

**Recent developments in Semitic and Afroasiatic linguistics**  
**Five teaching modules at Addis Ababa University, March 10–14, 2014**

**4. Guttural phonology and the Hebrew forms *primae hēt***

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**1. Problems with a synchronic description of gutturals in Tiberian Hebrew and in modern Hebrew**

**(1) Intervocalic deletion of /ʔ/ and /h/ forms in Biblical Hebrew**

**Non-reduced**

**Reduced**

שְׂאֵרִית <i>šəʿērīt</i> 'rest of' (2 Chr 34:9)	שְׂרִית <i>šērīt</i> (1 Chr 12:39)
תְּאוֹמִים <i>təʿōmīm</i> 'twins' (Gen 38:27)	תּוֹמִים <i>tōmīm</i> (Gen 25:24)
לְהַגִּיד <i>lə-haggīd</i> 'to tell' (1 K 18:12)	לְגִיד <i>l-aggīd</i> (2 K 9:15)
לְהִרְאוֹת <i>lə-hērāʾōt</i> 'to be seen' (1 K 18:2)	לְרְאוֹת <i>l-ērāʾōt</i> (Ex 34:24)

**(2) Blocked reduction of a vowel historically preceded by a guttural**

<b>m.sg. Tib.</b>	<b>modern</b>	<b>m.pl. Tib.</b>	<b>modern</b>	<b>Gloss</b>
עֲשִׂיר <i>ʿāšīr</i>	<i>ašir</i>	עֲשִׂירִים <i>ʿāšīrīm</i>	<i>aširim</i>	'rich'
אָבֹד <i>ʾābūd</i>	<i>avud</i>	אָבֹדִים <i>ʾābūdīm</i>	<i>avudim</i>	'lost'
הָרוּג <i>hārūg</i>	<i>arug</i>	הָרוּגִים <i>hārūgīm</i>	<i>arugim</i>	'killed'

**2. Gutturals as a natural class**

**(3) The "gaháwa-syndrome" found in dialectal Arabic verb forms**

underlying:	/yáGC <sub>2</sub> iC <sub>2</sub> /	<i>yahdim</i> 'he serves'
post-guttural epenthesis:	yaGaC <sub>2</sub> iC <sub>3</sub>	<i>yahádım</i>
a-deletion:	yGáC <sub>2</sub> iC <sub>3</sub>	<i>yhádım</i>

**(4) Examples of the "gaháwa-syndrome" in nouns (*mediae gutturalis*)**

/naʿja/	→	<i>naʿája</i>	'ewe'
/ʾaḥmar/	→	<i>ʾahámar</i>	'red'
/ʾaḥḍar/	→	<i>ʾaháḍar</i>	'green'
/qahwa/	→	<i>gaháwa</i>	'coffee'
/baḡla/	→	<i>baḡála</i>	'female mule'

- (5) Epenthesis of a copied vowel

$\emptyset \rightarrow V / V$  [pharyngeal] \_\_\_]σ  
[- str]

- (6) Example surface forms of verbs
- primae*
- {א, ה, ח, ע}

Root	Non-past ("imperf.")	Infinitive	Gloss
אהב	יֶאֱהֵב <i>yə'əḥēb</i>	לְאֵהֵב <i>lə-'əḥōb</i>	'to love'
הפך	יֶהַפֵּךְ <i>yahăḥpōk</i>	לְהַפֵּךְ <i>la-hăḥpōk</i>	'to turn'
חלם	יֶחַלֵּם <i>yahălōm</i>	לְחַלֵּם <i>la-ḥălōm</i>	'to dream'
עמד	יַעֲמֵד <i>ya'ămōd</i>	לְעַמֵּד <i>la-'ămōd</i>	'to stand'

- (7) Synchronic derivation of surface verbs forms
- primae gutturalis*

underlying /yiGC<sub>2</sub>ōC<sub>3</sub>/  
 preguttural lowering yaGC<sub>2</sub>ōC<sub>3</sub>  
 post-guttural epenthesis yaGăC<sub>2</sub>ōC<sub>3</sub>  
 post-vocalic spirantisation yaGăC<sub>2</sub>ōC<sub>3</sub>  
 of C<sub>2</sub> (if C<sub>2</sub> ∈ {ב, ג, ד, כ, פ, ת})

### 3. The relevance of the sonority scale

- (8) Epenthesis in apocopated consecutive verb forms of the ה"ל type

**Root Falling sonority (C<sub>1</sub> → C<sub>2</sub>)**

שָׁבַ וַיִּשָּׁב *way-yišb* 'and he took captive' (Num 21:1)

שָׁתָ וַיִּשָּׂת *way-yēšt* 'and he drank' (Gen 9:21)

**Root Rising sonority (C<sub>1</sub> → C<sub>2</sub>)**

מָרָה וַתִּמָּר *wat-tēmer* 'and it [Jerusalem] was reluctant' (Ez 5:6)

גָּלָה וַיִּגְלֵל *way-yiḡel* 'and he uncovered' (2 K 17:23)

- (9) Epenthesis in Arabic C
- <sub>1</sub>
- vC
- <sub>2</sub>
- C
- <sub>3</sub>
- structures

**Falling sonority (syllable coda)**

/bard/ > [bard] 'cold'

/širk/ > [širk] 'disbelief'

/qalb/ > [ʔalb] 'heart'

**Rising sonority (syllable coda)**

/badr/ > [badir] 'full moon'

/šukr/ > [šukur] 'thanks'

/qabl/ > [ʔabil] 'before'

"A syllable contact A<sup>\$</sup>B is the more preferred, the less the Consonantal Strength of the offset A and the greater the Consonantal Strength of the onset B; more precisely – the greater the characteristic difference CS(B)–CS(A) between the Consonantal Strength of B and that of A." (Vennemann 1988: 40)

(10) Possible blocking of syncope in Akkadian C<sub>1</sub>vC<sub>2</sub>vC<sub>3</sub>(v)-structures

**Reduced form**

*nakru(m)* 'hostile'

*ublū* 'they (m.) brought'

**Non-reduced form**

*nakiru(m)*

*ubilū*

(11) Jussive forms in Chaha

**Rising sonority (C<sub>2</sub> → C<sub>3</sub>)**

*yägfär* 'let him release'

*yäk'βär* 'let him plant'

*yäft'am* 'let him block'

**Falling sonority (C<sub>2</sub> → C<sub>3</sub>)**

*yäsərt* 'let him cauterise'

*yätərx* 'let him make an incision'

*yägəmt'* 'let him chew off'

(12) A possible sonority scale for Tiberian Hebrew

Consonantal strength / Sonority		Consonantal strength / Sonority classes	Hebrew consonants	
↑ ↓	most sonorous (weakest consonantality)	0	low (open) vowels	NA
	0	mid vowels	NA	
	1	high (close) vowels / glides	י ו	
	2	central liquids ( <i>r</i> -sounds)	ר	
	3	lateral liquids ( <i>l</i> -sounds)	ל	
	4	nasals	מ נ	
	5	voiced fricatives	ז ב ג ד	
	6	voiceless velarised fricative	צ	
	7	voiceless plain fricatives	ת ש פ	
	8	voiced plosives	ב ג ד	
least sonorous (strongest consonantality)	9	voiceless velarised plosive	ט	
	10	voiceless plosives	ת פ ק	

#### 4. Forms *primae gutturalis* in general

Gesenius 1910: 164–169 = §§ 62, 63; Bauer & Leander 1922: 347–353 = § 49; Blau 1993: 54f. = § 28; Joüon & Muraoka 2006: 167f. = § 68.

Joüon & Muraoka 2006: 81 (= § 22b): “ $\aleph$  and  $\beth$  readily take the ḥaṭef;  $\eta$  and  $\pi$  readily go without it. The following consonant may or may not favour the use of the ḥaṭef.”

Ginsberg 1929–1930: 131–133; LaSor 1956; DeCaen 2003.

#### (13) Percentage of *ḥaṭāḇ*-forms (ordered with decreasing $C_2$ -sonority)

$C_2$	Percentage of forms with anaptyxis			
	$C_1 = \aleph$	$C_1 = \eta$	$C_1 = \pi$	$C_1 = \beth$
א	–	–	100%	100%
י	–	0%	74%	–
ך	100%	100%	99%	96%
ל	100%	100%	92%	96%
מ	100%	100%	2%	98%
נ	100%	–	100%	100%
ז	90%	–	99%	86%
ה	100%	–	–	–
ח	100%	–	–	–
צ	100%	–	50%	61%
ק	93%	–	35%	–
שׁ	–	–	18%	99%
שׂ	6%	–	28%	86%
ב	100%	0%	37%	100%
ג	100%	0%	10%	100%
ד	25%	0%	0%	13%
ט	0%	–	97%	62%
ך	–	–	11%	50%
כ	100%	0%	0%	0%
פ	0%	58%	0%	0%
ת	100%	–	0%	0%

## 5. A closer look at the Hebrew forms *primae hēt*:

### (14) A cumulative ranking

C <sub>2</sub>	Percentage of forms with anaptyxis
ג, ה, ו, ז, ט, י, כ, ל	100%
מ, נ, ס, ע, פ, צ, ק, ר	96-99%
ש	91-95%
ת	71-75%
ך	46-50%
ץ	31-35%
שׁ	26-30%
שׂ	16-20%
ק	11-15%
ח	1-5%
ף, פּ, כּ, דּ, גּ, בּ	0%

### (15) Percentage of contact anaptyxis depending on the status of C<sub>3</sub>

C <sub>2</sub>	Percentage for III-strong verbs	Percentage for III-weak verbs
ג	100%	100%
ז	99%	100%
ט	50%	97%
ו	99%	100%
ל	100%	56%
צ	0%	100%
ד	0%	73%
שׁ	13%	67%
ב	61%	0%
פ	0%	0%
ת	0%	0%

(16) Forms with and without epenthetic *hăṭāp̄* (ordered with decreasing C<sub>2</sub>-sonority)

Root	Imperfect	Infinitive	Gloss
חור	יְחַוְרוּ <i>yehṣwārū</i>		'to grow pale'
חיה	יְחַיֶּה <i>yihyē</i>		'to live'
חרך	יְחַרֵּךְ <i>yahārōk</i>		'to fry (?)'
חלק	יְחַלֵּק <i>yahālōq</i>		'to distribute'
חמד	יְחַמֵּד <i>yahmōd</i>		'to desire'
חנט		לְחַנֵּט <i>la-hānōṭ</i>	'to embalm'
חבל	יְחַבֵּל <i>yahābōl</i>		'to impound'
חגר		לְחַגֵּר <i>la-hāgōr</i>	'to gird'
חזק	יְחַזֵּק <i>yehṣzaq</i>		'to be strong'
חצב		לְחַצֵּב <i>la-hṣōb</i>	'to split'
חסם	תְּחַסֵּם <i>taḥsōm</i>		'to tie up the mouth'
חשך	יְחַשֵּׁךְ <i>yahśōk</i>		'to hold back'
חשב	יְחַשֵּׁב <i>yahśōb</i>		'to think'
חבט	יְחַבֵּט <i>yahbōṭ</i>		'to beat off'
חגר	יְחַגֵּר <i>yahgōr</i>		'to gird'
חדל	יְחַדֵּל <i>yehḏal</i>		'to stop'
חטב		לְחַטֵּב <i>la-hṭōb</i>	'to cut wood'
חקר	יְחַקֵּר <i>yahqōr</i>		'to do research'
חכם	יְחַכֵּם <i>yehkam</i>		'to be prudent'
חפר		לְחַפֵּר <i>la-hpōr</i>	'to dig'
חתם	יְחַתֵּם <i>yahṭōm</i>		'to seal'

(17) Strong verbs vs. ה"ל and א"ל verbs with the same C<sub>2</sub>

Form without <i>hăṭāp̄</i>		Form with <i>hăṭāp̄</i>
לְחַטֵּב <i>la-hṭōb</i> (Dt 19:5)	vs.	לְחַטֵּב <i>la-hăṭō(ʿ)</i> (Hos 8:11)
יְחַסֵּר <i>yehṣar</i> (Dt 15:8)	vs.	יְחַסֵּר <i>yehṣē</i> (Ps 34:9)
תְּחַצֵּב <i>taḥṣōb</i> (Dt 8:9)	vs.	יְחַצֵּר <i>yehṣē</i> (Is 30:28)
תְּחַשֵּׁךְ <i>teḥśak</i> (Qoh 12:2)	vs.	תְּחַשֵּׁר <i>teḥṣē</i> (Is 6:11)

- (18) Distribution of *hātāp̄*-vowels in prefix-conjugation forms (pa<sup>ʿ</sup>al) and suffix-conjugation forms (nif<sup>ʿ</sup>al) ending in a vowel (ordered with decreasing C<sub>2</sub>-sonority)

Root	CvḥC <sub>2</sub> əC <sub>3</sub> v̄ / Cvḥ(ṽ)C <sub>2</sub> ṽC <sub>3</sub> v̄(n)	CvḥvC <sub>2</sub> C <sub>3</sub> v̄	Gloss
חור	יְחַרְרוּ <i>yehḥwārū</i> (P)		'they grow pale'
חרב	יְחַרְבוּ <i>yehḥrābū</i> (P)	יְחַרְבוּ <i>yehḥerbū</i>	'they are devastated'
		נְחַרְבוּ <i>nehḥerbū</i>	'they were massacred'
חרג	וַיְחַרְגוּ <i>way-yahḥrəḡū</i>		'and they came out frightened'
חרד	יְחַרְדוּ <i>yehḥrādū</i>	יְחַרְדוּ <i>yehḥerdū</i>	'they tremble'
	יְחַרְדוּ <i>yehḥrādū</i> (P)		
חרק		וַיְחַרְקוּ <i>way-yahḥarqū</i>	'and they gnashed [teeth]'
חלט	וַיְחַלְטוּ <i>way-yahḥlṭū</i>		'and they considered irrevocable'
חלם	יְחַלְמוּ <i>yahḥlāmū</i>		'they become strong'
חלם		וַיְחַלְמוּ <i>way-yahḥalmū</i>	'and they dreamt'
	וַיְחַלְמוּ <i>way-yahḥālómūn</i> (P)		'and they dreamt'
חלף	יְחַלְפוּ <i>yahḥlōpū</i> (P)		'they pass'
חלק	וַיְחַלְקוּ <i>way-yahḥləqū</i>		'and they dealt'
	יְחַלְקוּ <i>way-yahḥlōqū</i> (P)		'and they dealt'
חמל	יְחַמְלוּ <i>yahḥmólū</i> (P)		'they have pity'
	תְּחַמְלוּ <i>taḥmālū</i>		'you (pl.) have pity'
חמס	תְּחַמְסוּ <i>taḥmósū</i> (P)		'you (pl.) are violent'
חמר	יְחַמְרוּ <i>yehḥmərū</i>		'they ferment'
חמר	וַתְּחַמְרָה <i>wat-taḥmər-ā(h)</i>		'and she should pitch with resin'
חנט	וַיְחַנְטוּ <i>way-yahḥnṭū</i>	וַיְחַנְטוּ <i>way-yahḥantū</i>	'and they embalmed'
חנך	וַיְחַנְכוּ <i>way-yahḥnəkū</i>		'and they inaugurated'
חזק	יְחַזְקוּ <i>yehḥzəqū</i>	יְחַזְקוּ <i>yehḥəzqū</i>	'they are strong'

Root	CvḥC <sub>2</sub> əC <sub>3</sub> v̄ / Cvḥ(ṽ)C <sub>2</sub> ʾC <sub>3</sub> v̄(n)	CvḥvC <sub>2</sub> C <sub>3</sub> v̄	Gloss
חסר	יְחַסְרוּ <i>yahsərū</i>		'they are deficient'
חשך	תַּחֲשֹׁכִי <i>tahśəkī</i>		'you (f. sg.) hold back'
חשב	יְחַשְׁבוּ <i>yahšəbū</i>		'they think'
	יְחַשְׁבוּ <i>yahšōbū</i> (P)		'they think'
	יְחַשְׁבוּן <i>yahšōbūn</i> (P)		'they think'
	נְחַשְׁבוּ <i>neḥšəbū</i>		'they were counted'
חשך	יְחַשְׁכוּ <i>yehšəkū</i>		'they are dark'
חבא	נְחַבְאוּ <i>neḥbəʾū</i>		'they were hidden'
חבל	יְחַבְלוּ <i>yahbəlū</i>		'they impound'
	יְחַבְלוּ <i>yahbōlū</i> (P)		'they impound'
חבש	וַיְחַבְּשׁוּ <i>way-yahbəšū</i>		'and they bound'
	וַיְחַבְּשׁוּ <i>way-yahəbōšū</i> (P)		'and they bound'
	אֶחַבְּשֵׁה <i>ʾəḥbəš-ā(h)</i>		'let me bind'
חגר	יְחַגְרוּ <i>yahgərū</i>		'they gird'
חדל	וַיְחַדְּלוּ <i>way-yahḏəlū</i>		'and they stopped'
	אֶחַדְּלֵה <i>ʾahḏəl-ā(h)</i>		'let me stop'
חטא		יְחַטְּאוּ <i>yehəṭʾū</i>	'they sin'
חטב	יְחַטְּבוּ <i>yahṭəbū</i>		'they cut wood'
חקר	יְחַקְרוּ <i>yahqōrū</i> (P)		'they research'
	תַּחְקְרוּן <i>tahqərūn</i>		'you (pl.) research'
חכם	יְחַכְּמוּ <i>yehkāmū</i> (P)		'they are prudent'
	אֶחַכְּמֵה <i>ʾəḥkām-ā(h)</i> (P)		'let me be prudent'
חפז	נְחַפְּזוּ <i>neḥpāzū</i> (P)		'they were frightened'
חפץ	יְחַפְּצוּ <i>yahpəšū</i>		'they are pleased'
	יְחַפְּצוּ <i>yehpāšū</i> (P)		'they are pleased'
חפר	יְחַפְּרוּ <i>yahpərū</i>		'they dig'
חפר	יְחַפְּרוּ <i>yahpərū</i>		'they are ashamed'
	יְחַפְּרוּ <i>yehpārū</i> (P)		'they are ashamed'
חפש	יְחַפְּשׁוּ <i>yahpəšū</i>		'they investigate'
	נְחַפְּשׁוּ <i>neḥpəšū</i>		'they w. investigated'
חתר	יְחַתְּרוּ <i>yahṭərū</i>		'they break through'



(19) Anaptyctic Cv̄hvC<sub>2</sub>C<sub>3</sub>v̄ forms extrapolated from the previous list

חזק	יְחַזְקוּ	<i>yəḥəzqū</i>
חטא	יְחַטְאוּ	<i>yəḥəʔū</i>
חלם	וַיַּחְלְמוּ	<i>way-yəḥalmū</i>
חנט	וַיַּחְנְטוּ	<i>way-yəḥantū</i>
חרב	יְחַרְבוּ, נְחַרְבוּ	<i>yəḥərbū, nəḥərbū</i>
חדד	יְחַדְדוּ	<i>yəḥərdū</i>
חרק	וַיַּחְרְקוּ	<i>way-yəḥarqū</i>

(20) Minimal pairs contrasting *hăṭāṭāp*-less forms with forms carrying *hăṭāṭāp* due to prosodic influence (distancing of main accent, or strong pausal accent – in the last example)**Form without *hăṭāṭāp*****Form with *hăṭāṭāp***

יְחַקֵּר <i>yəḥqōr</i> (Job 13:9)	יְחַקְרֵזֶזֶת <i>yəḥqār-zō(ʔ)ṭ</i> (Ps 44:22)
יְחַשֵּׁב <i>yəḥšōb</i> (Is 10:7)	אֶל-יְחַשְׁב־לִי <i>ʔal-yəḥšāḥ-lī</i> (2 Sam 19:20)
יְחַשְׁבוּ <i>yəḥšōbū</i> (Is 13:17)	יְחַשְׁבוּן <i>yəḥšōbūn</i> (Ps 35:20)
נְחַמֵּד <i>nəḥmād</i> (Gen 2:9)	נְחַמְדִּים <i>nəḥmādīm</i> (Ps 19:11)
מַחְמֵד <i>maḥmād</i> (Hos 9:6)	מַחְמְדִּים <i>maḥmādīm</i> (Ct 5:16)
אֶחְסֵה <i>ʔəḥsē</i> (Ps 57:2)	יְחַסֵּה <i>yəḥsē</i> (Ps 34:9)

## (21) The paradigm of חיה (as far as attested)

**Form without *hăṭāṭāp* (paʿal) Form with *hăṭāṭāp* (hifʿil)**

3.sg.m.	יְחִי <i>yihyē</i> (Dt 8:3)	יְחַיֶּה <i>ḥəḥyā</i> (Jos 6:25)
2.sg.m.	תְּחִי <i>tihyē</i> (Gen 27:40)	יְחַיֶּיתָנּוּ <i>ḥəḥyitā-nū</i> (Gen 47:25)
2.sg.f.	תְּחִי <i>tihyī</i> (2 K 4:7)	—
1.sg.c.	אֶחְיֶה <i>ʔəhyē</i> (2 K 1:2)	יְחַיֶּיתִי <i>ḥəḥyētī</i> (Num 22:33)
3.pl.m.	יְחִי <i>yihyū</i> (Zech 1:5)	—
2.pl.m.	וְחַיֶּיתֶם <i>wi-ḥyitē</i> (Ez 37:5)	וְחַיֶּיתֶם <i>ḥəḥyitē</i> (Jos 2:13)
	תְּחִי <i>tihyū</i> (Jer 35:7)	—
	תְּחִי <i>tihyūn</i> (Dt 8:1)	—
2.pl.f.	תְּחַיֶּינָה <i>tihyēnā</i> (Ez 3:21)	—
1.pl.c.	נְחִי <i>nihyē</i> (Gen 43:8)	—

ipt. sg.m.	וְחַיָּה <i>we-hyē</i> (Prov 7:2)	וְחַיֵּי <i>haḥăyē-nī</i> (Is 38:16)
ipt. pl.m.	וְחַיִּי <i>wi-hyū</i> (Jer 27:12)	וְחַיֵּי <i>haḥăyū</i> (Num 31:18)
inf. cs.	לְחַיּוֹת <i>li-hyōt</i> (Ez 33:12)	לְחַיֵּי <i>lə-haḥăyōt</i> (Gen 6:20)
inf. abs.	—	וְחַיָּה <i>haḥăyē</i> (Jos 9:20)
noun	מְחַיָּה <i>miḥyā</i> (Ezra 9:8)	—
	'preservation of life'	

## 6. An optimality-theoretical analysis

### 6.1. An example (Bat-El 1996)

1. **SYLLCONT**: The onset of a syllable must be less sonorous than the last segment in the immediately preceding syllable, and the greater the slope in sonority the better.

2. **LINEARITY IO**: The sequence of the constituents must follow the unmarked syntactic order (here: noun-adjective).

#### (22) Constraint Tableau for (modern Hebrew) *xaydak* 'bacterium'

Candidates	SYLLCONT	LINEARITY IO
a. :) xaydak		
b. dakxay	* !	*

#### (23) Constraint Tableau for (modern Hebrew) *ramkol* 'loudspeaker'

Candidates	SYLLCONT	LINEARITY IO
a. kolram	* !	
b. :) ramkol		*

### 6.2. Analysis of selected opposing forms

1. **LOWERING IO-Pref** (the output correspondent of an input vowel in the prefix must be [-high]);

2. **DEP IO** (output segments must have input correspondents);

3a. \* $\text{ḥ}\check{\text{v}}^{\$}\text{C}_2[-\text{son}]/\text{m}$  (no syllable contact  $\text{ḥ}\check{\text{v}}^{\$}\text{C}_2[-\text{son}]/\{\text{m}\}$ ),

with  $\text{C}_2[-\text{son}] \in \{\check{\text{s}}, \text{s}, \text{b}, \text{g}, \text{d}, \text{q}, \text{d}, \text{k}, \text{p}, \text{t}\}$  and

3b. \* $\text{h}^{\$}\text{C}_2[+\text{son}]$  (no syllable contact  $\text{h}^{\$}\text{C}_2[+\text{son}]/\{t, \acute{s}, \text{ʃ}\}$  – with / $\text{h}$ / as coda of an *unstressed* syllable), with  $\text{C}_2[+\text{son}] \in \{w, y, l, n, z, r, \underline{b}, \bar{g}\}$ ;

4. \* $\text{h}^{\$}\text{C}_2\bar{v}\#$  (no  $\text{h}^{\$}\text{C}_2\bar{v}$  form –  $\text{C}_3 = w/y$  – without epenthetic  $\text{h}\acute{\text{a}}\bar{\text{t}}\bar{\text{a}}\bar{\text{p}}$ );

5a. \* $\text{Cv}\text{h}\text{C}_2\text{v}\text{C}_3\text{-}\acute{\text{o}}$  (no  $\text{Cv}\text{h}\text{C}_2\text{v}\text{C}_3$ -structure without epenthetic  $\text{h}\acute{\text{a}}\bar{\text{t}}\bar{\text{a}}\bar{\text{p}}$  before a clitic element with the feature [+main stress]);

5b. \* $\text{h}\check{v}^{\$}\text{C}_2\check{v}\#$  (no  $\text{h}\check{v}^{\$}\text{C}_2\check{v}$ -structure with an epenthetic  $\text{h}\acute{\text{a}}\bar{\text{t}}\bar{\text{a}}\bar{\text{p}}$  in case of strong pausal accent on the ultima of a form  $\text{h}^{\$}\text{C}_2\check{v}$  form –  $\text{C}_3 = w/y$ ).

(24) Constraint Tableau for *yahtōm* (Est 8:10)

Input: $\text{yiC}_1\text{C}_2\bar{\text{o}}\text{C}_3$	* $\text{Cv}\text{h}\text{C}_2\text{v}\text{C}_3\text{-}\acute{\text{o}}[+\text{main stress}]$	* $\text{h}^{\$}\text{C}_2[+\text{son}]$ (no unfortunate syllable contact)	DEP IO (no epenthesis) $\approx$ * $\text{h}\check{v}^{\$}\text{C}_2[-\text{son}]$	LOWERING IO-Pref (prefix vowel must be [-high])
a. : ) םתּוּ	NA			
b. םתּוּ	NA		*!	
c. םתּוּ	NA			*

(25) Constraint Tableau for *yahālōm* (Gen 28:12)

Input: $\text{yiC}_1\text{C}_2\bar{\text{o}}\text{C}_3$	* $\text{Cv}\text{h}\text{C}_2\text{v}\text{C}_3\text{-}\acute{\text{o}}[+\text{main stress}]$	* $\text{h}^{\$}\text{C}_2[+\text{son}]$ (no unfortunate syllable contact)	DEP IO (no epenthesis) $\approx$ * $\text{h}\check{v}^{\$}\text{C}_2[-\text{son}]$	LOWERING IO-Pref (prefix vowel must be [-high])
a. םלּוּ	NA	*!		
b. : ) םלּוּ	NA		*	
c. םלּוּ	NA	*!		*

Comment: form a. is preferred in (24) because of the strong onset of the second syllable; form b. is preferred in (25), as the other two forms feature an unfortunate syllable contact.

(26) Constraint Tableau for *yehsār* (Pr 31:11)

Input: yiC <sub>1</sub> C <sub>2</sub> āC <sub>3</sub>	*Cv̄hC <sub>2</sub> vC <sub>3</sub> -ó[+main stress]	*h̄ <sup>s</sup> C <sub>2</sub> v̄ (no C <sub>3</sub> = w/y form without epenthesis)	*h̄ <sup>s</sup> C <sub>2</sub> [+son] (no unfortu- nate syllable contact)	DEP IO (no epenthesis) ≈ *h̄ <sup>v</sup> <sup>s</sup> C <sub>2</sub> [-son]	LOWERING IO-Pref (prefix vowel must be [-high])
a. :) הָקָרְיִ	NA	NA			
b. קָרְיִ	NA	NA		* !	

(27) Constraint Tableau for *yehšē* (Ps 34:9)

Input: yiC <sub>1</sub> C <sub>2</sub> ē	*h̄ <sup>v</sup> <sup>s</sup> C <sub>2</sub> ṽ# [+strong pausal accent]	*h̄ <sup>s</sup> C <sub>2</sub> v̄ (no C <sub>3</sub> = w/y form without epenthesis)	*h̄ <sup>s</sup> C <sub>2</sub> [+son] (no unfortu- nate syllable contact)	DEP IO (no epenthesis) ≈ *h̄ <sup>v</sup> <sup>s</sup> C <sub>2</sub> [-son]	LOWERING IO-Pref (prefix vowel must be [-high])
a. הָקָרְיִ		* !			
b. :) הָקָרְיִ				*	

(28) Constraint Tableau for *ʾehsē* (Ps 57:2)

Input: ʾeC <sub>1</sub> C <sub>2</sub> ē	*h̄ <sup>v</sup> <sup>s</sup> C <sub>2</sub> ṽ# [+strong pausal accent]	*h̄ <sup>s</sup> C <sub>2</sub> v̄ (no C <sub>3</sub> = w/y form without epenthesis)	*h̄ <sup>s</sup> C <sub>2</sub> [+son] (no unfortu- nate syllable contact)	DEP IO (no epenthesis) ≈ *h̄ <sup>v</sup> <sup>s</sup> C <sub>2</sub> [-son]	LOWERING IO-Pref (prefix vowel must be [-high])
a. :) הָקָרְיִ		*			
b. קָרְיִ	* !			*	

Comment: form a. is preferred in (26) because of the strong onset of the second syllable; form b. is preferred in (27) as the mora count in a III-weak form stipulates an epenthetic *hātāp* vowel; form a. is preferred in (28) because of the strong pausal accent, in spite of the III-weak parameter.

(29) Constraint Tableau for *yahšōb* (Is 10:7)

Input: yiC <sub>1</sub> C <sub>2</sub> ōC <sub>3</sub>	*Cv <sub>h</sub> C <sub>2</sub> vC <sub>3</sub> <sup>-</sup> ó[+main stress]	*h <sup>s</sup> C <sub>2</sub> [+son] (no unfortu- nate syllable contact)	DEP IO (no epenthesis) ≈ *h <sup>v</sup> <sup>s</sup> C <sub>2</sub> [-son]	LOWERING IO-Pref (prefix vowel must be [-high])
a. :) יְחַשֵּׁב	NA			
b. יְחַשֵּׁב	NA		*!	

(30) Constraint Tableau for *yahšāb(-)* (Ps 40:18)

Input: yiC <sub>1</sub> C <sub>2</sub> oC <sub>3</sub>	*Cv <sub>h</sub> C <sub>2</sub> vC <sub>3</sub> <sup>-</sup> ó[+main stress]	*h <sup>s</sup> C <sub>2</sub> [+son] (no unfortu- nate syllable contact)	DEP IO (no epenthesis) ≈ *h <sup>v</sup> <sup>s</sup> C <sub>2</sub> [-son]	LOWERING IO-Pref (prefix vowel must be [-high])
a. יְחַשֵּׁב	*!			
b. :) יְחַשֵּׁב			*	

Comment: form a. is preferred in (29) because of the strong onset of the second syllable; form b. is preferred in (30) because of the rightward shift of the main accent.

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