A triconsonantal derivation of the lamed-he paradigm
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1. Introduction

The so-called *lamed-he* roots form an anomalous class of verbs in Biblical Hebrew. Unlike strong verbs, they lack a consonantal third radical. This anomaly occurs in the perfect, e.g. בָּנָה *bånå* 'he built', the imperfect, e.g. יִבְנֶה *yiḇnɛ* 'he will build', and most other parts of the paradigm. Together with the absence of a consonantal third radical in these verbs in many other Semitic languages, this has traditionally prompted scholars to reconstruct them with a vocalic radical in Proto-Semitic, making them a class of weak verbs. In some accounts, these roots were originally biconsonantal, followed by a vowel or a diphthong; thus Bauer & Leander (1922: 406–427), who reconstruct the imperfect stem (which is older than the perfect, in their view) as **bini*, occurring besides other root types like **gulu*, **šataɪ̯* and **raðaṷ* (*sic*). Brockelmann (1908: 618–632) argues against such a biconsonantal reconstruction, noting that the third-weak forms can easily be derived from strong roots with **w* or **y* as their third radical. These consonantal third radicals, however, were regularly elided, causing the contraction of the surrounding vowels. This resulted in Proto-Semitic forms with long vowels following the second radical, like the perfect **banaya > *banā* and the imperfect **yabniyu > *yabnī*.

Both of these approaches reconstruct a weak precursor of the *lamed-he* paradigm for Proto-Semitic. As Birkeland (1940: 41–46) shows, however, it is far more likely that these roots were still triconsonantal at the Proto-Semitic stage, only to lose their consonantal third radical at a much later point in time. This conclusion is supported by two main arguments:

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1. The correspondences between long vowels resulting from the loss of an intervocalic glide are abnormal. For example, Biblical Aramaic *å* normally corresponds to Biblical Hebrew *o*, as in Aramaic קָל *qål* besides Hebrew קוֹל *qol* 'voice'; in the *lamed-he* verbs, we find Aramaic *å* as in בְּנָה *bnå* corresponding to Hebrew *å* as in בָּנָה *bånå*. Similarly, Biblical Aramaic *o* normally corresponds to Biblical Hebrew *o*, as in יוֹם *yom* 'day' (both Aramaic and Hebrew); contrast this with the correspondence between Aramaic בְּנוֹ *bno* and Hebrew בָּנוּ *bånu* 'they built'.

2. Many Semitic languages attest spellings with a consonantal *w* or *y* that cannot represent a vowel, like Old Byblian <*bny*> 'he built' (KAI 4:1), Moabite <*wyꜥnw*> '(and) he afflicted' (KAI 181:5), Ugaritic <*ȧtwt*> 'she came' (KTU 1.4:IV:32), Sabaic <*wꜥdww*> 'and they entered' (Stein 2003: 194), Safaitic <*mṭy*> 'he journeyed' (Al-Jallad 2015: 121–122), or Classical Arabic *banā* 'he built', where the *ā* is spelled with <*y*> (later distinguished from consonantal *y* by the lack of diacritic dots). To this we may add the preservation of vocalised forms with a consonantal glide, like Classical Ethiopic *bakaya* 'he cried, Classical Arabic *banaytu* 'I built', and the recently discovered Old Arabic αθαοα 'he came' (Al-Jallad & Al-Manaser 2015).

These are compelling reasons to reconstruct a triconsonantal *lamed-he* paradigm for Proto-Semitic. Accordingly, Birkeland's account has gained widespread acceptance; Blau (2010: 248–252), for instance, follows it closely.[2] However, several aspects of this reconstruction remain unclear.

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[2] Diem (1977) argues against a triconsonantal reconstruction of these verbs, preferring to reconstruct biconsonantal stems followed by a long vowel, e.g. *-glū, motivated by the desire to reduce the number of sound laws necessary to arrive at the attested forms. These are replaced, however, by a similarly large number of analogies, many of which are problematic. For instance, Diem explains the replacement of Arabic 3m.pl. perfect forms like *nasiyū (from original *nasī + ū) by nasū 'they forgot' as analogical to the same change of *-iyū to -ū in the prefix conjugation, since no analogical model in the perfect is available; but a change like this, which is phonetically regular and introduces irregularities into the paradigm, is far more easily understood as sound change than analogy. Nor does this account explain why the long vowel, presumably part of the root, varies in quality, as in Arabic *raǧā* 'he hoped', *yarǧū* 'he hopes', *rāǧī* 'hoping (construct)'; in the triconsonantal reconstruction,

First, the precise phonetics of the contraction of *-*VWV*[3] sequences are puzzling. For example, how are we to understand the change from *-*iWu* to Biblical Hebrew -ɛ attested in the imperfect? Birkeland and Blau try to account for these unexpected reflexes of triphthong contraction through analogy, but the lack of motivation for these analogical changes and the presence of -ɛ in forms without a clear analogical model make this implausible.

Second, there is the unexpected form of the *qal* masculine singular imperative, like בְּנֵה *bne*. Blau explains the final -*e* as coming from *-*ay*, but this is hard to reconcile with cognate forms like Classical Arabic *ibni*. Moreover, it is isolated within the Biblical Hebrew paradigm, resembling neither the long imperfect, יִבְנֶה *yiḇnɛ*, nor the jussive, יִּבֶן *yíḇɛn*. How should the imperative be reconstructed, and what sound changes did it undergo?

Third and finally, the infinitive construct forms, like בְּנוֹת *bnoṯ*, have defied explanation. Can these forms be derived from the strong paradigm, and if not, where do they come from?

This paper will propose answers to all of these questions, limiting its scope of investigation to the *qal* or G-stem. In doing so, I hope to remove any objections to the reconstruction of a strong, triconsonantal paradigm for the Proto-Semitic precursors of the *lamed-he* verbs. This will simplify the reconstruction of Proto-Semitic and provide an interesting case study in the genesis of differently inflected verb classes.

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this varying quality automatically results from that of the vowels surrounding the reconstructed third radical (in this case, those in *ragawa, *yarguwu, and *rāgiwu, respectively). See also the objections and triradical (but not triconsonantal) analysis presented by Voigt (1988: 184–205).

[3] In the formulaic notation used in this paper, *V* represents any vowel, *W* represents any semivowel (*w or *y), and *C* represents any consonant.

Table 1. The *lamed-he* perfect and imperfect

	perfect		imperfect	
person	PNWS	BH	PNWS	BH
3m.sg.	*banaya	בָּנָה *bånå*	*yabniyu	יִבְנֶה *yiḇnɛ*
3f.sg.	*banayat	בָּנְתָה *bånṯå*	*tabniyu	תִּבְנֶה *tiḇnɛ*
2m.sg.	*banayta	בָּנִיתָ *båníṯå*	*tabniyu	תִּבְנֶה *tiḇnɛ*
2f.sg.	*banayti	בָּנִית *bånit*	*tabniyī	תִּבְנִי *tiḇni*
1c.sg.	*banaytu	בָּנִיתִי *båníṯi*	*ʾabniyu	אֶבְנֶה *ʾɛḇnɛ*
3m.pl.	*banayū	בָּנוּ *bånu*	*yabniyū	יִבְנוּ *yiḇnu*
3f.pl.	*banayā	בָּנוּ *bånu*	*tabniyna	תִּבְנֶינָה *tiḇnénå*
2m.pl.	*banaytum	בְּנִיתֶם *bniṯɛm*	*tabniyū	תִּבְנוּ *tiḇnu*
2f.pl.	*banaytin	בְּנִיתֶן *bniṯɛn*	*tabniyna	תִּבְנֶינָה *tiḇnénå*
1c.pl.	*banaynā	בָּנִינוּ *bånínu*	*nabniyu	נִבְנֶה *niḇnɛ*

2. Triphthong contraction

A simple comparison of the Biblical Hebrew perfect and imperfect *lamed-he* forms to their strong Proto-Northwest-Semitic reconstruction, as in Table 1, reveals a number of sound laws.[4] These were already identified by Bergsträsser (1918: 99–102) and may be formulated as follows:

> (1) The contraction of a short vowel, a semivowel, and **a* resulted in **-ā > -å* (*qåmɛṣ*), as in **banaya* > בָּנָה *bånå*;

> (2) The contraction of a short vowel, a semivowel, and **i* or **u* resulted in **-ē*, which shows up in Biblical Hebrew as *-ɛ* (*sḡol*) when stressed, *-e* (*ṣere*) when unstressed, as in **yabniyu* > יִבְנֶה *yiḇnɛ*, **bāniyu* (masculine *qal* active participle construct) > בֹּנֵה *bone*.[5]

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[4] The BH first and second person perfect forms, as well as the second and third person feminine imperfect, go back to the stative paradigm, rather than the fientive reconstructions given here. The third person feminine singular perfect has added an additional feminine ending to the inherited one (Blau 2010: 250).

[5] While this is the formulation given by Bergsträsser, it is more likely that position in the word is the conditioning factor, rather than stress. As construct states are proclitic, the **-ē* in בֹּנֵה *bone* etc. counts as word-internal, and is reflected as *e*, like other cases of word-internal **-ē*. The shift of **-ē* to *-ɛ* affected both stressed and unstressed vowels in truly

Note that the quality of the first vowel does not affect the outcome: *-*iWa*, *-*uWa*, and *-*aWa* all behave the same, as do *-*iWu*, *-*uWu*, and *-*aWu*. This led to the merger of the stative and fientive *lamed-he* paradigms, which would originally have been distinguished by the quality of the vowel preceding their semivocalic third radical.

Rule (2) is hard to understand phonetically, specifically in the case of *-*iWu* > *-e* and *-ɛ*. We should expect the contraction of two high vowels to result in another high vowel, such as **-*ī*; in fact, this is the attested outcome in Classical Arabic *yabnī*. Blau (2010: 101–102) maintains that this was actually the outcome in an earlier stage of Hebrew, too. In his account, the e-vowels originally only go back to the sequences *-*aWu* and *-*aWi*. They then spread to original cases of *-*iWu* and *-*iWi* through analogies such as שָׂדֹות *śåḏoṯ* 'fields' : שָׂדֶה *śåḏɛ* 'field' = יְפֹות *yåp̄oṯ* 'beautiful (f.pl.)' : יָפֶה *yåp̄ɛ* 'beautiful (m.sg.)', replacing original **יָפִי **yåp̄i. Similarly, while *ṯamāniyu* 'eight (f.sg.)' should have yielded **שְׁמֹנִי **šmoni, it was analogically replaced: נִרְאָה *nirʾå* 'appearing (f.sg.)' : נִרְאֶה *nirʾɛ* 'appearing (m.sg.)' = שְׁמֹנָה *šmonå* 'eight (m.sg.)' : שְׁמֹנֶה *šmonɛ* 'eight (f.sg.)'.[6]

This analogical explanation is unsatisfactory. As may be seen from the examples given, the posited analogies appear somewhat far-fetched. Moreover, while analogy may occur irregularly, every single case of *-*iWi*, *-*iWu*, *-*uWi* and *-*uWu* appears in Biblical Hebrew as an e-vowel, including such unlikely candidates for analogical replacement as the masculine *qal* active participle and the numeral שְׁמֹנֶה *šmonɛ* 'eight (f.sg.)'. This rather points towards the operation of a regular sound law, not of analogy.

The key to understanding this sound law lies in the phonetic realization of the Proto-Semitic phonemes *i* and *u*. In Proto-Semitic, these were most likely realized as one would expect: as short, close vowels. But at some point

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word-final position, cf. אֵלֶּה *ʾéllɛ* 'these' (admittedly of uncertain reconstruction); a preceding *y* blocked this change, as in אַרְיֵה *ʾarye* 'lion'.

[6] Blau (2003) gives a different account, stating that word-final *-*iWu* also resulted in *-ɛ* without addressing the phonetic issues. He maintains that word-internal *-*iWi*- yields *-i-*, as in *piyi-hū* > *píhu* 'his mouth'; the cases where it yields Biblical Hebrew *-e-* are then analogical. However, *pɛ* 'mouth' should be reconstructed as just *p-* followed by long case vowels, not as *piy-*; cf. the Classical Arabic construct state accusative *fā* < *pā*, not **fiya* < *piya*. This removes any evidence for *-*iWi*- > *-i-*.

in the prehistory of Hebrew – perhaps as early as Proto-Northwest-Semitic – these vowels seem to have undergone a phonetic change, becoming the close-mid vowels *e and *o. This is supported both by evidence from foreign transcriptions and by evidence from the internal reconstruction of Hebrew.

Starting with the evidence from transcriptions, the most common Greek transcription of reflexes of Proto-Semitic *i, also in cases where Biblical Hebrew has i, is epsilon. In the Septuagint, we find names like μελχα (BH מִלְכָּה milkå) and γεδεων (BH גִּדְעוֹן giḏʿon); see Lisowsky (1940) for many more examples.[7] The same spelling predominates in the Second Column of the Hexapla (Brønno 1943), e.g. σεδκαχ (BH צִדְקְךָ ṣiḏqḵå) 'your righteousness', εμεθθαχ (BH אֲמִתֶּךָ ʾămittéḵå) 'your faithfulness'. Similarly, the Latin transcriptions of Jerome have e as the normal transcription of this phoneme, as in chennor (BH כִּנּוֹר kinnor) 'lyre', iethmau (BH יִתְמֶהוּ yiṯmáhu) 'they will wonder' (Harviainen 1977). Its rounded counterpart, *u, has usually shifted to ɔ (qåmɛṣ ḥåṭup̄) in Biblical Hebrew when unstressed. This change is more easily explained from an intermediate *o than coming directly from *u. Even where Biblical Hebrew has u, usually before geminates, we find o-vowels in transcriptions, e.g. Jerome's ozihel (BH עֻזִּיאֵל ʿuzziʾel, a personal name) or sgolla (BH סְגֻלָּה sḡullå) 'possession'.

These transcriptions strongly suggest that short *i and *u had shifted to *e and *o in Hebrew. But perhaps the dialect that gave rise to the Tiberian reading tradition was just more archaic than those underlying the Greek and Latin transcriptions, uniquely preserving *i and *u with their original, Proto-Semitic quality. While this is a priori possible, it is contradicted by internal evidence. A well-known but rarely discussed peculiarity of Biblical Hebrew historical phonology is that when *i and *u are lengthened, they practically always develop into e (ṣere) and o (ḥólɛm); see table 2.[8] With one very late

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[7] A frequent class of exceptions is found in the names beginning with *yi-, which are regularly transcribed with iota in the Septuagint, e.g. ἰσραηλ (BH יִשְׂרָאֵל yiśråʾel).
[8] In table 2, 'accentual' lengthening refers to the phonetically long realization of all accented vowels in Biblical Hebrew. Except for *miʿʿina, which has undergone a shared Canaanite sound change from earlier *maʿʿina (Huehnergard 1992), all pre-BH forms given are Proto-Northwest-Semitic.

exception,[9] lengthening of *i and *u never yields the expected values of **ī and **ū, which would be written with ḥíreq and šúreq or qibbuṣ, respectively. If *i and *u maintained their original values in all pre-stages of Biblical Hebrew, this can only be understood if we posit a separate lowering change in all of these cases; that is, if *i always changed to *ē and *u always changed to *ō. Since there is no phonetic reason to suppose this, it makes more sense to hold that *i and *u had changed to *e and *o in all environments before these lengthening changes took place. This entails that in those cases where we do find Proto-Semitic *i and *u reflected by Biblical Hebrew i and u, this is the result of a late change, which cancelled out the much earlier, lowering sound change in many unstressed, closed syllables (as was also suggested by Meyer 1992: 105–106). Given the occurrence of precisely such a sound change in Aramaic just centuries before the codification of the Tiberian reading tradition (Beyer 1984: 138–140), this is hardly problematic.

Table 2. Pre-Biblical Hebrew lengthening processes

lengthening process	Pre-BH (*i)	BH (e)	Pre-BH (*u)	BH (o)
tonic	*sāliḥum	שֹׁלֵחַ šoleaḥ	*gabuhum	גָּבֹהַ gåḇoah
pretonic	*kabidīma	כְּבֵדִים kḇeḏim	–	–
pausal	*samiʿū	שָׁמֵעוּ šåméʿu	*yasmurū	יִשְׁמֹרוּ yišmóru
accentual	*yantinu	יִתֵּן yitten	*yamluku	יִמְלֹךְ yimlok
compen-satory	*miʾʾina	מֵאֵן meʾen	*yuburraku	יְבֹרַךְ yḇorak

The assumption that *i and *u were realized as *e and *o in earlier stages of Hebrew resolves the problem of triphthong contraction. So far, we have only considered word-final triphthongs, but intervocalic semivowels also occurred word-internally, as in the perfect of hollow verbs (Suchard forthcoming). Here, we see that the outcome of triphthong contraction is a long vowel with the quality of the original second vowel: thus, *qawama > *qāma > קָם

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[9] Namely the cases of so-called virtual gemination like *mihhar > מִהַר mihar 'he hurried', where both vowels are phonetically long.

qåm 'he stood up', **maweta* > **mēta* > מֵת *mēṯ* 'he is dead', **bawoṯa* > **bōṯa* > בּושׁ *bōš* 'he is ashamed'. This sound law, **V̆₁WV₂* > **V̄₂*, is phonetically quite attractive, and only one detail prevents us from extending its operation to word-final position, as well as word-internal contexts: the change of **-VWu* > *-ɛ*. It may be that **-u* (or **-o*) merged with **-i* (or **-e*) in word-final position; this is ad hoc, but not implausible, and there are no counterexamples. Thus, we have arrived at a phonetically acceptable, *lautgesetzlich* explanation of the development of triphthongs in the *lamed-he* paradigm and elsewhere.

3. The imperative

As was mentioned above, Blau (2010) believes the surprising masculine singular imperative form בְּנֵה *bne* should be reconstructed as **bnay*. This is questionable. First, with very few other originally word-final occurrences of **-ay*, we cannot be sure whether the development to *-e* is regular, as Blau maintains; the possible counterexample of **matay* > מָתַי *måṯay* 'when' suggests otherwise.[10] More importantly, imperatives show a close formal resemblance to the prefix conjugation throughout Semitic, but forms like **bnay* would be completely isolated within the paradigm, unlike both the 'long' imperfect **yabniyu* > יִבְנֶה *yiḇnɛ* and the jussive **yabni* > יִבֶן *yíḇɛn*.

I will argue that the attested imperative form regularly follows from the correct reconstruction according to familiar sound laws. Given the lack of consensus on how the Semitic imperative should be reconstructed, this is where we should next turn our attention.

In his recent contribution to the discussion, E. Bar-Asher (2008) gives three alternatives for the reconstruction of the Semitic G-stem imperative:

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[10] Blau explains this form differently, believing it to be analogically based on the pausal form, מָתָי *måṯåy* < **mataya* (p. 101). In his account, pausal lengthening preceded triphthong contraction and thus prevented it, but this is not based on any attested alternation between contracted triphthongs in context besides uncontracted forms *in pausa*. His objection that **matay* should not have yielded מָתַי *måṯay* because pre-Hebrew regularly stressed every penultimate syllable is remedied by the observation that a stress shift took place in words of this syllable structure, e.g. **yaqum* > יָקֹם *yåqom*, not **יְקָֹם **yåqɔm.

1. The imperative stem was identical to the stem of the prefix conjugation. Based on the variation in the theme vowel, this gives us three forms, *qṭul, *qṭil, and *qṭal. This is the reconstruction I will argue for below; it is also explicitly adopted by Lipiński (2001: 343), and Gzella (2011: 441), among others.

2. The imperative stem was based on that of the prefix conjugation, but copied the theme vowel, inserting it between the first two radicals, as in *quṭul, *qiṭil, and *qaṭal. This seems to be the most popular reconstruction in the more recent literature and is also found in classic works like Brockelmann (1908: 544) and Bauer & Leander (1922: 304).

3. Bar-Asher's own proposal, based on the Barth–Ginsberg law:[11] the imperative stem was based on that of the prefix conjugation, but inserted an *a between the first two radicals if the theme vowel was high, as in *qaṭul, *qaṭil, and an *i if it was low, as in *qiṭal.

Bar-Asher does not directly argue against reconstruction 1, the *qṭVl hypothesis, stating (p. 4):

> (…) a priori if a linguist has to choose between the [first] two theories, the one that assumes two vowels should be pursued first, since the option of *qṭVl violates what is known to us about the syllabic structures of all classical Semitic languages. The only reason to choose this option would be if there were facts about the imperative forms or their distribution among the different branches of the Semitic languages that were otherwise inexplicable.

While it may be true that the surface realization of every syllable contains only one consonant in the onset in all *classical* Semitic languages, this was arguably not the case for Proto-Semitic, which is more relevant for our purpose. Testen (1985) shows that two words, at least, should be reconstructed as starting with a consonant cluster: the word for 'son' (BH בֵּן *ben*) and that for 'two (m.)' (BH שְׁנַיִם *šnáyim*). These words show unexpected behaviour in

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[11] This morphological rule states that the G-stem verbal prefixes contained an *a if the theme vowel was *u or *i, but an *i if the theme vowel was *a, resulting in forms like *ya-qṭul-, *ya-qṭil-, and *yi-qṭal-.

multiple Semitic languages. In Aramaic and Modern South Arabian, they undergo a sound change of *n > r that is not otherwise regular in those languages, e.g. Biblical Aramaic בַּר *bar*, תְּרֵין *tren*. In Classical Arabic, they contain a prothetic vowel, as seen in *ibnun* and *iṯnāni*, which is elided after words ending in another vowel. And in Biblical Hebrew, no pretonic lengthening takes place in these words (Garr 1987: 136, n. 32), cf. בְּנִי *bni* 'my son' for expected **בֵּנִי **beni*, an argument that was not noted by Testen. All these anomalous reflexes point to anomalous reconstructions for these nominal stems: *bn-* and *ṯn-*. Bar-Asher argues against these reconstructions (pp. 4–5, n. 13), attributing the Arabic forms to a sporadic metathesis (e.g. *binun* > *ibnun*) and the Aramaic forms with *r* to sporadic rhotacism. This does not address the staggering improbability that sporadic changes should target precisely the same forms in four separate branches of Semitic; contrast this with the shared *lack* of unusual behaviour in the plural 'sons', which shows no metathesis in Arabic *banūna*, no rhotacism in Aramaic בְּנִין *bnin* and Mehri *ḥǝbūn*, and pretonic lengthening in Biblical Hebrew בָּנִים *bånim*, all of which point to a reconstructed stem *ban-*. The reconstruction with a word-initial consonant cluster clearly has more explanatory power.

It is thus probable on other grounds that Proto-(West-)Semitic could have word-initial syllables that started with a consonant cluster, which removes Bar-Asher's main objection against the *qṭVl* reconstruction of the imperative. Moreover, while only few issues are truly inexplicable under the hypotheses that posit a vowel between the first two radicals, these reconstructions do call for a large number of analogies and a fair amount of special pleading. Problems for the *qVṭVl* reconstructions include:

- the origin of the Arabic imperatives, *uqṭul*, *iqṭil*, and *iqṭal*: are these formed by analogy with the prefix conjugation or through irregular metathesis of the first vowel? Why is the initial vowel missing from irregular imperatives that do not contain a consonant cluster such as *kul* 'eat (m.sg.)' for expected **uʾkul* and *sal* 'ask (m.sg.)' besides regular *isʾal*?
- the lack of pretonic lengthening in Biblical Hebrew קְטֹל *qṭol* and קְטַל *qṭal*: did the first vowel in *qaṭal* or *qiṭal* remain short through analogy with *quṭul* or similar? Or were G-stem imperatives unstressed, unlike all other imperatives where this is visible (cf. הִשָּׁמֶר *hiššåmer*

'take heed (m.sg.)', הָקֵם *håqem* 'erect (m.sg.)', both with pretonic lengthening)?

- the lack of expected *a* in either of the Classical Ethiopic forms, *qaṭəl* and *qəṭal*: is this due to analogy with the prefix conjugation or due to an ad hoc sound change of *a > *ə*?

By contrast, the derivation of the attested forms from a *qṭVl reconstruction is trivial. The word-initial consonant cluster is resolved, either by prothesis, as in Arabic, or by epenthesis of either a full vowel (Akkadian, which has forms like *quṭul*, *qiṭil*, *qiṭal* and *qaṭal*)[12] or a schwa (Hebrew, Aramaic, Ethiopic). That's it.[13] Given its phonotactic permissibility, the elegance of this account speaks greatly in favor of a Proto-Semitic reconstruction of the strong G-stem imperative stems as *qṭul, *qṭil, and *qṭal.

The reconstructed imperative stem is thus formally identical to that of the jussive. As both the Biblical Hebrew jussive יִ֫בֶן *yíḇɛn* and its Classical Arabic cognate *yabni* attest, the *lamed-he* roots should be reconstructed with an unusually absent third radical in word-final position: instead of expected *yabniy, these forms point to *yabni. It is unclear whether this is an inherited morphological feature of this verb class, which would then be slightly 'weak' in Proto-Semitic after all, or whether this results from a deletion of word-final glides; the latter seems more likely, as it explains some other alternations between *y and zero,[14] but potential counterexamples like *matay 'when' complicate the matter.[15] Either way, it is clear that the second person

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[12] Whether an Akkadian -*qṭal* stem forms its imperative like *qiṭal* or *qaṭal* is lexically determined. One of these formations may be secondary. If not, the reconstruction of *qṭVl imperatives should be limited to Proto-West-Semitic and Akkadian preserves the Proto-Semitic situation. This does not affect the proposed derivation of the Hebrew *lamed-he* imperative.

[13] A possible complication is the lack of the *n > *r* shift in Aramaic and Modern South Arabian imperatives with *n* as their second radical, but *n* could easily have been analogically restored here.

[14] Namely in some prepositions, e.g. *ʿala (> BH עַל *ʿal*) 'on' besides *ʿalay-hu (BH עָלָיו *ʿålåw*) 'on him'.

[15] Voigt (1988: 195) proposes an analogical explanation for Arabic, based on the interpretation of long vowels as a sequence of two short vowels: imperfect *yaqṭulu : jussive *yaqṭul = imperfect *yarguu : jussive *yargu. For pre-Hebrew, this would also work: imperfect *yaqṭole : jussive *yaqṭol = imperfect *yabnee : jussive *yabne. As this analogy relies on the prior contraction of the triphthongs in the imperfect, it must then be a parallel development

masculine imperative should be reconstructed as *bni. While Arabic maintains a distinction in theme vowel in verbs with a weak third radical, e.g. *yadʿu* 'that he call', *yarḍa* 'that he be content', the merger of the fientive and stative paradigms in Hebrew seems to have led to the generalization of forms with the vowel *i; forms in *u may previously have merged with *i phonologically due to the change of word-final *-u > *-i suggested in the previous section.[16] Being the only vowel in the word, this *i was stressed and therefore resisted the loss of unstressed short vowels in *Auslaut*. *bni then participated in the regular shift of *i to *e. The resulting *e, being short, was not affected by the shift of long *-ē to -ɛ. Thus, *bni regularly resulted in בְּנֵה *bne*, the form attested in Biblical Hebrew.[17]

4. The infinitive construct

The origin of the *lamed-he* infinitive construct בְּנוֹת *bnoṯ* remains an unsolved problem. Brockelmann (1908: 628) writes that "[its] reconstruction (…) cannot be established, as no parallels occur in the related languages",[18] while Bauer & Leander (1992: 411) reconstruct forms like *banaḵatu* that should yield different Biblical Hebrew reflexes (**בָּנָת **bånåṯ, with triphthong contraction and pretonic lengthening). Blau (2010: 250) identifies (with others) the -ṯ as the feminine ending and attributes the -o- to either the Canaanite Shift (see below) or analogy with the strong forms like קְטֹל *qṭol*, but does not give a reconstruction.

Of Blau's two suggestions for the origin of the -o-, analogy with the strong forms is to be rejected, as the vowels in בְּנוֹת *bnoṯ* and קְטֹל *qṭol* behave

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in Arabic and Hebrew, which is less attractive; moreover, this leaves the *-a* / *-ay-* alternation in the prepositions (see note 14) unexplained.

[16] I thank Dr. Marijn van Putten for pointing this out to me.

[17] Aristar (1987: 166) also notes that "-ē [i.e. ṣere] is the regular reflex of earlier stressed short *i" in this position; his account differs from mine in that he prefers a reconstruction like *biní (at least in isolation), which is hard to reconcile with the regular penultimate stress which can be reconstructed for the rest of pre-Hebrew (Cantineau 1931).

[18] "dessen Grundform (…) sich nicht feststellen läßt, da sich keine Parallelen in den verwandten Sprachen finden".

differently. Before suffixes, the stem of the *lamed-he* infinitives remains unchanged, while the strong form undergoes metathesis: contrast בְּנֹתוֹ *bnoṯo* with קָטְלוֹ *qɔṭlo*. Together with the usual plene spelling of בְּנֹת *bnoṯ* and the usual defective spelling of קְטֹל *qṭol*, this suggests that the former contains a historically long vowel, while the latter contains a historically short vowel.[19]

It thus seems unlikely that the *lamed-he* infinitive construct was analogically based on the strong infinitive construct. Nor can it simply go back to the same form, as this would leave the origin of the feminine suffix unexplained. However, other, vestigial infinitive forms are also preserved in Hebrew. Most relevantly, there is the **qiṭlat-* pattern, reflected in Biblical Hebrew as קְטְלָה *qiṭlå*, e.g. יִרְאָה *yirʾå* 'to fear', שִׂנְאָה *śinʾå* 'to hate'; also compare the similar, biradical **ṭilt-* and **ṭilat-* forms from verbs with *n* or *y* (< **w*) as their first radical, like **tint-* > תֵּת *teṯ* 'to give', **ṯibt-* > שֶׁבֶת *šέbεṯ* 'to sit', **diʿat-* > דֵעָה *deʿå* 'to know', **lidat-* > לֵדָה *leḏå* 'to give birth'.

If we reconstruct a **qiṭlat-* verbal noun of the *lamed-he* roots, this should presumably look like **binyat-*. However, an inherited form like this would have already undergone a sound change in Proto-Semitic. As noted by Brockelmann (1908: 186), pre-Proto-Semitic sequences of **CWV* changed to Proto-Semitic **CV̄*; this largely explains the paradigm of the hollow verbs (Suchard forthcoming) and can also be observed in nouns derived from these roots, like **maqwam-* > **maqām-* > מָקוֹם *måqom* 'place', with the Canaanite Shift of Proto-Northwest-Semitic **ā* to Proto-Canaanite **ō*, reflected by Biblical Hebrew *o*. The same change took place before the feminine suffix: compare **ʾaḫwat-* (see Wilson-Wright 2016 for the presence of **w* in this word) > **ʾaḫāt-* > אָחוֹת *ʾåḥoṯ* 'sister'. In the same way, pre-Proto-Semitic **binyat-* shifted to Proto-Semitic **bināt-*. The subsequent reduction of the first vowel and shift to **ō* of the second is completely regular, cf. **ḏirāʿ-* > זְרוֹעַ *zroaʿ* 'arm'. Thus, בְּנֹת *bnoṯ* is the regular reflex of a **qiṭlat-* verbal noun derived from roots with **w* or **y* as their third radical.

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[19] The metathesis of קְטֹל *qṭol* to קָטְלוֹ *qɔṭlo* is paralleled by that in the imperative. This may indicate that the infinitive construct stem should also be reconstructed as **qṭul-*. The metathesis would then be a regular pretonic change of **C₁C₂uC₃-* to **C₁uC₂C₃-*, comparable to the behaviour of **u* in other pretonic contexts, where it geminates a single following consonant rather than being lengthened itself.

5. Conclusion

The aim of this paper was to clarify three aspects of the development of the Biblical Hebrew *lamed-he* paradigm. In section 2, it was argued that the sound law $*\breve{V}_1WV_2 > *\bar{V}_2$ correctly predicts the outcome of triphthong contraction, if we take the previous change of $*i$ to $*e$ and $*u$ to $*o$ into account. No appeal to analogy is needed. In section 3, a discussion of the Proto-Semitic form of the imperative stem gave us $*bni$ as the precursor of the *lamed-he* masculine singular imperative, which regularly developed to Biblical Hebrew בְּנֵה *bne*. In section 4, $*binyat$- was proposed as the pre-Proto-Semitic form of the *lamed-he* infinitive construct; like the imperative, the attested Biblical Hebrew form בְּנוֹת *bnoṯ* regularly derives from this.

As the main argument for a weak – i.e. non-triconsonantal – reconstruction of these verbs for Proto-Semitic was that the attested forms could not be explained from a strong paradigm, I believe the resolution of these lingering issues for the triconsonantal approach definitively shows that the *lamed-he* verbs originally contained three consonantal radicals. A possible weak feature was identified in the jussive–imperative stem, $*bni$, but given the lack of weak inflection in the rest of the paradigm, including suffixed forms of the jussive and imperative, this may well be the result of a sound change, which may have postdated the Proto-Semitic stage. In conclusion, then, there is no need to reconstruct a separate category of third-weak roots for Proto-Semitic.

References

Al-Jallad, A.M. (2015). *An outline of the grammar of the Safaitic inscriptions*. No. 80 in Studies in Semitic languages and linguistics. Leiden: Brill.

Al-Jallad, A.M., & A. Al-Manaser (2015). 'New epigraphica from Jordan I: a pre-Islamic Arabic inscription in Greek letters and a Greek inscription from north-eastern Jordan', *Arabian Epigraphic Notes* 1, 51–70.

Aristar, A.M.R. (1987). 'The Semitic jussive and the implications for Aramaic', *Maarav* 4/2, 157–189.

Bar-Asher, E.A. (2008). 'The imperative forms of Proto-Semitic and a new perspective on Barth's Law', *Journal of the American Oriental Society* 128/2, 233–255.

Bauer, H., & P. Leander (1922). *Historische Grammatik der hebräischen Sprache*. Volume I: Einleitung, Schriftlehre, Laut- und Formenlehre. Halle: Max Niemeyer.

Bergsträsser, G. (1918). *Hebräische Grammatik*. Volume I: Einleitung, Schrift- und Lautlehre. Leipzig: Vogel.

Beyer, K. (1984). *Die aramäischen Texte vom Toten Meer*. Volume 1. Göttingen: Vandenhoeck & Ruprecht.

Birkeland, H. (1940). *Akzent und Vokalismus im Althebräischen*. Oslo: Dybwad.

Blau, J. (2003). 'On the preservation of ancient forms and sound shifts in frequent words resisting analogy in Hebrew and Arabic', in P. Marassini (ed.), *Semitic and Assyriological studies presented to Pelio Fronzaroli* (Wiesbaden: Harassowitz), 70–74.

——— (2010). *Phonology and morphology of Biblical Hebrew*. Winona Lake: Eisenbrauns.

Brockelmann, C. (1908). *Grundriss der vergleichenden Grammatik der semitischen Sprachen*. Volume I: Laut- und Formenlehre. Berlin: Reuther & Reichard.

Brønno, E. (1943). *Studien über hebräische Morphologie und Vokalismus*. Leipzig: Brockhaus.

Cantineau, J. (1931). 'De la place de l'accent de mot en Hébreu et Araméen Biblique', *Bulletin d'Etudes Orientales* 1, 81–98.

Diem, W. (1977). 'Die Verba und Nomina tertiae infirmae im Semitischen', *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 127, 15–60.

Garr, W. R. (1987). 'Pretonic vowels in Hebrew', *Vetus Testamentum* 37, 129–153.

Gzella, H. (2011). 'Northwest Semitic in general', chapter 18 in S. Weninger (ed.), *The Semitic Languages* (Berlin/New York: De Gruyter), 425–451.

Harviainen, T. (1977). *On the vocalism of the closed unstressed syllables in Hebrew*. Helsinki: Societas Orientalis Fennica.

Huehnergard, J. (1992). 'Historical phonology and the Hebrew piel', in W. R. Bodine (ed.), *Linguistics and Biblical Hebrew* (Winona Lake: Eisenbrauns), 209–229.

Lipiński, E. (2001). *Semitic Languages: outline of a comparative grammar*. Second edition. Leuven: Peeters.

Lisowsky, G. (1940). *Die Transkription der hebräischen Eigennamen des Pentateuch in der LXX*. Doctoral dissertation, University of Basel.

Meyer, R. (1992). *Hebräische Grammatik*. Reprint of the third edition. Berlin: De Gruyter.

Stein, P. (2003). *Untersuchungen zur Phonologie und Morphologie des Sabäischen*. No. 3 in Epigraphische Forschungen auf der Arabischen Halbinsel. Rahden: Marie Leidorf.

Suchard, B.D. (forthcoming). 'The Hebrew verbal paradigm of hollow roots: a triconsonantal account', in *Zeitschrift der Deutschen Morgenländischen Gesellschaft*.

Testen, D. (1985). 'The significance of Aramaic *r* < **n*', *Journal of Near Eastern Studies* 44/2, 143–146.

Voigt, R.M. (1988). *Die infirmen Verbaltypen des Arabischen und das Biradi-kalismus-Problem*. No. 39 in Veröffentlichungen der Orientalischen Kommission / Akademie der Wissenschaften und der Literatur. Stuttgart: Steiner Wiesbaden.

Wilson-Wright, A. (2016). 'Father, brother, and father-in-law as III-w nouns in Semitic', *Bulletin of the School of Oriental and African Studies* 79/1, 23–32.