Zeitschrift für Althebraistik 13/2 (2000):145-56

The Phonology of Classical Hebrew: A Linguistic Study of Long Vowels and Syllable Structure

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Occasionally in the study of details, one pulls on what appears to be a marginal thread, a thread which proves to be woven throughout the whole of the tapestry. The thread under consideration in the present work is a sometimes overlooked phonological rule in Classical Hebrew.[1] The task is the specification of the phonological rule as well as its implications for the history of Hebrew, the structure of the middle-glide verb, and the identification of prefix verbs in the biblical text. In order to attain this goal, three topics will be addressed in the following order: the status of long vowels in Classical Hebrew phonology, the internal structure of the middle-glide verb (henceforth the IIwy verb), and the structure and development of the prefix verbs.

1. Long Vowels[2]

Historically long vowels[3] and contracted long vowels are stable in Classical Hebrew in that they survive the phenomenon of propretonic reduction.[4] Furthermore, it has been cursorily noted in previous grammatical works that long vowels exist only in restricted environments: they never appear in a closed, unstressed syllable (see JOÜON 1993:§29 *b* n. 1 and LONG 1997:31, n. 103). In fact, "long vowels show a *tendency to become short* when their syllable closes" (LIPIŃSKI 1997:179; MOSCATI 1980:65; emphasis added).[5] This analysis hints at the truth, but is too vague to be useful for linguistic analysis. In fact, the story is neither so simple nor banal. This section will specify the precise environment in which long vowels or contracted diphthongs become short in pre-Classical Hebrew. Then the identified phonological rule will be situated relative to other diachronic features of Hebrew.

The following argument presupposes a few specific developments within the history of Hebrew (some of which also apply to Central Semitic, or even the whole of Semitic). First, many Semitic languages demonstrate a case system (e.g. Arabic)

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1 The use of 'classical' is intended to highlight the differences between the reconstructed vowel system of Classical Hebrew and that of the Tiberian Masoretes. See footnote n. 11 for further discussion.

2 These vowels are often referred to as "unchangeable" (see KAUTZSCH 1910:§25; BL 1962:§67), but this is certainly not the case, as the rest of this essay will demonstrate.

3 Historically long vowels are: *ī, ō* < **â/ā, ū*. Long vowels resulting from assimilation/contraction are: *ê* < **ay*, *î* < **iy*, *ô* < **aw*, *û* < **uw*. For the numerous nominal and verbal patterns in which long vowels exist in Proto-Semitic and Classical Hebrew, see LONG 1997:20-45; JOÜON 1993:§88; BL 1962:§61; KAUTZSCH 1910:§§83-86.

4 "PS long vowels do not reduce to shwa in BH; they retain the following vowel qualities or timbres...*/ā/ > *o*...*/ī/ > *i*...*/ū/ > *u*...", Long 1997:8.

Propretonic reduction may be represented by the following notation: V>Ø/VC__CVC(C)V́C(C)
>ə/+C__CVC(C)V́C(C)

5 The statement is identical in both works.

and it is thought that such a case system was original within the Semitic family. Presumably, Proto-Semitic distinguished three grammatical cases by means of morphological affixation (MOSCATI 1980:§12.64; LIPIŃSKI 1997:§32.13).[6] Three suffixed short vowels marked the nominative case *-*u*, the accusative case *-*a*, and the oblique case *-*i*. It is likely, and integral to the following argument, that pre-Classical Hebrew also distinguished three cases by means of similar morphological affixation (BL 1962:§65; KAUTZSCH 1910:§§89-90; JOÜON 1993:§93*b*; WOC 1990:§8; LONG 1997:17-18). However, the word final case vowels were lost in Central Semitic at some point after the 14th century BCE.[7]

Second, the following conditioned sound changes occurred during the course of Hebrew (BL 1962:§25*l-q*; JOÜON 1993:§17*e*; GARR 1985:46): syncopation of both glides and laryngeals in intervocalic position,[8] and anaptyxis between consonantal clusters.[9] Two unconditioned sound changes which occurred in Hebrew are also important for the following analysis: **â/ā > ō* (by the 10th century BCE)[10] and tonic lengthening, i.e., **á > ā*, **é/í > ē*, **ú/ó > ō*.[11] Finally, the following analysis depends on the observation of both syllable (+), morpheme (-), and word boundaries (#).[12]

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6 Cf. LIPIŃSKI 1997:§32.1 for the proposal of an original diptotic system, rather than the traditionally proposed triptotic system.

7 The case system is present and fully functional in Canaanite during the 14th century, as demonstrated by the Tell el-Amarna tablets (see RAINEY 1996a:161ff.)

8 Although syncopation of *w*, *y*, and *h* is a relatively early phenomenon in the history of Hebrew, it appears that it was in process during the 14th c. BCE (see RAINEY 1996 (1):23-24, 39, 108, 129, 148, 153; HESS 1993:186). See also LONG 1997:15; GARR 1985:52-54.

9 It is only logical that anaptyxis was conditioned by the loss of final case vowels which resulted in the phonologically undesirable consonantal clusters. However, the evidence supplied by the Greek transcriptions of the 3rd century CE (cf. SÁENZ-BADILLOS 1993:85), reflects both anaptyctic vowels as well as consonant clusters, thus suggesting that anaptyxis was not a consistent phonological feature until a relatively late point within the history of Hebrew (e.g. the Masoretic period).

10 The sound change **â/ā > ō* is often referred to as the 'Canaanite Shift' and it must have taken place very early; it appears to be in process within the Canaanite of the 14th century Amarna period (see RAINEY 1996a:48; also MOSCATI 1980:§8.74; LIPIŃSKI 1997:§21.12).

11 To illustrate tonic lengthening I have used macrons over the stress-lengthened vowels. However, macrons are also traditionally used over originally long vowels. Admittedly, this type of transcription may result in confusion between Hebrew *ō* (lengthened) and *ō* (<**ā*), and also between Hebrew *ā* (lengthened) and Proto-Semitic *ā*. In the present paper, *ā* will only represent stress lengthened vowels unless noted otherwise. On the other hand, *ō* will only represent an originally long vowel (<**â/ā*). In addition, I will represent both the *qameṣ-ḥatuf* and the stress lengthened *ḥolem* with *o* for clarity in the present argument (see the chart below), although it deviates from common practice.

Although the PS vowel system is reconstructed as three long and three short vowels (see first column in the chart below), the complete vowel system of Classical Hebrew is presumably: ə, a, ā, â, e, ē, ê, i,ī, î, o, ō, ô, u, ū, û. The chart below illustrates the relationships of the simple vowels within Classical Hebrew (to be distinguished from the qualitative vowel system of the Tiberian Masoretic Text):

PS Vowels	Classical Hebrew vowels			
	Long	Lengthened Short	Short	Reduced Short
*/a/, */ā/	(> ō)	ā ←	→ a ←	→ e, a
*/i/, */ī/	ī	ē ←	→ e,i ←	→ e, e
*/u/, */ū/	ū	o ←	→ o,u ←	→ e, o

1.1. Nominal Evidence

Many nominal patterns in PS contained long vowels, usually in the first syllable (e.g., C$\bar{\text{v}}$CvC) or in the final syllable (e.g., C$\bar{\text{v}}$C, CvC$\bar{\text{v}}$C, CvCC$\bar{\text{v}}$C). Consider the following Hebrew realization of the underlying pattern CvC$\bar{\text{v}}$C with the masculine singular inflectional suffix (-Ø):[13]

1a) *g^{e}b̲īr* 'lord'

The feminine form is realized by two allomorphs, **-t*, **-at* (both common in Proto-Semitic and Classical Hebrew[14]), which are affixed to the stem before the original case vowel. Consider the following feminine forms:

2a) *g^{e}b̲īrā* 'lady'
2b) *g^{e}b̲éret̲* 'lady'
2c) *g^{e}b̲éret̲* 'lady of-' [bound form]

Examples (2b-c) demonstrate that when the allomorph **-t* is added to a noun pattern with a long vowel in the final syllable, the resulting form contains a short vowel in place of the long vowel. However, (2a) shows that when the allomorph **-at* (> *ā*) is added, the form retains the long vowel. One possible analysis would be to identify two underlying patterns for the feminine forms listed above, one with a short vowel and one with the same long vowel seen in the masculine form. However, I would like to propose a more economical analysis. Consider the underlying (i.e., Proto-Semitic) syllabic structure of the lexemes in the chart below. The first column contains the Proto-Semitic stem, the second contains the stem plus the appropriate feminine singular allomorph and the nominative case suffix *-u*, the third contains the redivided syllabic structure after affixation and the loss of final short vowels, and the final column contains the Hebrew data:

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12 Morpheme boundaries in this paper are a reflection of linear analysis. Hence, this excludes any type of marking for the Semitic discontinuous root morpheme.

13 In this paper, I will not indicate those consonants (*w*, *y*, *h* or *ʾ*) used to mark vowels, i.e. the so-called matres lectionis.

14 There is a morpho-syntactic difference in Classical Hebrew: on the one hand, **-t* is commonly used to mark both feminine singular free and bound words; **-at*, on the other hand, is in complementary distribution with the morpheme *-ā* (a diachronically later morpheme), the former marking the bound form, the latter marking the free form.

	Proto-Semitic	→[15]	→	**Hebrew**
3a)	*gibīr-	*gi+bīr-at-u	*gi+bī+rat#	*g^{e}b̲īrā́*
3b)	*gibīr-	*gi+bīr-t-u	*gi+birt#	*g^{e}b̲éret̲*
3c)	*šalāš-	*ša+lōš-at-u	*ša+lō+šat#	*š^{e}lōšā́*
3d)	*šalāš-	*ša+lōš-t-u	*ša+lušt#	*š^{e}lóšet̲*[16]
3e)	*ʾaddīr-	*ʾad+dīr-t-u	*ʾad+dirt#	*ʾaddéret̲*

This evidence[17] suggests the following analysis:

4) V [+long] > V [-long] /_ CC.[18]

In this way, the development of Hebrew *g^{e}bhéreth* 'lady' (Isa 47:7), 'lady of-' (Isa 47:5) is: **gibīr-t-u >*gi+bir+tu > *gi+birt# > *gibiret > g^{e}b̲éret̲*[19].
The value of this analysis lies in its ability to account for the feminine forms (see the chart above) as well as for the masculine form (**gibīr-u > *gi+bī+ru > g^{e}b̲īŕ*). Furthermore, we may propose a relative placement of this sound change within the historical development of Hebrew: it must have occurred after the loss of final short vowels, but before the addition of anaptyctic vowels (which open the final syllable). Now that we have analyzed the nominal evidence, the following question arises: Did the sound change given in (4) operate outside of nominal morphology? The following section treats the verbal evidence.

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15 I am including the Canaanite Shift (**ā > ō*) in this column.

16 This datum presents ambiguous evidence. According to the current analysis, **ā > ō* (Canaanite Shift) > *u* (reduction of long vowel) > *o* (tonic lengthening of short vowel).

17 More evidence lies in the forms of these nouns with pronominal suffixes: *g^{e}b̲irtī́* 'my mistress' (Gen 16:8); *g^{e}b̲irtā́h* 'her lady' (Gen 16:4); *g^{e}b̲irtḵ́* 'your mistress' (Gen 16:9); *š^{e}loštā́m* 'three of them' (Ezek 40:10); *š^{e}lošt^{e}k̲ém* 'three of you' (Num 12:4); *ʾaddartṓ* 'his mantle' (1 Kgs 19:13); *ʾaddartā́m* 'their glory' (Zec 11:3); cf. *n^{e}ḥoštī́* 'my bronze (fetters)' (Lam 3:7); *n^{e}ḥuštā́h* 'its copper' (Ezek 24:11).

18 In their historical grammar, Bauer and Leander note the shortening of long vowels in both nominal and verbal stems, "Lange Vokale in geschlossener Silbe wurden im Ursem. gekürzt...Drucklose, lange Vokale in offener Silbe wurden gekürzt, wenn sie einer betonten Länge vorangingen..." (BL 1962:§26; see BERGSTRÄSSER 1962:§23). While this observation accurately accounts for the Hebrew data, the evidence of Biblical Aramaic, e.g., *qā́mtā* 'you arose', should prohibit us from declaring this to be an "Ursemitischen" principle. In his *Student's Manual*, Long also observed this phenomenon, specifically in regard to *n^{e}ḥóšeth* 'bronze', "the Arabic cognate *nuḥās*, supports a historical development from **qutāl(+at?)* as follows: **nuḥāš(+at?) > *nuḥōš(+at?) > *nuḥuš+t...> *nuḥōšt > n^{e}ḥōšet*" (p. 28). Unfortunately, Long categorizes this as an "obscure development" (p. 31).

19 Anticipatory assimilation of *i > e* and the reduction of propretonic short vowel in an open syllable.

1.2. Verbal Evidence

Consider the development of the causative (Hif'il) imperative (5a-c) and jussive (6a-c):

5a) **hašlīk-Ø*[20] *> *haš+lik# > hašlḗḵ* 'cast down!' (Ex 7:9)
5b) **hašlīk-ī > *haš+lī+kī+ > hašlīḵī* 'cast down! (f.s.)' (Jer 7:29)
5c) **hašlīk-ihū > *haš+lī+ki+hū+ > hašlīḵḗhū* 'cast it down!' (Ex 4:3)

The 2ms imperative (5a) in PS is a verbal form without a final vowel, and therefore ends in the appropriate sequence (-C#) for the long vowel to shorten. Forms in Classical Hebrew with some type of sufformative (e.g., inflectional suffixes), such as both (5b) and (5c), do not fulfill the environment specified by rule (4); therefore, the long vowel is preserved.

6a) **yahangīd-Ø > *yan+gid#*[21] *> yaggéḏ* 'let him report' (Judg 14:5)
6b) **yahangīd-ū > *yan+gī+dū# > yaggīḏū* 'let them report' (1 Sam 27:11)
6c) **yahangīd-ah > *yan+gī+dah# > yaggīḏā́h* 'let him report it' (Jer 9:11)

The jussive examples (6a-c) also show the long vowel preserved in open syllables but reduced in a closed syllable that is word final. At this point the verbal evidence supports the following modification to the rule given in (4):

7) V [+long] > V [-long] /_ C{C}
{#}

The next test for this analysis lies with the morphologically complex IIwy verb.

2. The IIwy Verb

Because the Hebrew IIwy verb has a complex internal structure, most Hebrew grammars eschew in-depth morphological analysis and simply list the various forms. Depending on the aim of the grammar, this may be justifiable solution; the IIwy verbs are difficult to explain in brief. Certainly some grammars do set out to explain the internal structure of any given Hebrew verb; all the more surprising, then, is that I have yet to uncover any treatment which explicitly connects the morphological structure of these weak roots with the sound change isolated above.[22]
Throughout the paradigm of the IIwy verb, the glide either syncopates when it is in an intervocalic position or assimilates to and contracts with an adjacent vowel,

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20 Regardless of the origin or development of the second/theme vowel in the causative paradigm, the Classical Hebrew data, often marked with a *y* mater lectionis, show that the stem contains the long vowel *ī*.

21 Syncopation of intervocalic *h* (see GARR 1985:56-57) and loss of final short vowel.

22 Aristar (1979) mentions this same principle in passing (p. 219); however, he (like Long, see below footnote n. 33) makes no mention of the application of the rule to nominal morphology. Furthermore, he limits it to the final form of the prefix verb form by proposing a completely different analysis for the internal structure of the IIwy verb: he argues for an originally bi-radical root and the existence of the mid-vowels *e* and *o* in Proto-Semitic.

resulting in a complex long vowel. These sound changes explain how a three-consonant root results in a two-consonant form such as *qâm* 'he stood'. However, syncopation and contraction do not provide a complete understanding of the IIwy verb. They do not explain why there is an alternation in the vowel length between certain forms, e.g., 3ms *qâm* 'he stood', but 2ms *qámtā* 'you stood'. Nor do they explain why this alternation takes place in Hebrew but not in a related Central Semitic language, Aramaic (cf. *qâm* 'he stood' and *qâmtā* 'you stood'). Finally, these sound changes have no bearing on the use of "linking" vowels between the root and the verbal inflectional suffix in some verbal forms. In order to address these questions, we must analyze the following data from the roots {q-w-m} 'to stand', {n-w-p} 'to wave', and {š-w-b} 'to return', particularly in light of the rule given above in (7):

8a) **qawam-ta* > **qaam+ta* > **qâm+ta* > *qámtā* 'you stood' (2 Sam 12:21)[23]
8b) **hinwip-ta* > **hin+yip+ta*[24] > **hi+nîp+ta* > **hi+nip+ta* > *hēnáptā*[25] 'you waved' (Ex 20:25)
8c) **tašwub-na* > **ta+šûb+na* > **ta+šub+na* > *tāšóḇnā* 'you/they (f.p.) will return' (Ezek 16:55)

When the consonantal sufformatives for the 2ms suffix verbs (8a-b) and the 2/3fp prefix (8c) verb are added, the long vowels are followed by the sequence of -CC, with the result of vowel reduction.[26]

In contrast to (8c) above, examples (9a-b) witness the addition of a linking vowel (*ō* and *ê* respectively), which results in the preservation of the long vowel: *î* in (9a); *û* in (9b).[27]

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23 Cf. *qámtī* 'I stood', *qamtém* 'you stood (mp)', *qámnū* 'we stood'. Pausal forms (in which the accent is pulled back to the penultima) present the stress lengthened *ā*, though this is likely not a realization of the historically long vowel: *mā́ṯnū* 'we are dead'; *nā́ḥtī* 'I rested'; *sā́ḵtī* 'I anointed'; *sā́rtī* 'I departed'; *qā́mtī* 'I arose'; *śā́mtī* 'I placed'.

24 Near anticipatory assimilation of the glide, i.e. the [+back] glide assimilates to the following, adjacent [-back] vowel.

25 Philippi's Law: short *i* in a stressed, closed syllable > *a*.

26 There are sixty-two suffix verb examples (other than the ones listed in the text above) which exhibit long vowel reduction: הֲבֵאתָ, הֲבֵאתִי (הֲבֵאתוֹ, הֲבֵאתָהּ, הֲבֵאתָנוּ, הֲבֵאתֶם), בַּנְתָּה, חָלִיתִי, חָלְנוּ, הֶטֵבְנוּ, הֲכַבְנוּ, הֲטָלְתִּי, מַתִּי, מַתָּה, מַתְנוּ, הֲמִתִּי (הֲמִתִּיהָ), הֲמִתָּה, הֲמִתֶּם, נָחְנוּ, הִנַּחְתִּי (הִנַּחְתִּיו), הִנַּחְתָּ, הִנַּחְתֶּם (הִנַּחְתּוֹ), נָסַעְתָּ, נָסְעָה, נָסְעוּ, נָסְתֶּם, נָפַתִּי, סָכְתָּ, סְרִתֶּם, פִּשַּׁטֶּם, צָמַתִּי, צָמְתוּ, צְמַתֶּם (צְמַתְנִי), צָרַתִּי, צָרְתָּ, רַבְתָּ, רַצְתָּ, שַׂמְתִּי, שַׂמְתָּ, שַׂמְתָּה, שַׂמְנוּ, שַׂמְתֶּם, שָׁבְתִּי, שָׁבְתָּ, שָׁבְנוּ, שָׁבְתֶּם, שְׁתִּי (שְׁתִּיהָ), שָׁתָה (שָׁתַנִי), תָּרְתִּי, תָּרְתֶּם. There are only three other examples of the prefix verb in the Hebrew Bible which exhibit this form: תָּאֹרְנָה, תָּגֹלְנָה, תָּשֹׁבְנָה.

27 There are fifty-two other examples (forty-six suffix verbs; six prefix verbs) which exhibit the addition of a linking vowel (and therefore also a long vowel): Suffix verb - הֲבִיאוֹתִיו (הֲבִיאוֹתִיךָ, הֲבִיאוֹתִיהוּ), הֲבִיאוֹתִים, הֲבִיאוֹתָנוּ (הֲבִיאוֹתָנִי, הֲבִיאוֹנוּם, הֲבִיאוֹתֶם, הֲבִישׁוֹתָ, הֲבִינוֹתֶם, בִּינוֹתִי, הֵטִיבוֹתָ, הַעִירוֹתָ, הַעִידוֹתִי, הַעִידוֹתָ, הַסִירוֹתִי, הַסִירוֹתָ, הַנִיחוֹתִי, הֲלִינוֹתֶם, הַנִיעוֹתִי, הַנִיפוֹתִי, הַסִירוֹתָ, הַכִינוֹנוּ, הַכִינוֹתָ, הַכִינוֹתִי, הֲרִימוֹתִי, רִיבוֹתָ, הַקִיצוֹתָ, הַקִיצוֹתִי, הַקִימוֹתִי, הַקִימוֹתִי, הַצִיקוֹתִי, הַפִיצוֹתֶם, הַפִיצוֹתִים, הַפִיצוֹתִיךָ (הַפִיצוֹתִי, הַעִירוֹתִיהוּ), הַרִיעוֹתֶם, הֲרִיקוֹתִי, הֲשִׁיבוֹתִי (הֲשִׁיבוֹתִים, הֲשִׁיבוֹתִיךָ), הֲשִׁיבוֹנוּ, הֲשִׁיבוֹתָ; Prefix verb - תְּבִיאֶינָה, תְּפוּצֶינָה, תְּעוּפֶינָה, תְּמִזְּהֶנָה, תְּמוּטֶינָה, תְּהִימֶנָה.
There are seventeen forms (sixteen suffix verbs; one prefix verb) in the text of the Hebrew Bible which appear to be exceptions to the present analysis: Suffix verb - הֲבִיאוֹתִיו (הֲבִיאוֹתִיךָ),

9a) **hinwip-tī* > **hin+yip+tī* > **hi+nîp+tī* > *h^{a}nîp̲ó́t̲ī* 'I waved' (Job 31:12)
9b) **tašwub-na* > **ta+šû̲b+na* > *t^{e}šû̲b̲ếnā* 'you/they (f.p.) will return' (Ezek 16:55)

Up to this point, the weak verbs forms presented have supported the rule specified above in (7). However, example (8a) allows us to specify the relative placement of the rule in (7): since the *â* did not change to *ō*, then **-awa* > *â* must have occurred after the Canaanite Shift (i.e. **â/ā* > *ō*).[28] Furthermore, the following data from other forms within the paradigm of the IIwy verb suggest that the rule in (7) must be modified yet again:

10a) **qawam-a* > **qa+wa+ma* > **qaa+ma*[29] > *qấm#*[30] 'he stood'[31]
10b) **yašwub-u* > *ya+šuu+bu* > *yā+šû̲b̲#*[32] 'he will return'

In (10a), the 3ms suffix verb, the *â* was preserved even though, after the final vowels were lost, it was followed by the sequence -C#. According to the present analysis, the *â* should have reduced. Likewise, in the 3ms prefix verb (10b) the retention of the *û* defies the rule stated in (7). With slight modification to the rule given in (4), though, all of the nominal and verbal forms presented can be explained:

11) V [+long] > V [-long] / _ C+

Rather than a sequence of either two consonants or one consonant at the end of the word, the rule given in (11) states that long vowels reduced in a closed syllable. There is a crucial qualification to this rule, though: the syllable in question is a *historically* closed syllable.[33] Let us reconsider the forms given above as in (10a-b), this time paying attention to syllable boundaries rather than word boundaries:

הַעִידוֹתָ, הֲקֵמוֹתָ (הֲקֵמוֹתוֹ), הֲקִמֹנוּ, הֲרֵמוֹתֶם, הֲרֵעוֹתֶם, הֲשִׁבוֹתָ (הֲשִׁבוֹתוֹ, הֲשִׁבוֹתָם, הֲשִׁיבוֹתֶם), הֲשִׁבוֹתֶם (הֲשִׁיבוֹתֶם); Prefix verb - תְּקִימֶנָּה. These forms are occasionally attributed to mistaken vocalizations which can be reconciled by slight changes in either the Tiberian consonantal text or vocalization (KAUTZSCH 1910:§72*k*; cf. JOÜON 1993:§83*b*, n. 3).

28 Cf. also the (originally long) *ā* in the participle: *qā́m* '(he was) rising' (<**qāmu* <**qāimu* <**qāwimu*); *qāmêhém* 'those who stand (against) them' (Ex 32.25; masculine plural construct [bound form] + 3 m.p. suffix; <**qāimayhim* <**qāwimayhim*).

29 Syncopation of intervocalic *w*. This could also be analyzed as the reduction of the triphthong **awa* to *â*.

30 Loss of all word-final short vowels (which included case vowels).

31 Cf. *qā́mā* 'she stood', *qā́mū* 'they stood'. The only unambiguous exception within the IIwy verb to the preservation of the long vowel in an open syllable is from the root {r-w-ᶜ}: *hērēᶜū* 'they shouted' (1 Sam. 17:20).

32 **wu* > *û*; loss of word final short vowel. Cf. *tāšû̲b̲* 'you will return', *tāšû̲b̲ī* 'you (f.s.) will return', *ʾāšû̲b̲* 'I will return', *yāšû̲b̲ū* 'they will return', *tāšû̲b̲ū* 'you (m.p.) will return', and *nāšû̲b̲* 'we will return'.

33 Long does note this principle in his discussion of the IIwy weak verb (1997:62f.); however, he does not appear to recognize its application to nominal morphology as well (cf. footnote n. 18 above). Furthermore, it should be noted that this is not a novel concept to those who have studied Arabic morphology (cf. WRIGHT 1898 §§25,151; MOSCATI 1980:§10.3; and ARISTAR 1979:211).

12a) **qawam-a* > **qa+wa+ma+* > **qaa+ma+* > *qâm+* 'he stood'
12b) **yašwub-u* > **ya+šuu+bu+* > *yā+šûḇ+* 'he will return'

An important implication of this analysis is that the rule given in (11) must be applied to pre-Classical Hebrew forms. If it applied to the Classical Hebrew realizations, then the long vowels in (12a-b) should have reduced.
In summary, this phonological rule must have operated after the Canaanite Shift, but before both the loss of the case vowels (which provided the necessary syllabic structure) and anaptyxis (which effectively destroyed the conditioning environment of closed syllables).
Many of the features of the Hebrew prefix verbal system have been introduced in the course of the this section. It will now be fruitful to step back and approach the prefix verb as a whole in order to demonstrate the explanatory value of the specified sound change: V [+long] > V [-long] / _ C+.

3. The Classical Hebrew Prefix Verb

The following reconstruction of the prefix verb is based upon comparative Arabic data (see MOSCATI 1980:131ff.; LIPIŃSKI 1997:§§38-39), internal Hebrew reconstruction, and the particularly important Canaanite evidence of Tell el-Amarna (RAINEY 1996b:220).[34] Rainey has proposed the schema outlined below for the prefix verbal system in the Canaanite of the Amarna letters:

	Indicative		**Injunctive**
Preterite	*yaqtul, -û*	Jussive[35]	*yaqtul, -û*
Imperfect	*yaqtulu, -ûna*	Volitive	*yaqtula, -û*
Energic	*yaqtulun(n)a*	Energic	*yaqtulan(n)a*

Using the IIwy verb with its revealing morphology (cf. JOÜON 1993:§117*c*), the following chart shows the relationship between the Canaanite and the Hebrew systems:

[34] Many will recognize the influence of A.F. Rainey's 1986 study. Valuable contributions were also made in the symposium responding to his article: RAINEY 1988; GREENSTEIN 1988; HUEHNERGARD 1988; and ZEVIT 1988.

[35] Huehnergard (1988) argues for one verbal form representing both the preterite and the jussive rather than two homophonous forms (p. 20).

	Canaanite → → **Hebrew**
Preterite:	**yašwub-Ø* > **ya+šûb+* > **ya+šúb+* > *yāšóḇ*[36] (Isa. 12:1)[37] / *wayyā́šoḇ (*Gen 22:19; cf. *yāšḗḇ,* Ps 90:3 [Hifᶜil])
Imperfect:	**yaqwum-u* > **ya+qû+mu+* > *yāqū́m* (Isa 40:8)
Energic:	**yaqwum-un(n)a* > **ya+qû+mun+* > *yeqûmún* (Deut 33:11)
Jussive:	**yašwub-Ø* > **ya+šûb+* > **ya+šúb+* > *yāšóḇ* (Num 25:4)
Volitive:	**yaḥwiš-a* > *yā+ḥî+šā+* > *yāḥîšā* (Isa 5:19 [Hifᶜil])
Energic:	**yaqwum-an(n)a* -- unattested

Considering the above data, we see that the short vowel in the Classical Hebrew preterite/jussive demonstrates the effect of the historically closed syllable upon the *û*. The imperfect and volitive forms support the corollary--open syllables allow the retention of long vowels. One further example is instructive:

> 13) **yašwub-ū* > **ya+šû+bū* > *yašū́ḇū* 'let them return' (1 Kgs 22:17), 'they will return' (Jer 22:27), 'they returned' (*imperfective*, Judg 2:19; *preterite*, 2 Sam 23:10)[38]

Example (13) demonstrates the length of the vowel underlying the Hebrew data and the resulting ambiguity of the Classical Hebrew realization when V [+long] > V [-long] / _ C+, does not apply (i.e. jussive, preterite, and imperfective have homophonous forms).

What is particularly relevant for the study of the prefix verbal system is what can now be said about forms other than the third masculine singular. In his grammar, Joüon states that the jussive *form* "cannot be seen" in many cases (114*g* n.1) and also that it does not appear with suffixation but is replaced by the indicative form (§46 *a*). However, this conclusion is misguided. In such cases, it is not that the morphological form identified as the jussive disappears or is replaced by a non-jussive form. Rather, the preterite/jussive forms *become* homophonic with the "long" prefix verb. For example, in 1 Sam 27:11 and Prov 4:25, the context makes it clear that the verbs *yaggīḏū́* and *yayšīrū* are semantically jussive since they are bracketed by imperatives. I would argue that they should also be *parsed* as jussives even though they no longer exhibit the "short" form. Furthermore, when suffixes are added to the preterite/jussive (e.g. the preterite *yarkīḇḗhū* in Deut 32:13), the "short" forms (i.e. **yarkḗḇ*) also "disappear"; or better, the final syllable of the verb is opened allowing the paradigmatic long vowel (of the Hifᶜil in this case) to be

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36 The realized form exhibits 'tonic lengthening' (see above in section I and footnote n. 11). Also cf. *tāšóḇ* 'let her/you (m.s.) return'.

37 Cf. *wattā́šoḇ* 'and she/you (m.s.) returned' and *wannā́šoḇ* 'and we returned'. The preterite with and without the conjunction *wa:* are identical in underlying form; the difference lies in the shift in word stress in preterite with the conjunction which results in the final closed unstressed syllable (a syllable type which may carry only a short vowel in Classical Hebrew).

38 Cf. *wayyāšūḇū* 'and they returned'.

preserved. Therefore, rather than drawing the conclusion that there is paradigm "mixing," we should allow for the possibility of a full jussive/preterite paradigm which happens to be homophonous with the imperfective paradigm in many of the forms. In these cases, morphology can no longer be used to disambiguate verbal forms; context and syntax are the best recourse.

4. Conclusion

The explanatory value of the rule V [+long] > V [-long] / _ C+ is at least fivefold. First, recognition that its application was limited to pre-Classical Hebrew (or possibly to 'Canaanite') explains why Aramaic (a non-Canaanite language) differs — it does not share this phonological innovation with Hebrew.[39] Second, it explains the retention of the long vowels in the IIwy verbs in particular verbal forms (i.e., those with historically open syllables). Third, the effect of this rule on the morphological structure of the prefix verbs suggests the possible existence of previously unidentified jussive/preterite prefix verbs in the biblical material. Fourth, the relative ordering of this change among other historical developments (Canaanite Shift, loss of case vowels, and anaptyxis) contributes to our understanding of history of the Hebrew language. Finally, by demonstrating the general nature of the rule V [+long] > V [-long] / _ C+ (i.e., it clearly operated in both nominal and verbal morphology), I have made a case for its inclusion in any grammar which introduces basic historical data and reconstructions.

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[39] An examination of even the rather small lexicon of Biblical Aramaic produces many examples of long vowels existing in closed syllables. However, it may be argued that it is Aramaic which is innovative and Hebrew which is conservative. Either way, the languages differ in this regard.

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Abstract:

The task of the present work is a sometimes overlooked phonological rule in Classical Hebrew: V [+long] > V [-long] / _ C+. This phonological rule is analyzed in relation to the status of long vowels in Classical Hebrew phonology, the internal structure of the middle-glide verb (IIwy verbs), and the structure and development of the prefix verbs. It was found that the explanatory value of the rule V [+long] > V [-long] / _ C+ is at least fivefold. First, recognition that its application was limited to pre-Classical Hebrew (or possibly to 'Canaanite') explains why Aramaic (a non-Canaanite language) differs — it does not share this phonological innovation with Hebrew. Second, it explains the retention of the long vowels in the IIwy verbs in particular verbal forms (i.e., those with historically open syllables). Third, the effect of this rule on the morphological structure of the prefix verbs suggests the possible existence of previously unidentified jussive/preterite prefix verbs in the biblical material. Fourth, the relative ordering of this change among other historical developments (Canaanite Shift, loss of case vowels, and anaptyxis) contributes to our understanding of history of the Hebrew language. Finally, by demonstrating the general nature of the rule V [+long] > V [-long] / _ C+ (i.e., it clearly operated in both nominal and verbal morphology), a case is made for its inclusion in any grammar which introduces basic historical data and reconstructions.

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