radical A Journal of Phonology
ISSN 2592-656X

volume 3, 2023

Faust, Noam

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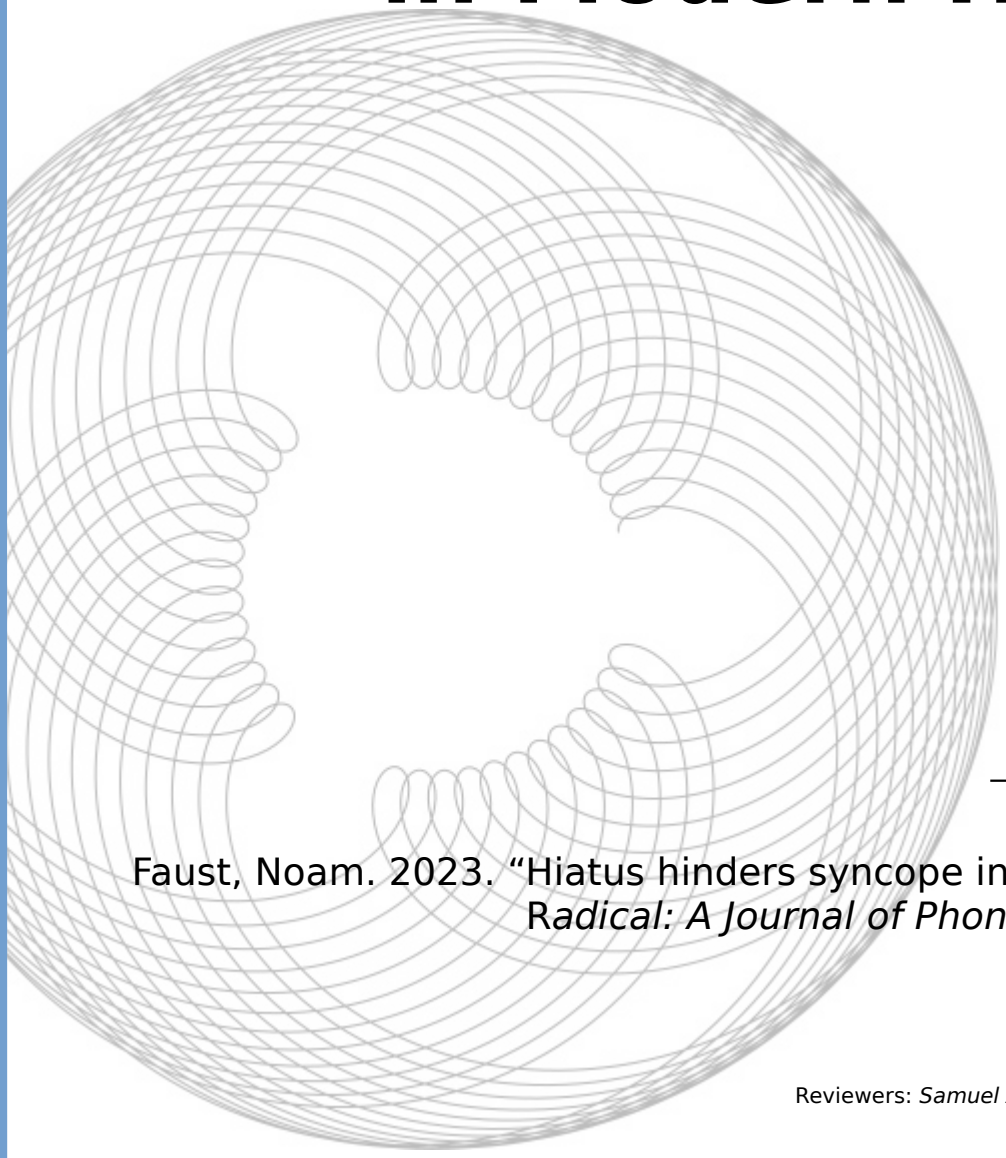


Faust, Noam. 2023. “Hiatus hinders syncope in Modern Hebrew”. *Radical: A Journal of Phonology*, 3, 203-237.

Editor: Shanti Ulfsbjorninn
Reviewers: *Samuel Anderson, Semra Baturay Meral*

PAPER

HIATUS HINDERS SYNCOPE IN MODERN HEBREW

FAUST, NOAM (UNIVERSITÉ PARIS 8, CNRS/SFL)

In Modern Hebrew, hiatus hinders the syncope of the vowel of the first syllable of the word in three common morphological scenarios. This paper presents experimental findings to that effect, and asks why hiatus hinders syncope. A formal answer is proposed in the framework of Strict CV (Lowenstamm 1996, Scheer 2004). The solution relies on the existence of an empty C-slot between the two vowels of the hiatus, and on the possibility for this C-slot to be governed through V-to-C government.

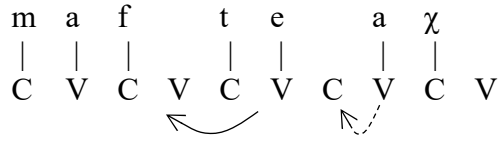
Empty Onset, Government, Hebrew, Hiatus, Strict CV

INTRODUCTION

In the autosegmental theory of Strict CV (Lowenstamm 1996, Scheer 2004), the skeletal tier is composed of the reiteration of CV units. Thus, the Modern Hebrew word *mafteaχ* 'key' is represented as in (1), with several empty skeletal positions. Most of the work in this framework is focused on V-to-V government, illustrated by the continuous arrow, which is regarded as the condition for a V-slot to remain silent (final empty V-slots can remain silent by parameter). Another, less studied aspect of the theory is V-to-C government, illustrated by the dashed arrow. While empty C-slots do

not require government systematically, according to Scheer & Ségéral (2008) the government potential of a nucleus is *always* realized; and thus, in hiatus configurations such as *ea* in (1), the empty C-slot is governed by the following V-slot. Note that a nucleus can govern either a preceding V-slot or a preceding C-slot; never both.

(1) Two targets of government in Strict CV



The existence of empty C-slots inside hiatuses is shared by several autosegmental theories of representation, such as Strict CV; in contrast, V-to-C government is unique to this theory. In this paper, I provide empirical and formal support for these ideas. The data come from Modern Hebrew, where hiatus seems to hinder syncope in initial syllables.

The paper is structured as follows. The next section presents data from three configurations in which syncope is blocked by hiatus: **i.** initial clusters, **ii.** the inflection of the accusative preposition, and **iii.** the inflection of the dative preposition. In section 2, I report on experimental results that support the empirical generalizations from section 1. Section 3 offers a formal analysis, devised with the tools of Strict CV mentioned above. I show that all of the cases at hand involve an empty, governed C-slot, which is crucial to the blocking of syncope. In cases **i** and **iii** above, this government relation is established in an initial cycle, and for syncope to occur, it has to be undone; but that, I propose, is ruled out by the following principle:

(2) Principle of intercyclic government
The government of an empty skeletal slot in cycle C cannot be undone in cycle C+1.

In case **ii** above, V-to-C government applies in the second cycle, and protects the V-slot from syncope.

1. HIATUS HINDERS SYNCOPE IN MODERN HEBREW

1.1 INITIAL CLUSTERS

Modern Hebrew is quite permissive with respect to the array of initial clusters it allows for. This is illustrated in (3) by verbs of the type QaTaL, thus called because of their 3MSG.PST form. The regular action nouns of such verbs are of the form QTiLa, with the first two elements of the root forming an initial cluster. Obstruent-obstruent (TT) clusters are allowed (2a), as are obstruent-sonorant ones (TR, 3b). But not all clusters are acceptable: for instance, sonorant-initial ones (RC) are broken up by the epenthetic [e] (3c).[1]

(3) Possible initial clusters in Modern Hebrew

		3MSG.PST	QTiLa			3MSG.PST	QTiLa
a. #TT	‘attack’	takaf	tkifa	c. *#RC	‘sip’	lagam	l**e**gima
	‘betray’	bagad	bgida		‘rebel’	maʁad	m**eʁ**ida
	‘jump’	kafaʦ	kfiʦa		‘purchase’	ʁaχaʃ	ʁ**e**χiʃa
	‘swim’	saχa	sχija		‘fall’	nafal	n**e**fila
b. #TR	‘build’	bana	bnija				
	‘wean’	gamal	gmila				
	‘hang’	tala	tlija				
	‘whistle’	ʃaʁak	ʃʁika				

Another case in point is that of verbs whose second radical remains unpronounced (4). Historically, and in the current orthography, these correspond to verbs with /ʔ, h, ʕ/ in the second radical position. But today, these sounds are unpronounced by most speakers. As shown below, intervocalically the syllable boundary left behind can also be pronounced [ʔ] (4a). After a consonant in non-initial position (4b), the syllabic boundary often disappears – but it, too, can be realized as [ʔ]. In contrast, in initial

1 See Asherov and Bat-El (2019) on initial clusters in MH.

clusters, neither the omission of the syllabic boundary nor the pronunciation of the initial cluster as #*Cʔ are grammatical: the action nouns of such verbs also exhibit the non-lexical, epenthetic [e] (4c).

(4) "Guttural"-medial verbs

		a. 3MSG.PST	b. 3MSG.FUT	c. QTiLa
*#Cʔ	'kick'	ba.at ~ baʔat	jivat ~ jivʔat	b**e**.ita ~ b**e**ʔita, *bita, *bʔita
	'aspire'	ʃa.af ~ ʃaʔaf	jiʃaf ~ jiʃʔaf	ʃ**e**.ifa ~ ʃ**e**ʔifa, *ʃifa, *ʃʔifa
	'wonder'	ta.a ~ taʔa	jite ~ jitʔe	t**e**.ija ~ t**e**ʔija, *tija, *tʔija
	'lock'	na.al ~ naʔal	jinal ~ jinʔal	n**e**.ila ~ n**e**ʔila, *nila, *nʔila

While the RC clusters in (3c) are ruled out by sonority considerations, the putative Cʔ clusters in (4) are not, especially in a language that does allow for sonority plateaus such as those in (3a). The appearance of epenthesis in (4) therefore requires explanation.

Although both the #RC and #Cʔ conditions are resolved through epenthesis, there is also a difference between the two. The epenthetic [e] that resolves /#RC/ can disappear in natural speech, especially if the preceding word ends in a vowel – as illustrated in (5a) for the action nouns of (3c) above when they are preceded by the definite marker *(h)a-*. In contrast, the epenthetic vowel that resolves /#C(ʔ)/ is not syncopatable, even after a vowel (5b).

(5) Post-vocalic syncope of epenthetic [e] in the #RC condition

a. *#RC	'sip'	a-l**e**gima ~ a-lgima
	'rebel'	a-m**e**ʁida ~ a-mʁisa
	'purchase'	a-ʁ**e**χiʃa ~ a-ʁχiʃa
	'fall'	a-n**e**fila ~ a-nfila
b. *#Cʔ	'kick'	a-b**e**.ita, *a-bita, *a-bʔita
	'aspire'	a-ʃ**e**.ifa, *a-ʃifa, *a-ʃʔifa
	'wonder'	a-t**e**.ija, *a-tija, *a-tʔija
	'lock'	a-n**e**.ila, *a-nila, *a-nʔila

Note again that the effect occurs after *any* vowel-final word, not only after proclitics like the definite article. Accordingly, in the analysis in section 4, it will be regarded below as a bi-cyclic effect.

To summarize, while an originally epenthetic vowel [e] can be syncopated, after vowel-final words, from what is originally a sonorant-initial cluster, the same epenthetic [e] cannot be syncopated if its insertion creates a surface hiatus, as in the case of items with a second historical guttural. Hiatus hinders syncope in initial clusters in Modern Hebrew.

1.2 INFLECTED PREPOSITIONS

Alongside the case of initial clusters, I know of two other cases in which hiatus seems to block syncope. Both involve the inflection of prepositions (prepositions in Modern Hebrew are inflected for person, gender and number; the term "inflected prepositions" is a traditional one.).

The first case concerns the accusative preposition *et*, whose inflectional stem is *ot-*. As shown in (6), the initial vowel of the inflected stem syncopates optionally throughout the paradigm. Intuitively, syncope only occurs when the inflected preposition is encliticized (inflected prepositions can also carry main stress, like regular words, under certain conditions).

(6) Optional syncope of /o/ in the inflection of the encliticized preposition =*ot* 'ACC'

1	SG	ot-i	~	t-i
	PL	ot-ánu	~	t-ánu
2	MSG	ot-χa	~	t-χa
	FSG	ot-aχ	~	t-aχ
	M/FPL	ot-χem/n	~	t-χem/n
3	MSG	ot-o	~	t-o
	FSG	ot-a	~	t-a
	M/FPL	ot-am/n	~	t-am/n

According to my intuition, this optional syncope occurs when the inflected preposition is cliticized to C-final hosts (7a). It sounds degraded in the hiatus configuration brought about when the clitic follows a V-final host (7b).[2]

(7) Hiatus hinders syncope in the cliticized inflection of the preposition *et* (stem *ot-*)

a.	natán=t-o ~ ot-o	'he gave it'
	give.PST.3MSG= ACC-3MSG	
	t-iten=t-o ~ ot-o	'she will give it'
	3FSG-give.FUT=ACC-3MSG	
b.	natn-ú=ot-o, *t-o	'they gave it'
	give.PST-1PL= ACC-3MSG	
	natn-á=ot-o, *t-o	'she gave it'
	give.PST-1PL=ACC-3MSG	

The second case concerns the inflection of the dative preposition *l(e)-*. This preposition exhibits two stems upon suffixation: *l(e)-* before singular suffixes and *la-* before plural ones. As shown in (8), both *e* and *a* syncopate optionally from the forms they occur in, unless they are part of a hiatus (3M/F.PL). The sentences in (9) illustrate.[3]

(8) Optional syncope of /a,e/ in the inflection of the encliticized preposition *le*

1	SG	l-i		
	PL	la-nu	~	l-nu[4]
2	MSG	le-χa	~	l-χa
	FSG	l-aχ		
	M/FPL	la-χem/n	~	l-χem
3	MSG	l-o		
	FSG	l-a		
	M/FPL	la-em/n	**NOT**	*l-em

2 It is possible that the position of stress in the base also affects the likelihood of syncope. The form *natá-tem=to* 'you(pl) gave it) sounds slightly more degraded than examples such as (7a).

3 After C-final stems, there is possibly further syncope of the [l], e.g *natán-χa* 'he gave to you(msg)'. Forms without the /l/ emerge also in the inflection of possessive *ʃel*, historically (and possibly synchronically) *ʃe+l* 'that+DAT': *ʃe-l-χa/χem* are often pronounced [ʃχaˌʃχem].

4 According to my intuition, syncope in this form occurs only when the base ends in a stressed vowel, e.g. *natnú=lnu* 'they gave to us', but *hevíu=lanu, *hevíu=lnu*. This is related to the fact that the inflected preposition also occurs as *lánu* when stressed or after unstressed syllables *hevíu=lánu*.

(9) Syncope in the enclticized inflection of *l(e)* (stem *le-* or *la-*)

a. natán-nu=l-χem/l-χa ‘we gave to you(mpl/msg)’
give.PST-1PL=DAT-2MPL/2MSG

b. natn-ú=l-χem/l-χa ‘they gave to you(mpl/msg)’
give.PST-3PL=DAT-2MPL/2MSG

As with the accusative preposition, syncope only occurs when the preposition is encliticized.

There are two differences and one crucial similarity between these two cases and the one involving initial clusters from the introduction. First, the items in this section are function words, not content words like those involving initial clusters. Second, the syncopated vowel in initial clusters is originally the epenthetic [e] of the language, whereas the function words examined in this subsection exhibit syncope of lexical vowels such as *a* and *o*. I will return to this difference in the analysis below; for the present purpose, it is not crucial – in all cases examined, hiatus hinders syncope.

The similarity between the three cases examined is important. In all three, syncope of the *first* vowel of an item was blocked: e.g. *b**e**ita*, *l**a**-em, **o**t-o*. Indeed, there is reason to think that hiatus does *not* block syncope when the targeted vowel is not the first of its item. In (10), the second vowel of the verbal stems of the QiTeL and QaTaL templates disappears upon suffixation even if the final element is a historical guttural (as its possible realization as [ʔ] attests). Assuming the forms in (10b,d) are /kine.-u/ and /baʁa.-a/, one must conclude that hiatus does not block syncope in these cases.

(10) Hiatus does *not* hinder syncope if the target of syncope is not initial

QiTeL.PST.3MSG	QiT_L.PST-3PL	
a. kines	kin_s-u	‘gather’
b. kine	kin_(ʔ)-u	‘envy’, *kine(ʔ)-u
QaTaL.PST.3MSG	QaT_L.PST-3FSG	
c. baʁaχ	baʁ_χ-a	‘escape’
d. baʁa	baʁ_(ʔ)-a	‘create’, *baʁa(ʔ)-a

Thus, two questions are raised: i. why does hiatus hinder syncope? and ii. why does hiatus hinder syncope only of the first vowel of an item?

Before I provide my answers to these questions, an intermission of sorts is called for. The facts reported above correspond to my intuitions as a native speaker, and have not been reported anywhere that I am aware of (with the exception of (10), which is common knowledge).[5] The next section therefore provides experimental corroboration to my intuition about initial clusters.

2 EXPERIMENTAL CORROBORATION

The experiment in this section concerns only the facts from initial clusters. I chose to avoid the inflected prepositions because, like many function words, their frequency enables them to exhibit idiosyncracies that may be attributed not to phonology, but to rote memorization. If the blocking effect I intuit is indeed not lexically-specific, it should be attested in content words (though a frequency effect is not excluded).

2.1 EXPERIMENT AND PARTICIPANTS

In order to check my intuitions, I asked a native-speaker, non-linguist friend to record short sentences (3-4 words). All of the sentences ended in a syncopated word, which I told them how to pronounce. In all of the sentences, the word preceding the syncopated word was vowel-final. These words were divided into the three conditions illustrated in

5 Bolozky (2019) does discuss syncope in rapid, free speech, but from a much wider perspective.

(11). In the RC condition, a word with an initial RC cluster was pronounced without the epenthetic vowel that it requires in isolation. In the condition I call Rʔ, a word which in isolation would be pronounced Re(ʔ)V_2, was pronounced RV_2. Finally, in the RVC condition, the syncopated vowel was a lexical vowel /i/, /a/ or /e(j)/ that, according to my intuition, it is ungrammatical to syncopate. I did not explain to the recorder what the experiment was about.[6]

(11) The different conditions of the experiment

	Condition	Citation form		Postvocalic syncopated
a.	RC	[n**e**fila]	'fall'	[nfila]
b.	Rʔ	[n**e**ul-im]	'locked-PL'	[nulim]
c.	RVC	[n**i**muk-im]	'excuse-PL'	[nmukim]

All of the target words began with a sonorant (hence the R in the condition names). There were 12 target words in each condition, 3 for each of the sonorants of MH /l, m, n, ʁ/ (=36 sentences in total). The average log frequency was similar across conditions (RC: M=10.9, SD= 1.50; Rʔ: M=11.5, SD=1.16 ; RVC: M=11.8, SD=1.17), as confirmed by a one-way ANOVA on the log frequency of each noun ($F(2,33)= 1.207$, $p > 0.3$), based on frequency scores from the SketchEngine HeTenTen corpus (Jakubíček et al. 2013, Kilgariff et al. 2014).[7] I also controlled for the size of the syncopated target – disyllabic or monosyllabic – such that there was the same number of items of a given size in each condition. See the appendix for the list of items and sentences.

The experiment ran online on the *pcibex* platform. Participants were recruited on social networks, and through emails to my friends and acquaintances. Participants were told this was an experiment for native speakers of Hebrew about spoken Hebrew. For each sentence, they were asked if the sentence "sounds alright". They had a choice

6 Note that in the Rʔ condition, only the "resyllabified" realization in (11b) was checked; [a=neulim] pronounced as [anʔulim] was not, as this realization sounded even less natural to me.

7 http://www.sketchengine.eu

between “OK” and “not OK”. They were able to replay the sentence as many times as they wished before they made a choice.[8]

If my intuitions are correct, speakers should respond “OK” much more in the RC condition than in the Rʔ condition. The latter should at any rate not fare better than the RVC condition, in which unsyncopatable vowels are absent.

2.2 RESULTS AND SHORT DISCUSSION

The table in (12) presents the results from the first 79 participants. Cells show the percentage of OK/notOK answers in each condition, with the actual number of answers in parentheses.[9]

(12) Experimental results

	OK	NotOK	Example
Rʔ	13.8% (131)	86.2% (817)	[a=neul-im] => [anulim] ‘DEF=locked-pl’
RVC	27.3% (259)	72.7% (689)	[a=nimuk-im] => [anmukim] ‘DEF=excuse-pl’
RC	63.6% (603)	36.4% (345)	[a=nefila] => [anfila] ‘DEF=fall’

The results confirm my intuitions. Syncope in the RC condition was accepted 63,6% of the time, a result which mirrors the variation that was reported in the introduction. Syncope in the Rʔ condition is very far behind, with only a 13,8% acceptance rate, a fact which I interpret as ungrammaticality. Indeed, the acceptance rate in this condition was even significantly lower than in the RVC condition (27,3%), which involved the syncope of vowels that it is clearly ungrammatical to syncopate. In other words, syncope of the epenthetic [e] in the Rʔ condition is even worse than syncope of an unsyncopatable, lexical vowel.

One may ask why people accepted syncopated forms in the Rʔ and RVC conditions at all. There are several factors that might have been at play, but here I would like to

8 I thank Michael Becker and Si Berrebi for helping me design the experiment and interpret the results, and my father Dov Faust for helping me with the script.

9 I did not find a significant difference in the overall number of times participants asked to hear the items of a given condition again: Rʔ=260, RVC=239, RC=217.

point out one, namely the design of the experiment. Several participants wrote to me reporting that they thought they were asked whether they *understand* the sentence easily (although the question was "does this sentence sound alright?"). While this understanding is not detrimental to the results – comprehension is plausibly hindered by ungrammatical syncope – it might have led participants who understood the sentence to accept it despite the ungrammatical syncope.

There are several other interesting aspects to the results, including the difference between the R? and RVC conditions – but this is not the place to discuss them. To conclude, as I intuited, syncopating the epenthetic [e] in initial clusters is possible in #RC clusters but ungrammatical in #C? clusters, where that vowel is the first vowel in a hiatus: hiatus hinders syncope.

3 ANALYSIS

The formal analysis in this section is conducted within Strict CV (Lowenstamm 1996, Scheer 2004). For further motivation and discussion of the tools used in the analysis see the ample body of literature in this approach.

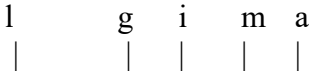
3.1 INITIAL CLUSTERS

Since Lowenstamm (1999), initial clusters in Strict CV are treated with the tool of the initial CV. Languages like Modern Hebrew, which break up some initial clusters, are said to do so in order for the V of the initial CV to be governed. Consider, for instance, the underlying representation of 'sip' in (13a), in which V_1 is empty. When phonology is applied, an initial CV unit is added (13b). Despite the fact that V_1 is underlyingly empty and potentially governed from V_2 to its right, it is also a "responsible nucleus" (Faust & Enguehard 2019), in that the nucleus to its left must be governed. For this reason, it is realized through [e]-epenthesis. The government potential of V_2 ends up

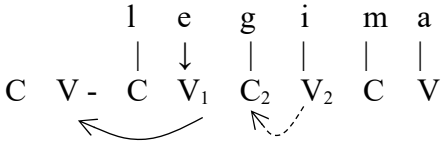
being applied to C_2 (dotted arrow; for V-to-C government, see Charette 1991, Pagliano 2003, Ulfsbjorninn 2021, Lahrouchi & Ulfsbjorninn, 2022).[10]

(13) Initial RC clusters – first cycle

a. /lgima/ 'sip'

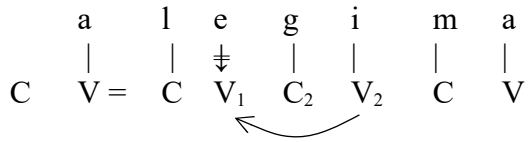


b. [legima]



The initial CV disappears upon the re-application of phonology to clitic+base sequences (14; Faust & Scheer 2015). A preceding contentful V-slot, such as that of the proclitic definite article /a=/ in (14), therefore deprives V_1 of its target, relieving it as it were of its responsibility. Since V_2 is contentful, its government potential is now transferred to V_1, which may be silenced.[11]

(14) Initial RC clusters – second cycle: [algima] 'the sip'



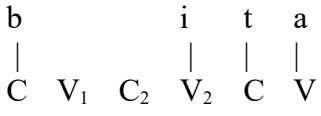
The Modern Hebrew reflex of the historical gutturals /ʔ,ʕ,h/ is examined in detail in Enguehard & Faust (2019) and Faust (2021). When followed by a full vowel, as in all the cases considered in the present paper, such historical gutturals correspond to an empty C-slot. This is represented in (15a) for *beita* 'kick': the second C-slot of the base is empty. Again, in (15b) V_1 is a responsible nucleus, and is therefore realized; and the government potential of V_2 is applied to the empty C_2.

10 Possible reasons that the nuclei in initial TT and TR clusters are *not* realized are discussed in Faust & Scheer (2015).

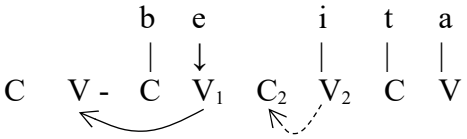
11 The susceptibility of [e] to syncope must somehow survive after the first cycle. I refrain here from making a proposal on how this can be formalized.

(15) Initial #C? clusters – first cycle

a. /b.ita/ 'kick'



b. [beita]

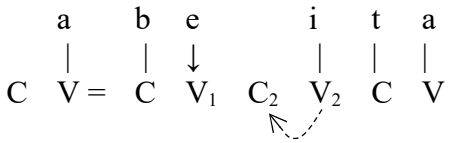


The only difference between (13b) and (15b) is the emptiness of C_2. As foreshadowed, I submit that this is the reason that there is no syncope of the [e] of [beita] in the second cycle. The formal principle is given again in (16).

(16) Principle of intercyclic government (repeated from 5)
The government of an empty skeletal slot in cycle C cannot be undone in cycle C+1.

Accordingly, as shown in (17), the government potential of V_2 *cannot* be transferred from C_2 to V_1. Therefore, even though V_1 is relieved of its responsibility, it cannot be syncopated, because it is not itself governed. Technically, then, it is not hiatus that blocks syncope in this cases, but the way hiatus is formalized in Strict CV and the V-to-C government that it entails.

(17) Initial #C? clusters – second cycle: [abeita] 'the kick'



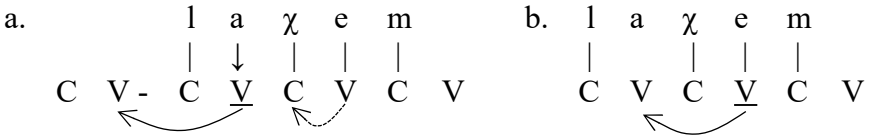
The principle of intercyclic government is at play in the two cliticized prepositions, too, as shown in the next subsection.

3.2 DATIVE CLITIC

One difference between the case of initial clusters on the one hand and those of inflected prepositions on the other is the quality of the vowel. In the latter, the vowel targeted by syncope is not *e,* the epenthetic vowel of the language: DAT /laχem/=> [=lχem], ACC /oto/ => [to]. Since Larsen (1998), syncopatable vowels that are not epenthetic are represented as floating. Floating segments are associated to their position only when association is called for, i.e. when the nucleus is responsible or ungoverned. Otherwise, they remain afloat and the nucleus remains unrealized.

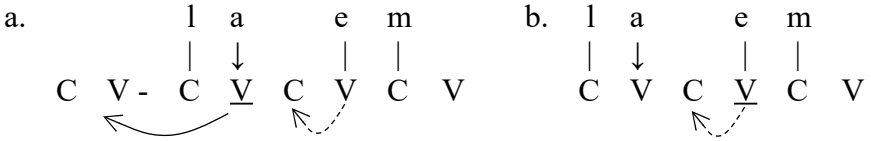
Consider now the representation of /la-χem/ 'DAT-3MPL' in (18). When not cliticized, the floating /a/ is associated to its nucleus even though it is governed, because it is responsible for the preceding nucleus (18a). When cliticized in context, the initial CV is gone, and so the nucleus is not responsible and the vowel is syncopated (178).

(18) Responsible floating /a/ associated in isolation, syncopated in context



As with initial clusters, the association of /a/ in the first cycle cannot be undone in the second if it is followed by an empty C (19b). In order for syncope to occur, /a/ would have to be governed, but this is not the case since a government relation had already been established in the first cycle (19a) between the following nucleus and the intervening empty C.

(19) Hiatus hinders syncope in /la-em/



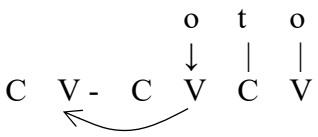
Thus, given V-to-C government, the same principle accounts for hiatus hindering syncope in initial clusters and in the dative clitic. The lack of syncope in the accusative paradigm presents a similar, though not identical logic.

3.3 ACCUSATIVE CLITICS

Unlike the syncope in the dative clitic, the one in the accusative paradigm always depends on its left context: [natan=oto] => [natanto] 'he gave it', [natnu=oto] => [natnuoto] 'they gave it'. In this case, the hiatus that blocks syncope is created in the second cycle, so the principle of intercyclic government is irrelevant. Still, as will now be shown, V-to-C government is again implicated in the blocking of syncope in the hiatus configuration.

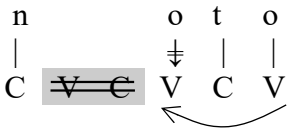
Consider the representation of /oto/ out of context in (20). The target of syncope, the vowel /o/, is represented as floating. As in the previous cases, this vowel must be associated in order to govern the preceding V-slot, i.e. that of the initial CV.

(20) Responsible floating /o/ associated in isolation



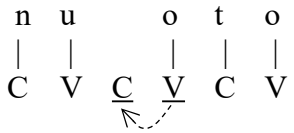
When the previous word ends in a consonant, as in (21), an empty VC sequence is created (in grey). Such sequences are deleted by assumption since Gussmann and Kaye (1993). This relieves the floating /o/ of its responsibility, thereby allowing its position to remain empty through government from the following nucleus.

(21) Empty VC deletion, floating initial /o/ remains afloat when cliticized to C-final base



In contrast, after V-final bases (22), there is no empty VC sequence and thus no VC deletion. But the C preceding the /o/ is still empty, and therefore /o/ is still a responsible nucleus. Again, for this reason, it is not syncopated.

(22) No empty VC deletion, floating initial /o/ associated when cliticized to V-final base



Comparing (22) and (20), one remarks that in (20), the C-slot preceding the /o/ was not governed; indeed, it has never been a principle of Strict CV that all empty C-slots must be governed in order to remain silent. Nevertheless, given this premise, the objection may be raised regarding (22) that governing the preceding C, since it is not obligatory, does not make the nucleus occupied by /o/ responsible. I have no answer to this objection, except that the evidence points to it being incorrect.

To summarize, in all three cases examined, the existence of an empty C-slot between the two vowels of the hiatus configuration blocks syncope from applying. In the first two cases, the C-slot absorbed the government potential of the syncope trigger, and retained it in a second cycle, thereby blocking the syncope of the *first* vowel of the hiatus; and in the third case, the C-slot protected the *second* vowel of a hiatus from being syncopated by keeping it responsible, even though its initial government target has been elided. Insofar as empty C-slots and V-to-C government are unique to Strict CV, the success of the analysis can be attributed to the use of this framework.

In the next subsection, I return to the case in which hiatus does *not* block syncope, and show that this case, too, is predicted according to Strict CV.

3.4 HIATUS DOES NOT BLOCK SYNCOPE IN NON-INITIAL POSITION

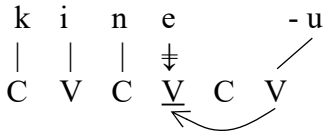
The data in (23) are repeated from (10) above. Assuming [kin(ʔ)u] is /kineʔ-u/ and [bar(ʔ)a] is /bara-a/, the general syncope of the lexical vowels /e/ and /a/ is not blocked in hiatus.[12]

(23) Hiatus does not hinder syncope in non-initial position

QiTeL.PST.3MSG	QiT_L.PST-3PL	
a. kines	kin_s-u	'gather'
b. kine	kin_(ʔ)-u	'envy', *kine(ʔ)-u
QaTaL.PST.3MSG	QaT_L.PST-3FSG	
c. baʁaχ	baʁ_χ-a	'escape'
d. baʁa	baʁ_(ʔ)-a	'create', *baʁa(ʔ)-a

Syncope is not blocked here because its target is not a responsible nucleus. As shown in (24), the underlined V-slot that would host the floating /e/ is governed. It is itself not a responsible nucleus in that neither the V nor the C preceding it are empty in any sense. Therefore, it *is* syncopated, unlike all other cases of hiatus we have examined.[13]

(24) Hiatus does not block syncope if the targeted position is not responsible



Recall now that such cases can also be pronounced [kinu]; this is expected if VC deletion – which is applicable here, because both V and C are unassociated – is regarded as optional in this stem-internal configuration.

12 That the vowel /e/ of the base is lexical, and not epenthetic, is evident from its stressedness.

13 As in the case of *oto* in isolation, the C-slot of the hiatus remains ungoverned, too. Also note that the issue of cycles is not raised in cases such as (23), since the suffixed forms are probably mono-cyclic. But even if they were bi-cyclic, it would not stop the syncope of the floating vowel. In the unsuffixed *kine* – which would be the first cycle – the C-slot of the final "guttural" is not governed, and so the principle of intercyclic government does not apply.

Having accounted for all of the relevant data, in the next section I take a step back to discuss an apparent alternative and conclude.

4 SHORT DISCUSSION OF AN APPARENT ALTERNATIVE, AND CONCLUSION

The previous section was a detailed, rather technical account of the blocking of syncope in hiatus. Some readers might object that it is too dependent on the theory it is formulated in. I'd like to consider an apparent alternative here, in the spirit of Optimality Theory.

The realization of /ti=pa.tu/ with syncope [tiptu] can be regarded as a violation of a constraint against the preservation of the contiguity in the input (McCarthy & Prince 1995): the adjacency of /p/ and /a/ in the input is lost in the output. We have seen, in cases like /natn-u=laχem/ => [nat.nul.χem], that this kind of contiguity violation does not pose a problem in Modern Hebrew. Why would /la.em/ not be resyllabified in the same environment? The answer can come from a more specific CONTIGUITY constraint, such as (25):

(25) Nucleus-to-Onset-Contiguity (CONTIGUITYNTOO)
A nucleus must have the same onset in the input and in the output.

The realization of /laχem/ as [lχem] does not violate CONTIGUITYNTOO, because the nucleus /a/ is altogether absent from the output. In contrast, a syncopated output [lem] for /laem/ does violate this constraint, since /e/, which in the input has a null onset, comes to have a full onset [l] in the output. The same is true for the cases of initial clusters, e.g. /a=nefila/ => [anfila] 'the falling' vs. /a=ne.ila/ => *[anila] 'the locking'. The same constraint would militate *for* syncope in /natan=.oto/ => [natanto] 'he gave it', since [natanoto] would violate that constraint by resyllabifying [n] as the onset of [o]. Finally, the constraint would correctly *not* be violated in cases where hiatus does *not* block syncope, e.g. /kine(ʔ)-u/ => [kin.(ʔ)u] 'they envied': again, the syncopated vowel

does not survive into the output, so the fact that its original onset is resyllabified is irrelevant.

There are nevertheless facts that such a constraint fails to explain. First, in the blocking of syncope in /natnu=oto/ => *[natnuto] 'they wrote it', the vowel /o/ would be syncopated, and therefore the constraint would be irrelevant in ruling out this form. Second, the optional additional syncope in /kine(ʔ)-u/ => [kin.(ʔ)u] => [kinu] does incur a violation of the constraint, since /u/ comes to have a new onset.

While these issues can arguably be resolved, and moreover have parallels in my own account, I will not pursue this path any further. I *would* nevertheless like to claim that the view just sketched out is in fact *not* an alternative to the Strict CV account in this paper; indeed, the two are completely compatible. The contiguity-based account does not attempt to explain why such contiguity is required – it simply assumes that it is. The strict CV account, with its formal relations between skeletal positions, explains exactly that: certain relations are created between positions in the hiatus configuration that protect the potential syncope target from deletion. Insofar as the Strict CV account motivates the contiguity constraint, it is also more explanatory than that constraint.

Without further ado, I move to conclude the paper. I began with novel evidence, based on my intuition, to the effect that certain hiatuses in Modern Hebrew hinder syncope. For one of the configurations discussed – that of initial clusters – I presented experimental evidence to back up my intuition. The formal analysis then relied heavily on two notions that are unique to Strict CV (and related frameworks): **i.** the existence of empty C-slots between the two vowels of a hiatus, and **ii.** V-to-C government. I proposed a principle that accounts for the facts using these two notions, and moreover makes falsifiable predictions; and the account was also shown to predict the non-blocking of syncope in some cases. Finally, I showed that an explanation based on the notion of contiguity does not really present an alternative to the Strict CV account, but rather assumes that something like that account is correct. Hopefully, the predictions

and tools of the account will be useful in the understanding of parallel cases in other languages.

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APPENDIX: EXPERIMENTAL MATERIAL

Condition	**Word (citation)**	**Word (pronounced)**	**OK**	**notOK**	**% OK**	**gloss**
RʔR	meuʁa	muʁa	28	51	35%	‘lair’
	neulim	nulim	15	64	19%	‘locked-MPL’
	leaka	laka	15	64	19%	‘band’
	meiʁot	miʁot	13	66	16%	‘fast-FPL’
	neum	num	12	67	15%	‘speech’
	meil	mil	10	69	13%	‘coat’
	leavot	lavot	10	69	13%	‘flame-PL’
	ʁeila	ʁila	7	72	9%	‘poinsonous-F’
	ʁei	ʁi	7	72	9%	‘mirror’
	ʁeaʃim	ʁaʃim	6	73	8%	‘sound-PL’
	neiga	niga	6	73	8%	‘driving’
	leom	lom	2	77	3%	‘natinality’
Type	**Word (citation)**	**Word (pronounced)**	**OK**	**notOK**	**% OK**	**gloss**
RC	nefila	nfila	69	10	87%	‘fall’
	leχiʦa	lχiʦa	69	10	87%	‘pressing’
	mesuχa	msuχa	69	10	87%	‘hurdle’
	ʁeχus	ʁχus	58	21	73%	‘property’
	ʁetuvot	ʁtuvot	53	26	67%	‘wet-FPL’
	meχiʁ	mχiʁ	53	26	67%	‘price’
	letaot	ltaot	51	28	65%	‘lizard-PL’
	ʁeguot	ʁguot	42	37	53%	‘calm-FPL’
	neχuʃim	nχuʃim	40	39	51%	‘determined-MPL’
	mesuʁot	msuʁot	39	40	49%	‘devoted-FPL’
	neχiʁ	nχiʁ	35	44	44%	‘nostril’
	levuʃ	lvuʃ	25	54	32%	‘costume’

Type	Word (citation)	Word (pronounced)	OK	notOK	% OK	gloss
RVC	ʁiʃona	ʁʃona	46	33	58%	‘first-F’
	ʁitsuf	ʁʦuf	43	36	54%	‘flooring’
	masoʁot	msoʁot	38	41	48%	‘trandition-FPL’
	nikuj	nkuj	36	43	46%	‘cleaning’
	lakoχa	lkoχa	35	44	44%	‘client-F’
	ʁikudim	ʁkudim	20	59	25%	‘dance-PL’
	mataʁa	mtaʁa	12	67	15%	‘goal’
	ʾlejʦan	ʾlʦan	8	71	10%	‘clown’
	limonim	lmonim	8	71	10%	‘lemons’
	matos	mtos	7	72	9%	‘plane’
	nimukim	nmukim	3	76	4%	‘reason-PL’
	naganit	nganit	3	76	4%	‘player-F’

Here are the sentences used in the experiment. They are given in Hebrew. In the Hebrew, the target word is always the last one; the corresponding word is underlined in the translation. The words in red are those that provided the preceding vocalic context (see transcription).

		#n tri/disyllabic
All of the gates were locked	aju n(e)ulim	כל השערים היו נעולים
We were absolutely determined	legamʁe n(e)χuʃim	היינו לגמרי נחושים
She had three guesses	ʃlolʃa n(i)mukim	יש לה שלושה נימוקים
Careful with the driving!	lan(e)iga	שים לב לנהיגה!
And then came the fall!	an(e)fila	ואז באה הנפילה!
His mother is a musician	ʃelo n(a)ganit	אמא שלו נגנית.
		#m tri/disyllabic
These are the fast ways	a-m(e)iʁot	אלה הדרכים המהירות
The three women were devoted	aju m(e)suʁot	שלושת הנשים היו מסורות
They have several traditions	kama m(a)soʁot	יש להם כמה מסורות
The bear stayed in the lair	ba-m(e)uʁa	הדוב נשאר במאורה
He jumped over the hurdle	a-m(e)suχa	הוא קפץ מעל המשוכה
Again you’ve missed the target	ta-m(a)taʁa	שוב פיספסת ת'מטרה!

		#l tri/disyllabic
Make him lower the flames immediately!	ta-l(e)avot	שינמיך מיד ת'להבות
The snake ate all of the lizards	a-l(e)taot	הנחש אכל את כל הלטאות
Pass me the lemons	a-l(i)monim	תעבירי לי ת'לימונים
He played in a band	be-l(e)aka	הוא ניגן בלהקה
It goes in by pressing	be-l(e)χitsa	זה נכנס בלחיצה
Suddenly a customer came in	niχnesa l(a)koχa	פתאום נכנסה לקוחה
		#ʁ tri/disyllabic
This is the poisonous toad	a-ʁ(e)ila	זאת הקרפדה הרעילה
The shirts were wet	aju ʁ(e)tuvot	החולצות היו רטובות
This is not the first time	a-ʁ(i)ʃona	זאת לא הפעם הראשונה
We hardly heard noises	ʃamʔu ʁ(e)aʃim	בקושי שמעו רעשים
We were completely calm	legamʁe ʁ(e)guʔot	היינו לגמרי רגועות
We dances several dances	kama ʁ(i)kudim	רקדנו כמה רקודים
		#m di/monosyllabic
I bough a coat from him	mimeno m(e)il	קניתי ממנו מעיל
Believe me, I paid the price	ta-m(e)χiʁ	תאמין לי שילמתי ת'מחיר
Who flew with you on the plane?	ba-m(a)tos	מי נסע איתך במטוס?
		#n di/monosyllabic
Who made the speech?	a-n(e)um	מי נשא את הנאום?
I got a piercing in the nostril	ba-n(e)χir	עשיתי פירסינג בנחיר
They started the cleaning	a-n(i)kuj	התחילו את הניקוי
		#l di/monosyllabic
They are not of the same nationality	oto l(e)om	הם לא אותו לאום
It's not exactly the same outfit	oto l(e)vuʃ	זה לא בדיוק אותו לבוש
Apparently he was a clown	aja l(ej)tsan[14]	כנראה שהוא היה ליצן
		#ʁ di/monosyllabic
I looked in the mirror yesterday	ba-ʁ(e)i	הסתכלתי אתמול בראי
They took all of the property he had	a-ʁ(e)χuʃ	לקחו לו את כל הרכוש
Tomorrow they'll finish the flooring	ta-ʁ(i)tsuf	מחר יגמרו ת'ריצוף

14 The omitted [ej] is sometimes pronounced [e]. It is not syncopatable.

DISCUSSION WITH SAMUEL ANDERSSON

(YALE UNIVERSITY)

Anderson, Samuel. 2023. discussion in: Faust, Noam (auth.) "Hiatus hinders syncope in Modern Hebrew". *Radical: A Journal of Phonology*, 3, 192-196.

COMMENTS

This paper discusses the phonology of vowel syncope in Modern Hebrew. Below I highlight some of the topics for discussion raised by the paper, focusing on the role of experiments in theoretical phonology on the one hand, and on the role of computation in Faust's analysis on the other. The discussion is divided into two sections, with one for each of these topics.

Experimental methodology. The fact that the paper combines introspective judgements with data from a judgement study is its principal empirical contribution. It is a very welcome one, since introspective judgements, especially by authors, may be subject to systematic biases as well as idiosyncrasies on the part of the person doing the judging. As the paper notes, the data reported have not previously been published in the literature on Hebrew, so collecting judgements through a study is especially useful here, as Faust says, "[i]n order to check my intuitions" (p. 175).

The field of phonology is theoretically very diverse, and even linguists who share the same overarching research goals (e.g. to explore the human capacity of phonological competence) often have widely different answers to the same question. Theoretical debates about whether some particular phonological pattern is attested are sometimes based on scant data, such as grammars where the source of the data is far from clear, and where perhaps only one or two illustrative examples are given. Even if such knowledge is available, it may easily be forgotten as theoretical phonologists sometimes

work on the basis of second-hand or third-hand sources. Weigel (2002) discusses the case of Yokuts, where many of the forms in Kuroda (1967) were made up on the basis of descriptive rules from Newman (1944) rather than coming from any speaker of the language.

Some approaches to phonology have been moving over the past several decades towards more data-oriented methodologies, with increased emphasis on the many factors that contribute to high-quality experimental research. These tackle the many difficult problems inherent in using judgement data, or phonetic data from experiments, or corpus data, in order to answer theoretical phonological questions (see Cohn and Renwick 2021 for a recent overview). Even for something as apparently simple as an acceptability judgement, a staple of phonological data collection, difficulties arise at every step: how they should be collected, how the sentences to be judged should be chosen or constructed, how the judgements should be interpreted, and so on (see Schütze 2016 for a book-length discussion which is useful to phonologists despite its focus on syntactic examples).

Given the central importance of having accurate data for any phonological project, it is welcome to see a paper which combines a formal theoretical analysis with collection of new data. Having access to better sources of data will lead to sounder generalizations and in turn to sounder theoretical work. If a phonologist finds that a particular framework they are working in cannot generate the patterns of syncope and blocking of syncope in Modern Hebrew, they will be able to respond by engaging critically with Faust's data. Since Faust reports the stimuli items used, the experimental design, and other details of the experiment, this task is made much easier. One can generate falsifiable hypotheses about methodological confounds or alternative explanations for the patterns in the data, and put these to the test empirically in future experiments.

This should not be taken to suggest that all phonologists need to be experts in experiment design or statistical analysis. I, for one, am certainly not an expert in either.

But by having the same people work at least in part on both data and theory, as Faust does in this paper, all phonologists stand to benefit from the results.

Questions about phonological computation. The theoretical analysis proposed in the paper depends on particular assumptions about cyclicity. The main one is the so-called Principle of intercyclic government, a constraint on which operations from earlier cycles can be undone by later cycles. Strict CV is a framework which attaches primary importance to representation. Given this, it is welcome to see an analysis which integrates this representational perspective with explicit assumptions about what the derivation looks like. It is of course the case that introducing computation into the picture raises additional interesting questions. Some of these are discussed below. These should not be thought of as critiques, but as points for further discussion and reflection.

A central concept around which the paper is orbiting is that of the Duke of York gambit, i.e. derivations where A → B → A (Pullum 1976). These have typically been assumed to have a marginal status in phonology, if they are at all possible. Some theories rule them out by design (see discussion in McCarthy 2003), while others allow them in specific contexts where a learner has reason to assume such a derivation (see Gleim 2019 on Duke of York derivations in Arapaho, analyzed in Stratal OT). The Principle of intercyclic government is a constraint militating against one type of Duke of York derivations: government from cycle C cannot be undone in cycle C+1. In other words, introducing government (A → B) cannot be immediately followed by undoing it (B → A). Given the importance of this type of derivation for blocking syncope of epenthetic vowels in Modern Hebrew according to the analysis in the paper, earlier literature on the Duke of York gambit may be relevant. This is especially the case for papers that discuss these issues as they come up in Modern Hebrew, such as Pariente (2017). Discussion of this question would give a clearer idea of where this paper sits relative to other positions on whether or not Duke of York derivations are possible in phonology generally.

The Principle of intercyclic government also raises interesting questions about the power of phonological constraints. The principle does not limit individual phonological operations, but is instead a type of meta-constraint on sequences of operations across cycles. Imposing constraints on derivations themselves, rather than individual operations within them, is reminiscent of Precedence constraints in Optimality Theory with Candidate Chains (OT-CC; McCarthy 2007). Such constraints may allow types of derivations which cannot be generated in other theories. In this context it would be interesting to know how powerful such intercyclic constraints can be. In OT-CC Precedence constraints hold over unbounded distances in candidate chains, but the current formulation of the Principle of intercyclic government limits itself to adjacent cycles C and C+1. Would it be possible, then, to introduce government in cycle C (say, the stem level) which is undone in cycle C+2 (say, the phrase level), perhaps subject to constraints on what phonological operations apply in cycle C+1 (say, the word level)?

A final point of discussion is found in footnote 11 on page 10, where Faust mentions that it is not entirely clear how the vowel [e] can remain susceptible to syncope across derivational cycles. It must be differentiated somehow from lexical vowels which cannot undergo syncope. I do not have an answer to this question, but it is possible that by making more explicit the power of derivational constraints which can hold intercyclically, as discussed in the previous paragraphs, a solution to this equally intercyclic problem may suggest itself.

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DISCUSSION WITH SEMRA BATURAY MERAL

(YILDIZ UNIVERSITY, INSTANBUL, TURKEY)

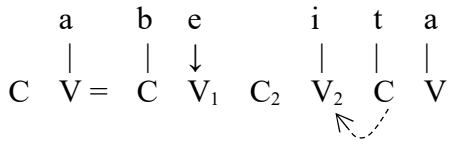
Baturay-Meral, Semra. 2023. discussion in: Faust, Noam (auth.) "Hiatus hinders syncope in Modern Hebrew". *Radical: A Journal of Phonology*, 3, 197-202.

COMMENTS

Brief Summary. In general terms, Faust's study discusses the scope of syncope in Modern Hebrew under the Strict CV account of Lowenstamm (1996) and Scheer (2004). The author points out that the epenthetic vowel breaking #RC clusters is syncopatable but the one in #Cʔ is not. Faust claims that hiatus and V-to-C government are the reasons for blocking the syncope of epenthetic [e] in the #Cʔ instances. The article provides the reader with a detailed discussion on the topic by supporting the theoretical claims with some experimental findings. The points which could be questioned in the article are given below in detail: (2) *V-to-C Government*, (3) *The Type of the Empty Onset*, (4) *Sonority*, (5) *No look back*.

V-to-C Government. Faust notes that the second (empty) C in *#Cʔ corresponds to one of the historical gutturals /ʔ, h, ʕ/, which exists in the current orthography. He claims that this empty C position (C_2) is governed by the following vowel (V_2) in phonology as given in his example (17) repeated in (1) below.

(1)



The author notes that "… the government potential of V2 *cannot* be transferred from C2 to V1. Therefore, even though V1 is relieved of its responsibility, it cannot be

syncopated, because it is not itself governed." (p.180). The first question regarding V-to-C government is why the empty C needs to be governed by a V. As is known, the inherent property of consonants is muteness (Dienes & Szigetvári 1999). This means that a consonant does not need to be licensed/governed to be silent. Licensing only supports the maintenance of the melodic material in the licensed position. Also, there is nothing to prevent an unlicensed C position from surfacing, but it is inclined to undergo lenition such as debuccalization and devoicing as a result of unlicensing as Dienes & Szigetvári (1999) claim. In fact, Faust also admits himself that the empty C-slots do not have to be governed in theoretical sense in order to remain silent in Strict CV approach (p.183). However, in his data analyses, V-to-C government applies as if it is a must. This leads a contradiction: it does not seem clear in the article when V-to-C government is a must and when not in theoretical sense. Some explanation or clarification on why we must govern the unpronounced C positions in Modern Hebrew may disambiguate this point.

The Type of the Empty Onset. The reader will recall that Faust puts some correlation between the empty C and V-to-C government. The author notes that this empty C (the second C in #Cʔ) corresponds to one of the historical gutturals /ʔ, h, ʕ/, which exists in the current orthography. What interests me regarding that governed empty C in Modern Hebrew is its structure, to which the author does not refer. Could the empty C/onset given by Faust have a structure similar to the one of a fully interpreted consonant? Could the failure of syncope be related to the structure of the empty onset? As is well known, there are two types of empty onsets referred to in Government Phonology literature (Charette 1991, Gussmann 2002, Charette 2006): (i) the empty onset without a skeletal point; and (ii) *the Pointed Empty Onset*. The empty onset without a skeletal point is a genuine empty onset, as opposed to *the Pointed Empty Onset* that is a reminiscent of a historical consonant. Accordingly, I wonder what kind of onsets the silent Cs are in Faust's study and how they are optionally realized. Do they have

floating gutturals? If yes, what makes them link to the relevant onset may be clarified or at least mentioned by the author for those who are especially curious about the constituent structure. Also, do we know more about these silent onsets: does a kind of lenition prevent these consonants from being pronounced? Is there a diachronic debuccalization process (a stop turns into a guttural and then the loss of the consonant appears as described by Harris (1994) and Honeybone (2008))? If there is such a process, could it be a possibility for those silent Cs to have a different structure similar to the pointed empty onset (or more structured one) given in Charette (1991)? I am curious about whether the impossibility of V-to-V government and blocking of syncope are really due to the V-to-C government or whether the structure of the empty C could also play a role in all these phenomena. Since the author refers to the existence of historical consonants under the silent C, the reader would definitely wonder about the type and structure of the onset. The answers of all these questions may show that the structure of the onset has nothing to do with the blocking of the syncope in Modern Hebrew but it deserves to be mentioned in the article, nevertheless.

Sonority. Faust argues that the absence of *#Cʔ is not due to sonority since even the initial obstruent-obstruent clusters are possible in Modern Hebrew. I think sonority may also be related to the discussion given in section (3) above, *The Type of the Empty Onset*. If it is the case that the silent C underwent any lenition in time (from obstruent to guttural (and even to nothing)), the onset might bear the traces of this historical changes as in the case of the pointed empty onset, which may tell us more about the sonority. If there is a historical lenition process, the "proto-sound" of the gutturals might be an impossible match for the first C in terms of sonority. Remember Scheer's claims (2019) that sonority is different (from melody – different in kind) and must be represented when (syllable) structure is built. Scheer (2019:139) argues that "sonority is projected at the syllabic level (where syllable structure lives, i.e. above skeletal slots in a regular autosegmental representation), but melody is not." If we consider the silent C in Modern

Hebrew in terms of its historical change and structure in the light of Scheer's claims on sonority, would it be possible for us to find an answer for the blocking of syncope in the language? Could it be a possibility that the projection of the unpronounced consonants still exists as before deletion or even before debuccalization of the consonant? What does the Strict CV approach the author argues to follow say about this issue? I think the historical change and the constituent structure of the silent C need to be discussed in the paper regarding sonority as well.

No look back. Faust notes that some initial clusters are broken with an (epenthetic) vowel in Modern Hebrew to govern the V of the initial CV as in his example (13b) repeated in (2) below.

(2)

a. /lgima/ 'sip'

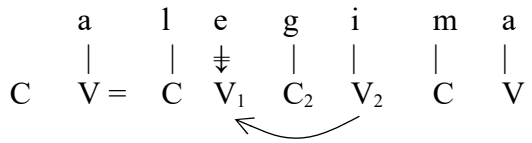
l		g	i	m	a
|		|	|	|	|
C	V_1	C_2	V_2	C	V

b. [legima]

		l	e	g	i	m	a
		|	↓	|	|	|	|
C	V -	C	V_1	C_2	V_2	C	V

Faust points out that an initial CV unit is added to the representation after phonology applies as in (13b). He argues that V_1 is a "responsible nucleus" for governing the empty nucleus to its left so it must be realized as [e]. Then the initial CV disappears when phonology reapplies to the clitic+base sequence. Faust states that "A preceding contentful V-slot, such as that of the proclitic definite article /a=/ in *(14)*, therefore deprives V_1 of its target, relieving it as it were of its responsibility. Since the fact that V_2 is contentful, its government potential is now transferred to V_1, which may be silenced." (p.179).

(3)



When we consider the Projection Principle, *governing relations are defined at the level of lexical representation and remain constant throughout a phonological derivation* (Kaye, Lowenstamm and Vergnaud 1990:221), Faust's analysis, which is based on Faust & Scheer (2015), seems to contradict the Projection Principle in that governing relations may change from one case to the other: V_1 is realized in (13b) since it is responsible for government of the subsequently added initial V but then in (14) (repeated in (3) above) it can be properly governed by V_2 (although it has a melody [e]) after the disappearance of the initial CV and appearance of the proclitic definite article. [e] has already been realized under V_1 since it is not properly governed. To change the government relations after all seems to be for deleting the vowel from the construction. I wonder how the Strict CV account approaches to the change of government relations and deletion of an already existing vowel from the structure. What does the Projection Principle mean for the analysis given in the article? The analysis also seems to be questionable in terms of no look back idea (Strict Cyclicity) of Kaye (1995) - *a property created through previous phonological computation cannot be undone by later computation* (Scheer 2011), which also exists in syntax since Chomsky's (1973) Strict Cycle Condition. How does the author interpret the CV insertion and (C)V deletion analyses in the study when he gets no look back mechanism into the consideration? What does it mean to add something when it is needed but to delete when it is not any more in terms of the Strict CV Approach? These points need clarification in the present paper as well.

Another question that remains is on the extraction of empty VC sequences from the structure. Faust claims that they are reduced as Gussmann & Kaye (1993) argues.

Reduction is problematic in terms of *the Projection Principle* since it also changes governing relations at the level of lexical representation. How could all these structure changing analyses be evaluated in the light of *the Projection Principle* and the Strict CV approach?

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