence **-ñhC-* shows optional nasal deletion: **senh₂-ti* > *ša(n)hzi* 'seeks'.⁴ Thus it is not unreasonable to assume that an inherited **-ñsC-* would behave in a similar fashion, with **ganšzi* > *ga(n)šzi*. Nevertheless, as Craig Melchert kindly points out to me,⁵ irrespective of what **gñh₃s-ti* would have become (**gaššzi*, **ganšzi* or **ganzzi*), if **gñh₃s-ti* had given us **ganšzi* and that sequence **were** phonotactically illicit, it would not have been repaired as *g(a)neššzi*. For, as Oettinger (1979:41) has convincingly demonstrated, when anaptyxis occurs to the right of the original accent, the accent remains, with the posttonic short *e* becoming *-i-* in a closed syllable, whence **g(a)niššzi*. However, only forms

⁴ Should one derive *wašt(a)-* 'miss the mark' from **h₂uomst-* (cf. Gk. *ἁμαρτή* 'error, sin'; Melchert 1994:50, with ref.) and *kuašzi* '(s)he kisses' from **kūéns-ti* (Kloekhorst 2008:88), these would provide additional instances of nasal loss in the sequence **-NsC-*. Both of these etymologies, however, are problematic.

⁵ In an e-mail dating to July 21, 2012.

with *e*-vocalism are attested in OH/OS (*g(a)neššzi*), with ***g(a)niššzi* never occurring (Melchert 1984:85). In short, the scenario that G sets forth will simply not work.

In part 3, "Blocages apophoniques" (307-430), G turns to those verbs with no discernable ablaut pattern. It is divided into five chapters: (XVI) nasal-infixed presents of the type *findō* 'split', which are not associated with a root aorist, (XVII) nasal-infixed presents of the type *fungō* 'knead', which have replaced amphikinetic present formations, (XVIII) nasal-infixed presents of the type *prahendō*, *prahensi*, *prahensus*, whose nasal has been generalized throughout the paradigm, (XIX) roots of the type *molō*, which originally ended in a laryngeal, and lastly (XX) roots of the type *uīuō*, which maintain the same vocalism throughout. Of course, one frequently discovers that the reason for such unexpected vocalism lies in the prehistory of the language: Latin speakers said *fidī* and not ***fīdī* because this particular root formed a thematic root aorist **b^hidom*, with comparanda in Hern. *ni hvidas* 'don't break!' and OHG *bizzi* 'you bit' (310, contra LIV 71). Of particular interest within this section is G's analysis of *pingō* 'paint' and *pungō* 'prick', which are commonly reconstructed as **peig-* 'paint' (LIV 464) and **peug-* (LIV 480), respectively. Like *(ē)mungō* 'blow', which is clearly related to Ved. *muñcāti* 'detach, free' and therefore must derive from **meyk-* 'undo, pull off' (LIV 443), G suggests that *pingō* and *pungō* derive from roots with final voiceless tectals (**peik̥-* 'incise', **peuk̥-* 'drive in').⁶ In each instance the voiced stop was introduced through sound change in the 1st pl. **pi-n-k̥-mos*, **pu-n-k̥-mos*, **mu-n-k̥-mos* > **pingmos*, **pungmos*, **mungmos*, with later replacement of the ending **-mos* by **-amos* > *-imus* (319). Clever as this solution is, one wonders why such a sound change occurred in the first place given the fact that **all** medial clusters of the shape CCC were reduced in some fashion or another (Weiss 2009:177-182). Compare the fate of similar clusters of the shape -CKN-: **tork^wmentom* > *tormentum*, **urkna* > *urna*, **k^winknoi* > *quīnī*.⁷ Perhaps the change of **pingmos* to **pingamos* through vowel anaptyxis represents a compromise for Latin speakers, one which avoids the phonotactically illicit sequence **-ngm-* as well the highly opaque ***pīmos*.

While the job of an IE linguist is to recognize reoccurring patterns within the daughter languages and to identify hidden connections therein, we should always be wary of being overly reductionistic. Thus, PIE (in)famously had two roots for 'fart': **pesd-* 'fart quietly' (Lat. *pēdō*, OHG *fist*, Slov. *pezdeti*) and **perd-* 'fart loudly' (Gk. *perdomai*, Eng. *fart*), which scholars have unanimously and quite sensibly assumed the pair to be a case of onomatopoeia, with the difference in consonantism subtly (or not so subtly) reflecting the difference in volume, as the liquid **r* is much more so-

⁶ The root **peik̥-* is continued by Ved. *piśāná-* 'ornamental', OCS *pišq* 'write', etc. **peuk̥-* by Hom. *πύκα* 'dark'.

⁷ All taken from Weiss, *ibid.*

norous than the fricative **s*. G (407-8), however, suggests that PIE **pesd-* rather reflects an univerbation of the archaic preverb **pe* 'towards' plus **s(e)d-* 'move',⁸ with a "lointain correspondant étymologique" in OCS *po-xoditi* 'go', an etymology which I find rather forced and difficult to believe. For G the crucial form is the Avestan verb *pazdaiia-* 'pursue', which he assumes to have been a causative to **pazd-*, whose original meaning was 'flee, escape'; thus, **pesd-* 'fart (quietly)' originally meant to 'to escape; emit'; **posdēje/o-* 'cause to escape, pursue'. But if one wants to connect the two roots, the Av. form may be just as easily viewed as a denominative verb to PIE **pesd-* 'annoying insect' (de Vaan 2008:454), which is continued by the Lat. *i*-stem *pēdis* 'louse' and the Ilr. *u*-stem **pazdu-* (Ved. *pedú-* (PN), *paidvá-* 'an insect harming horses', Av. *pazdu-* 'bug, grub'), in the sense 'to act like a bug towards someone, to pursue'. A similar semantic development is found in the English idiom 'to bug s.o.', meaning 'to annoy, persistently harass s.o.'. Both Lat. **pezdi-* and PIr. **pazdu-* very possibly derive from **pesd-* 'to fart (quietly)' (EWAi II 692), with the sense of an 'annoying insect' being 'a little fart', or perhaps these words are themselves examples of onomatopoeia, as so many bugs make the sound "bzzz(d)".⁹ Of course, it is surprising that the denominative of Av. *pazdu-* is *pazdaiia-* and not ***pazduiia-* or the like (cf. *fšū-/pasu-* --> *fšuiia-* 'keep cattle'), though in my opinion considerably more likely than G's proposition of **pesd-* consisting of a preverb + root.¹⁰ Simply put, one cannot find a better example of onomatopoeia reconstructable for PIE than the **pesd-/perd-* pair.

In the fourth and last part, "Débris apophoniques hors expression chrono-aspectuelle" (431-487), G focuses on true cases of the PIE ablaut being absorbed by other paradigms within the language. He begins with an excellent overview of the IE causative-iterative formation **CoC-éj-e/o-* (ch. XXII) as continued by Lat. *noceō* 'harm', a causative formed to the root **nek-*¹¹ 'perish, disappear', and by *sorbeō* 'sip', which reflects the iterative **srob^h-éj-e/o-* to the root **sreb^h-* 'sip' (with secondary root vocalism in Latin; see LIV 587), and then moves on to a brief discussion of durative / intensives (Ch. XXIII) of the type *gustāre* 'taste' (< **ġus-tah₂-jé/ó-*) and the type *agitāre* 'agitate' (< **ag-etā-i-e/o-*), the latter of which G derives from the unattested adjective **h₂aġetó-* 'active' (462). The final content chapter is devoted to *Verba ignōta*

⁸ For parallel formations, cf. **ni-sd-ó-* 'nest' and **h₂o-sd-ó-* 'branch'. For the sense 'move', see G 407.

⁹ I thank Brenna Reinhart Byrd for pointing this out to me.

¹⁰ An alternate (and perhaps more likely) etymology for Av. *pazdaiia-* is given by Cheung (2007:305), who posits *pazd-* as reflecting a causative *da*-stem to the root *pad-* 'go' (Skt. *pad-*), thus 'to make go; pursue'.

¹¹ Reconstructed by G as **h₂nek-*; see p. 435.

(Ch. XXIV), characterized by verbs such as **mlāre* 'be soft' and **lāre* 'flow', which may only be inferred through derivatives like *blandus* 'pleasant' (cf. Ved. *mlāyant-* 'soft') and *latex* 'liquid' (cf. Hitt. *lahh-* 'pour').

Overall G has given us an excellent and thoroughly researched book, illustrating his control not only of the Italic sub-branch but also of other branches as well.¹² That said, however, there are two significant weaknesses within G's work. First, while G does include a fairly extensive table of contents, there is no subject index or, more importantly, an index of forms from either Latin or other languages. G has much to say not only about Latin but also about a whole host of Indo-European problems, and the fact that specific forms, both in Latin and abroad, are not listed in the back of the book no doubt will make other scholars' work much more difficult, as they will have to peruse numerous pages for forms that may or may not be discussed within the text.

Secondly, and more seriously, it is quite common for G not to cite the previous research done on particular topics, especially those with views which he shares. For example, G provides a thorough discussion of etymology of *odiō* 'hate', which he connects with *oleō* 'smell', via the intermediate meaning 'to be smelly (to someone)' (52-59). However, he does explicitly not point out that this connection has been made on a number of occasions (cf. IEW 773; LIV 296). Perhaps previous works do not have as detailed of an account as G does, but the fact that others have even *suggested* this connection is worth mentioning. Another example (though not isolated in the least) lies in his treatment of **pariō* 'enclose' (suggested by *pariēs* 'wall'), which G derives from **tuerh_x-* 'grasp, enclose', as continued by Lith. *tvėrti* 'to sieze, surround' and Gk. *σopός* 'funerary urn' (198-9), a connection that goes back at least as early as Leumann (1977:187). This, as I see it, is a detriment to all, not only to those scholars that deserve the credit but also to G himself, as it is difficult to know when an idea is his own contribution or when it is someone else's. I sincerely believe that G omits such references for reasons of brevity or perhaps his assumptions of what constitutes common knowledge, but for those who are not specialists in the field of Latin historical verbal morphology (such as myself), it would certainly help to frame his contribution within context of the larger picture.

Such criticisms aside, G has done an admirably thorough job in his analysis of the Latin verbal system and has successfully convinced me that "(i)l y a en latin tout un vaste héritage fort archaïque que ne reflète pas du tout la doctrine reçue, telle qu'elle fut professée par les fondateurs de la discipline indo-européenne, et où l'on tient le latin pour une langue innovante... Ce point de vue doit être absolument révisé..." (479). For this reason, this book is strongly recommended for Latinists, Italicists and Indo-Europeanists in general, especially those interested in nominal and verbal mor-

¹² Also Semitic. See p. 441 (and elsewhere).

phology. However, there are a number of gems within this book that will prove useful for the Indo-Europeanist primarily devoted to phonological matters (like myself), such as an extensive discussion of forms which illustrate the CHCC > CCC rule (ch. XIII).¹³

References

- Benveniste, Emil. 1949. "Sur quelques développements du parfait indo-européen." *Archivum Linguisticum* 1, 16-22.
- Byrd, Andrew Miles. 2011. "Predicting Indo-European Syllabification through Phonotactic Analysis." In: Benedicte Nielsen Whitehead, Thomas Olander, Birgit Annette Olsen and Jens Elmegård Rasmussen (eds.), *The Sound of Indo-European: Phonetics, Phonemics, and Morphophonemics*, Museum Tusculanum Press: Copenhagen, 33-52.
- Cheung, Johnny. 2007. *Etymological Dictionary of the Iranian Verb*. Leiden & Boston: Brill.
- de Vaan, Michiel. 2008. *Etymological Dictionary of Latin and the other Italic Languages*. Leiden & Boston: Brill.
- Hackstein, Olav. 2002. "Uridg. CH.CC > C.CC." *Historische Sprachforschung* 115, 1-22.
- Jasanoff, Jay. 1998. "The Thematic Conjugation Revisited." In: Jay Jasanoff, H. Craig Melchert, Lisi Oliver (eds.), *Mír Curad: Studies in Honor of Calvert Watkins*, Innsbruck: Institut für Sprachwissenschaft, 301-316.
- Kloekhorst, Alwin. 2008. *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden & Boston: Brill.
- Lambert, Isebaert. 1992. Spuren akrostatischer Präsensflexion im Lateinischen. In: Latein und Indogermanisch, hrg. von Oswald Panagl und Thomas Krisch, 193-205. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Leumann, Manu. 1977. *Lateinische Laut- und Formenlehre* (2nd ed.). Munich: Beck.
- Meiser, Gerhard. 1998. *Historische Laut- und Formenlehre der lateinischen Sprache*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Meiser, Gerhard. 2003. *Veni Vidi Vici. Die Vorgeschichte des lateinischen Perfektsystems*. Munich: C.H. Beck.
- Melchert, H. Craig. 1984. *Studies in Hittite Historical Phonology*. Göttingen: Vandenhoeck & Ruprecht.

¹³ See Hackstein 2002 and Byrd 2011.

- Melchert, H. Craig. 1994. *Anatolian Historical Phonology* (Leiden Studies in Indo-European 3). Amsterdam & Atlanta, GA: Rodopi.
- Oettinger, Norbert. 1979. *Die Stammbildung des hethitischen Verbums*. Nürnberg: Hans Carl.
- Oettinger, Norbert. 1986. "Indo-Hittite"-Hypothese und Wortbildung. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Patri, Silvain. 2005. "Observations su la loi de Winter." *Historische Sprachforschung* 118, 269-293.
- Pokorny, Julius. 2005. *IEW: Indogermanisches Etymologisches Wörterbuch* (5th ed.). Tübingen & Basel: Francke Verlag.
- Puhvel, Jaan. 1984. *Hittite Etymological Dictionary*. Vol. 1/2 (1984); Vol. 3 (1991). Berlin/New York: Mouton de Gruyter.
- Ringe, Donald. 2006. *From Proto-Indo-European to Proto-Germanic*. Oxford & New York: Oxford University Press.
- Rix, Helmut, Martin Kümmel, Thomas Zehnder, Reiner Lipp, and Brigitte Schirmer. 2001. *LIV: Lexikon des Indogermanischen Verbum* (2nd ed.). Wiesbaden: Dr. Ludwig Reichert Verlag.
- Weiss, Michael. 2009. *Outline of the Historical and Comparative Grammar of Latin*. Ann Arbor & New York: Beech Stave Press.

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