

# ON VOWEL ASSIMILATION AND DELETION IN CASUAL MODERN HEBREW

by

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## 1. *Introduction*

A simple procedure for measuring casualness of speech is to compute the degree of low level phonetic reduction and assimilation in a given speech style—see, for instance, Shockey (1974), Semiloff (1973, 1975), Dressler (1975), Zwicky (1972), Bolozky (1977, 1982). We accept Dressler's (1975) claim that such casual speech phenomena are essentially a function of decreased attention, which results in unstressed syllabic nuclei not fully achieving their target, i.e., becoming lax, reduced, assimilated, etc. With the increased (relative) attention paid in casual speech to syllables with primary stress in lexical items central to the utterance, the low prominence of other syllables makes them likely candidates for reduction. Rate of speech and casual style are separate parameters that may exist independently of each other (see Shockey, 1974, and Semiloff, 1975); with heightened attention, for instance (as in the case of a paper delivered under severe time restrictions), it is possible to increase one's rate of speech without failing to achieve vocalic targets. Nevertheless, a significant correlation can be observed between rate of speech and degree of casualness as manifest in degree of phonetic reduction (see Bolozky 1977, 1982). The role of increased rate of speech in reduction and assimilation may *also* be related to decreased attention to syllables of low prominence: Since the attention focused on stressed syllables maintains their relatively long duration, speeding up the general rate of speech in the casual register will primarily be achieved by reduction of the low troughs of prominence. In this paper we are dealing with reduction and assimilation associated with the casual register, bearing in mind that it may be correlated with increased rate of speech, but not necessarily.

In Modern Hebrew (henceforth MH), when there are two or more syllables of low prominence in a sequence, the least prominent would often be elided. The most likely vowels to be affected by casual reduction/deletion are 'minimal' derived vowels (typically *e* and to a lesser extent *i* and *a*), and of those, the first ones to undergo laxing and reduction are the frequent ones. 'Derived' status refers either to derivation by a previous phonological process, or to affixation. Of minimal vowels derived by process, the most likely candidates for casual reduction/deletion are those that have a purely phonetic function which is not required in the casual register. On the other hand, deletion is restricted by some surface structure constraints, as well as by the prosodic constraint against stress clash. As far as affixation is concerned, the casual register distinguishes between the affix vowels themselves, which are subject to reduction/deletion processes, and vowels in stems, which do not undergo the same processes—unless they have been derived by a previous phonological rule. In this respect, the 'derived' notion is somewhat different from the one which serves as a base for lexical phonology (Kiparsky, 1982; Mohanan, 1986; etc.), where no such distinction is made. The distinction may reflect a systematic difference in frequency. Frequent items are always the first to undergo casual processes, as is also evident from the early fossilization of some reduced casual variants and their virtual acceptance as new lexical items. Affixes are of course more frequent than stems, and affix vowels are more easily recoverable by the hearer, by virtue of greater affix frequency and affix predictability in context as a grammatical formative. For some speakers, it is not only the frequency of the lexical items affected by deletion that plays a role, but also the frequency of the context triggering deletion. Frequently occurring collocations facilitate reduction; *e*-deletion is more likely to occur in the neighborhood of clitics and clitic-like words. Apparently, frequent co-occurrence reinforces the attachment between such items and the ones containing the vowels to be reduced, which facilitates the transition between the two syllables flanking the vowel subject to deletion. The deletion process further bonds the lexical item and the attached clitic together, emphasizing their prosodic status as a single 'phonological word' by contraction across word boundary.

The likelihood of casual reduction and deletion is primarily, then, a function of the following factors: (a) the absence of stress prominence; (b) the number of unstressed syllables in a sequence; (c) rate of speech (not a necessary factor, though); (d) frequency and predictability in context, and the capacity for recoverability associated with it (including the contribution of frequency to 'collocability' of adjacent items); (e) the

acceptability of syllabic restructuring that would result from the loss of a vowel whose phonetic *raison d'être* no longer exists; and (f) some surface structure constraints, including prosodic ones.

In MH, *e* (and occasionally *i*) can be deleted at the level of the 'phonological', or 'prosodic', word (i.e., including clitics—see Selkirk 1984). At the intonational phrase or sentence level, any one of the five phonemes (*i, e, a, o, u*) of MH can be shown to be affected to some degree by casual speech processes. Thus, for instance, Semiloff (1973) describes a variety of rules applying to subsets of the above. (For brevity, the following illustrations of reduction are taken out of their sentential context): Laxing may affect any vowel except *u*, especially when unstressed (e.g., *bišvilá* 'for her' > [bišvilá], *axšáv* 'now' > [axšáv]); an unstressed non-round vowel may be neutralized to a vowel approaching a schwa (e.g., *avál* 'but' > [évál], *laavód im* 'to work with' > [laavód<sup>em</sup>]), which in turn may be deleted initially in high-frequency function words (e.g., *avál* 'but' > [évál] > [vál]); unstressed *i* and *e* may be devoiced and lost between a spirant and a consonant (e.g., *šiším* 'sixty' > [šiším] > [šším], *dérex* 'way; through' > [dér<sup>ex</sup>] > [dérx]; and so on. More likely to be affected, however, are unstressed non-round vowels in frequent words. Of those, function words are reduced first, and among function words pronouns are the most likely to delete (*ani* 'I' > *ni, an* or *n; atá* 'you m.f.' > *ta*, etc.). Next are lexical items; as expected, frequent ones are more easily reducible. Only at the very casual register can round vowels in regular lexical items be affected as well:

- (1) *má atá xošév al zè* 'What do you think of it?'  
 what you m.s. think on it  
 > *má ta xšév al zè*  
*éyfo ha-šutáf šelxà* 'Where is your partner?'  
 where the-partner your  
 > *éfo aštáf š<sup>ex</sup>xà* > *éfo aštáf šxa*

Although we are interested in any type of casual reduction or assimilation, we will focus below on casual processes that affect syllable structure, such as reduction that ends up in total deletion and complete assimilation. As noted above, it is particularly *e* that is affected by reduction to the point of deletion or total assimilation, since it is the 'minimal', or weakest, vowel of MH. Consequently, we will concentrate on two major casual processes affecting *e*: *e*-deletion, probably the commonest vowel deletion process in Hebrew casual speech, which elides a 'minimal' *e* that has either been derived by a previous process for

phonetic reasons, or that constitutes part of an affix; and (complete) *e*-assimilation, which affects an unstressed *e* that is immediately followed by another unstressed vowel.

It should be noted that MH *e* corresponds to three Biblical Hebrew (henceforth BH) segments: /ε/ (*seghol*), /e/ (*tsere*), and *schwa mobile*, the three non-round mid vowels of Tiberian Hebrew. Traditional Ashkenazi Hebrew pronunciation maintains the phoneme /e/, but in Modern Israeli Hebrew, which follows the Sephardi tradition, all three have merged into /ε/. The precise phonetic realization of this /ε/ is variable, ranging from [e] to [ɛ] and to a central vowel approaching a schwa (see, for instance, Chayen, 1973). Normally, the particular phonetic quality is environmentally determined, with schwa-like variants resulting from greater reduction in unstressed syllables. For most speakers, they seem to be in free variation, and there is little doubt that in systematic phonemic terms, we are dealing with a single phoneme. For typographic convenience, MH /ε/ is represented as *e*.

## 2. *e* in ante-pretonic position

In MH, a morphophonemic rule deletes *a* from an open syllable, followed by another open syllable, followed by the syllable carrying the main stress. Although defined in phonetic terms, it is restricted in application to non-verbal forms.

(2) MS. SG.	FM. SG.	MS. PL.	FM. PL.	GLOSS
katán	ktaná	ktaním	ktanót	small
gadól	gdolá	gdolím	gdolót	big
katúv	ktuvá	ktuvím	ktuvót	written
davár		dvarím		thing
	gadér		gderót	fence

A derived *e*, however, is found when the resulting cluster would violate the sonority hierarchy (see Rosen, 1956, 156–160; Ornan, 1973, 186–190; etc.) as in:

(3) MS. SG.	FM. SG.	MS. PL.	FM. PL.	GLOSS
yašár	yešará	yešarím	yešarót	straight
naxón	nexoná	nexoním	nexonót	correct
matún	metuná	metuním	metunót	moderate
ratúv	retuvá	retuvím	retuvót	wet
laván	levaná	levaním	levanót	white

or where deletion would have yielded a consonant cluster the second member of which is low:

(4) MS. SG.	FM. SG.	MS. PL.	FM. PL.	GLOSS
šaʔúl	šeʔulá	šeʔulím	šeʔulót	borrowed
gaʔón		geʔoním		genius
ca <sup>c</sup> ír	ce <sup>c</sup> irá	ce <sup>c</sup> írím	ce <sup>c</sup> írót	young
ta <sup>c</sup> ún	te <sup>c</sup> uná	te <sup>c</sup> uním	te <sup>c</sup> unót	loaded
sa <sup>c</sup> ír	se <sup>c</sup> irá	se <sup>c</sup> írím	se <sup>c</sup> írót	hairy
ša <sup>c</sup> ón		še <sup>c</sup> oním		watch
bahír	behirá	behírím	behírót	light
tahór	tehorá	tehorím	tehorót	pure

Consider the cases involving sonorant consonants first. As noted in Bolozky (1977, 1982), the derived vowel in *yešarím*, etc., may optionally be deleted even in moderately casual or moderately fast speech when a CV proclitic is appended. The now-unassociated sonorant onset is consequently reassigned to the coda of the initial syllable (e.g., ha.ye.ša.rím > ha.y.ša.rím > hay.ša.rím):

(5) hayešarím	'the straight (ms. pl.)'	>	hàyšarím
hanèxoná	'the correct (fm. sg.)'	>	hànxoná
lamètunót	'to the moderate (fm. pl.)'	>	làmtunót
harètuvím	'the wet (ms. sg.)'	>	hàrtuvím
lalèvaná	'to the white (fm. sg.)'	>	lâlvaná

Deletion is favored in such cases because the phonetic need for the *e* concerned is removed by resyllabification beyond the word level. The resulting strings conform to the sonority scale. Note that deletable *e* does not necessarily have to have been derived by an actual process; its non-basic nature can be suggested by similarity of canonical patterns, as in:

(6)	CCaC+a	GLOSS
i.	braxá	blessing
	šmamá	desert, wilderness
ii.	nedavá	donation, alms
	renaná	happy singing
	yelalá	wailing

The speaker knows that the (ii)-forms belong to the same canonical forms as the (i)-forms (i.e., CCaC+á), and that the function of the *e* distinguishing between them is essentially phonetic. Once the phonetic need has been removed by resyllabification, the speaker concludes that such *e* can be subject to casual deletion, just as other derived *e*'s are:

- (7) ani ló yaxól li-šmóa et ha-yèlal-ót ha-èle 'I cannot listen to  
 I not can to-hear acc. the-wail-pl. the-these  
 these wails' > an ló yaxól lišmóa tà ylalót aèle

For some speakers, the process is most commonly triggered by clitics. As explained above, the strong collocation of a clitic with the word containing the affected syllable, caused by frequent co-occurrence, facilitates the transition from the clitic to the following vowel once the 'minimal' one in between has been removed. A contracted, closely knit phonological word is formed in the process. Other words ending in a vowel may trigger deletion as well, but it depends on the degree of their 'collocability' with the following item. Thus, while for some speakers all three illustrations in (8) below are equally acceptable, for others (8iii) is marginal: They would accept (8i) because the numeral closely collocates with the following noun, as well as (8ii) (though perhaps less readily) as a noun-adjective collocation, but would consider (8iii) to be less acceptable than either (8i) or (8ii), since the verb and the lexical direct object do not collocate very well:

- (8) i. šlošá yeladím 'three children' > šlošáyladím  
 three children  
 ii. xulcá levaná 'a white shirt' > xulcálvaná  
 shirt white  
 iii. hem hikú yeladím ba-rexóv > ?hèm ikúyladím barxóv  
 they beat children in the-street

In Bolozky (1977, 1982) it was suggested that the motivation for casual *e* deletion is in contributing to a more regular stress pattern, in which strong and weak feet alternate rhythmically:

- (9) šlošá yeladím 'three children' > šlošáyladím  
 three children

This follows the general tendency in MH for mechanical rhythmic alternation, according to which secondary stress is assigned to every other syllable of a prosodic word in a linear right-to-left fashion, starting from the main stress (see Bolozky 1982 and Bolozky forthcoming). Sometimes, however, the stress pattern resulting from casual *e*-deletion achieves precisely the opposite effect, i.e., causes a regularly alternating stress pattern to be replaced by a less regular one. (Whether this occurs by de-stressing of subsidiary stress to prevent stress clash, or by subsidiary stress distribution—constrained by stress clash avoidance—is a separate question, addressed in Bolozky, forthcoming):

- (10) *ba-mèkom-ót ha-rèxok-ím* 'in the distant places'  
 in the-place-pl. the-distant-pl.

> *bàmkomót arxokím*

*hà-xulcá ha-levan-á* 'the white shirt' > *hàxulcá alvaná*  
 the-shirt the-white-fem.

It appears, then, that the role of secondary stress distribution in normal speech in determining casual *e*-deletion is either marginal or irrelevant. One plausible explanation is presented in Semiloff (1973), according to which *e*-deletion is caused by attraction of the onset of *e* to a preceding syllable carrying a higher degree of stress, which leaves the weak vowel 'stranded' and thus makes it a likely candidate for deletion. Semiloff's proposal indeed explains *šlošá yèladím* 'three children' > *šlošáyladím*, but may or may not account for cases in which the sonorant in question is preceded by a monosyllabic proclitic, as in *rainu et ha-yèladím* 'We saw the children' > *rainu tàyladím*. It will depend on how secondary stress is understood to be assigned. *tàyladím*, for instance, does end with secondary stress on *ta*; attraction to this secondary stress can explain why *e* is deleted. But there is no independent reason for shifting that secondary stress to *a* in *ayèladím* to start with; in fact, such a shift changes meaning, by bringing about contrastive focusing on the initial syllable. Secondary stress that is independent of intonational focus is essentially the manifestation of mechanical rhythmic alternation, and in our opinion is assigned to the *a* in *tàyladím* as a result of the loss of *e*. Unless one can account independently for the shift in secondary stress, the stress-attraction explanation would not suffice. We will assume, then, that *e* is deleted in order to reduce the number of unstressed syllables between the primary stress of the word concerned and that of an adjacent word (as in *šlo.šá ye.la.dím* 'three children' > *šlo.šáy.la.dím*, *ba.mè.ko.mót a.rè.xo.kím* 'in the distant places' > *bàm.ko.mót.ar.xo.kím*), so as to facilitate production at a register in which unstressed syllables are very low in prominence and rate of speech is often increased. This does not mean that MH casual speech is 'stress-timed' while formal speech is 'syllable-timed'. We agree with Dauer (1983) that the tendency for stress to recur regularly is a language-universal property, and that rhythmic grouping takes place even in languages which have been called syllable-timed. Perhaps the MH casual register is more 'stress based' than the formal register, and because of the relatively greater prominence of the primary stresses in the former, the unstressed syllables would tend to reduce more readily within a particular stress

group. Possibly Dauer (1983) also has the answer to why the 'minimal' vowels are the ones that are completely eliminated: She explains the deletion of the '*e muet*' in French as the realization of a tendency to re-establish the evenness of successive syllables by eliminating an *inherently* short syllable. The MH 'minimal' *e* has a similar status, and even if its deletion does not result in measurable evenness of successive syllables, it appears to have this effect conceptually.

It should also be noted that *e*-deletion is sifted through an output filter, to make sure that it does not result in a syllable structure that is more complex than CV(C), which constitutes the optimal MH syllable (see Semiloff, 1973). Thus, if the sonorant consonant is preceded by a consonantal coda, deletion is blocked:

- (11) xulcót levanót > \*xul.cótl.va.nót (\*xul.cót.lva.nót)  
 shirts white, f. pl.

Clearly, syllables like *\*cotl* or *\*lva* can be excluded on universal grounds (by a constraint against coda-final or onset-initial sonorant consonant being separated from the nucleus by a less sonorant consonant), but it will be shown below that the output constraint would be needed independently for other cases.

As noted above, *a* is reduced to *e* also in sequences involving a low consonant in second position. The phonetic realization of such sequences is quite different from those involving sonorants, though. In MH, the pharyngeal fricative (and for many speakers *h* as well) merges with the glottal stop, which in turn is only realized (optionally) in pretonic position. There are many methodological reasons for continuing to postulate low consonants in the underlying structure, as well as residual phonetic clues that facilitate perception of a low consonant even when it is not there: Rabin (1973), for instance, argues that there are differences in intonation that can be attributed to the loss of <sup>c</sup> and <sup>?</sup>, and Farrar and Hayon (1980) point to laryngealization and syllabication as perceptual cues for underlying glottals. But although native speakers often tend to perceive a glottal stop in a number of conditions, it is rarely there acoustically. The vowel sequences resulting from low consonant loss involve a variety of casual speech processes, including complete assimilation, merger, and possibly even shortening, depending on word frequency and degree of casualness, as in an illustration from Blanc (1957, p. 37), *šéšmeòt* 'six hundred' > *šéšm<sup>e</sup>òt* > *šéšm<sup>o</sup>òt* > *šéšmot*, and in:

- (12) šeoním 'watches' > šooním > šo:ním (> šoním)  
 ceirím 'young, masc. pl.' > ciirím > ci:rím (> cirím)  
 teuním 'loaded, masc. pl.' > tuuním > tu:ním (> tuním)



Our claim is that this type of reduction is *also* motivated by the need to decrease the number of unstressed nuclei between primary stresses, to facilitate casual production without overloading the inter-stress interval. Semiloff (1973) correctly points out that the CV output is an improvement in syllable structure from the original V (in CV+V), and introduces the preference for CV(C) as an explanation for the assimilation and merger (and shortening) processes. In our opinion, this is not the cause for reduction, but rather a filter on the output of casual processes. Furthermore, we are not fully convinced that V(C) are as marginal in MH as they were in BH; there is no clear evidence that MH indeed tries to eliminate them (see Bolozky, in preparation).

It is interesting to note here that certain deviations from the norm in BH could be attributed to casual reduction of a similar kind. Such deviations are normally assumed to constitute scribal errors, or to have resulted from conflation of different manuscripts. Whatever their origin, merely-synchronic observation of the data makes it possible to regard them as casual variants of their regular formal counterparts:

- (13) Gen 38,27 t<sup>ʕ</sup>omím 'twins' Gen 25,24 tomím  
 I Sam 1,27 š<sup>ʕ</sup>elaθí 'my request' I Sam 1,17 šelaθéx 'your f.s.  
 request'  
 II Sam 23,37 habb<sup>ʕ</sup>eroθí 'from Beʕeroth' I Chr 11,39  
 habberoθí  
 Ps 29,6 r<sup>ʕ</sup>emím 'unicorns' Ps 22,22 remím  
 II Chr 34,9 š<sup>ʕ</sup>eriθ 'the rest of' I Chr 12,35 šeriθ

### 3. Casual Deletion of posttonic word-final *e*

A posttonic *e* is likely to be deleted in MH casual/fast speech from the feminine suffix *et*, which in Tiberian Hebrew was represented as /et/. (Historically, [ɛ] was inserted to prevent formation of word-final consonant clusters in BH):

(14) PRES.	PRES.	CASUAL	
MS. SG.	FM. SG.	VARIANT	GLOSS
šomér	šoméret	šomért	guard
kotév	kotévet	kotévt	write
medabér	medabéret	medabért	talk
mesadér	mesadéret	mesadért	arrange
mitlabéš	mitlabéšet	mitlabéšt	get dressed

Although undoubtedly facilitated by the *t* of *et* being the least sonorant non-glottal consonant, the process is again motivated by the need to reduce the number of syllables between primary stresses, and

applies as long as the output is not more complex than the optimal CV(C) syllable structure. It applies to an affix because of its inherent high frequency and the ease with which it can be recovered from the context as a grammatical item even without its vocalic nucleus. Also note that reduction is commonest in cases like (15i) below, where the syllable subject to deletion is followed by a clitic. It is somewhat less common in (15ii) because the next word is a lexical direct object, but still quite acceptable, because ‘speak’ and ‘Hebrew’ often collocate. ‘Speak’ and ‘Icelandic’ in (15iii) do not, which makes deletion marginal. In (15iv) it is primarily avoidance of a CVCC syllable that blocks deletion.

- (15) i. *hì šoméret alav kól ha-zmán*  
 she watch (f.s.) on him all the-time  
 > *hì šomért alav kól azmán*
- ii. *hì mèdabéret ivrít ‘She speaks Hebrew’*  
 she speak (f.s.) Hebrew  
 > *hì mdabért ivrít*
- iii. *hì mèdabéret islándit ‘She speaks Icelandic’*  
 she speak (f.s.) Icelandic  
 > ?*hì mdabért islándit*
- iv. *hì mèdabéret parsít ‘She speaks Persian’*  
 she speak (f.s.) Persian  
 > \**hì mdabért parsít*

Clearly, if the syllable following the one containing the *e* in question is stressed, deletion will be blocked, to prevent stress clash *as well as* a CVCC syllable:

- (16) *hì kotévet séfer ‘she writes a book’* > \**hì kotévt séfer*  
 she write (f.s.) book

Historically, a stem-final low consonant caused both the /*ε*/ of /+*ε*t/ and the preceding one to be lowered to *a*. The loss of that low consonant in MH resulted in an unstressed *a+a* sequence, which readily undergoes reduction similar to the merger and shortening in *šeoním* ‘watches’ > *šooním* > *šo:ním* (> *šoním*) above; *a* is affected by virtue of its ‘minimal’ status, as a derivative of *e*:

- (17) *šomáat* ‘hear, fem. sg.’ > *šomá:t* > *šomát*  
*nosáat* ‘travel, fem. sg.’ > *nosá:t* > *nosát*  
*mešagáat* ‘drive crazy’ > *mešagá:t* > *mešagát*  
*mitparáat* ‘go wild’ > *mitpará:t* > *mitparát*

This merger is again a manifestation of the need in casual speech to reduce the number of syllables between primary stresses, and results in more optimal syllable structure. Note that similar *a* may also be deleted following a *x* from historical *h* (mostly before clitics):

- (18) *hì šoláxat et ha-yéled* ‘She is sending the child’  
 she send f.s. acc. the-child  
 > *hì šoláxt et ayéled ~ hì soláxt tayéled*  
*hì boráxat itò maxár* ‘She escapes with him tomorrow’  
 she escapes with him tomorrow  
 > *hì boráxt itò maxár*  
*hì šoláxat itoním* ‘She is sending newspapers’  
 she send f.s. newspapers  
 > ?*hì šoláxt itoním* [Less acceptable for some speakers  
 because of weaker collocation]  
*hì šoláxat sfarím* ‘She is sending books’  
 she send f.s. books  
 > \**hì šoláxt sfarím*

It should be observed that *e* from BH / $\varepsilon$ / that was inserted to break an unpermitted word-final consonant cluster is not as likely to be deleted from *stem*-final position, not even in the optimal environment. Deletability of such *e*'s is, essentially, a function of frequency. To start with, any particular stem is always less frequent than an affix; and beyond that, individual frequent stems undergo deletion more readily than individual infrequent ones do. *e* is never deleted from infrequent items, such as *kéves* ‘male sheep’, *péleg* ‘spring’:

- (19) *anì ohév kéves bātanúr* ‘I like baked lamb’  
 I like sheep in-the-oven  
 > \**ni ohév kévs batanúr*  
*šatíti mè-a-péleg ha-zè* ‘I drank from this spring’  
 I drank from-the-spring the-this  
 > \**šatíti mèapélg azè*

In frequent stems, however, *e* is more likely to delete:

- (20) *raíta kvar et ha-séret ha-zè* ‘Have you already seen  
 you saw already acc. the-movie the-this  
 this movie?’ > *raíta kvar ta sért azè*  
*šel mí ha-yéled ha-zè* ‘Whose child is this?’  
 of who the-child the-this  
 > *šel mí ayéld azè*

Note that the role played by word frequency in the process of casual deletion is different from its impact in formal registers. While infrequent irregular items do not occur regularly enough to 'impress their exceptionality' upon the learner, and thus are first to be affected by major rules and processes (see, for instance, Schuchardt, 1885 [1972]; Anttila, 1972; Schwarzwald, 1982), frequency of use facilitates memorization of irregularity as well as of minor rules. In general, then, frequent forms tend to resist analogical change and leveling. In casual/fast speech, however, frequent items and frequent collocations are the first to undergo casual speech processes (as noted, for example, in Fidelholtz, 1975; Hooper, 1976a, 1976b; Leslau, 1969; Bolozky, 1981)—because infrequent forms are even less likely to be used in casual speech to start with than they are in formal speech; because casual speech involves natural phonetic rules rather than morphological or morphophonemic leveling; and presumably also (as pointed out in Bolozky, 1977) because frequent items are more easily recoverable from the output of reduction, deletion and assimilation, which characterize the casual speech register.

#### 4. *Casual e deletion in prefixes*

Casual deletion also applies to prefixes such as *tV* (the prefix of all 2nd person forms as well as the 3rd person singular feminine form of future paradigms), *mV* (the present tense prefix of most canonical verb patterns), *nV* (the 1st person plural of future paradigms), and *yV* (the 3rd person singular masculine prefix of future paradigms), whenever *V* is realized as *e*, provided that the output is a CV(C) syllable, and preferably when the preceding item is a clitic:

- (21) hi tɛlaméd otò ivrít 'She will teach him Hebrew'  
 she will teach him Hebrew  
       > hì tlaméd otò ivrít
- xána tɛlaméd otò ivrít 'Hannah will teach him Hebrew'  
 Hannah will teach him Hebrew  
       > xána tlaméd otò ivrít [Less acceptable for some  
       speakers because of weaker collocation]
- hu mèlaméd otì ivrít 'He teaches me Hebrew'  
 he teach (m.s.) me Hebrew  
       > hù mlaméd otì ivrít
- anáxnu nɛdabér itò maxár 'we will speak with him  
 we will speak with him tomorrow  
       tomorrow' > anáxnu ndabér itò maxár

- hu yèdabér itò maxár 'He'll speak with him  
 he will speak with him tomorrow  
 tomorrow' > hù ydabér itò maxár
- hu mèvalbél li et ha-móax 'He nags me'  
 he confuses to me acc. the-brain  
 > hù mvalbél li tamóax
- atèm telamdú otò ivrít 'You (ms. pl.) will teach  
 you ms. pl. will teach him Hebrew  
 him Hebrew > \*atèm tlamdú otò ivrít

When, as a result of the loss of a low consonant, a #CV+ prefix is followed by an identical unstressed vowel, the sequence undergoes reduction similar to the merger and shortening in *šomáat* 'hear, f.s.' > *šomá:t* > *šomát* above; 'minimal' vowels other than *e* are affected as well:

- (22) taavód 'you will work' > ta:vód > tavód  
 taazór 'you will help' > ta:zór > tazór  
 heevír 'he passed' (tr.) > e:vír > evír  
 neelám 'he disappeared' > ne:lám > nelám  
 hoovár 'he was transferred' > o:vár > ovár

##### 5. *e*-deletion in proclitics and other function words

Colloquial MH has lost the enclitic pronouns of BH, but it maintains most of its proclitics. Proclitics such as *le* 'to', *be* 'in' or *še* 'that' (see Schwarzwald, 1984a, for a detailed description of their realizations in semi-formal Modern Hebrew) not only facilitate reduction of 'minimal' vowels in words to which they are attached, but are also often subject to casual *e*-deletion themselves. Like affixes, they are easily recoverable by virtue of their inherent frequency and predictability from context as grammatical items. Again, deletion is constrained by the CV(C) output condition:

- (23) racínu le-dabér itò 'We wanted to talk to him'  
 we wanted to-talk with him  
 > racínu ldabér itò
- racít le-dabér itò 'You f.s. wanted to speak to him'  
 you f.s. wanted to-speak with him  
 > \*racít ldabér itò
- raíti otò be-šabát 'I saw him on Saturday'  
 I saw him in-Saturday  
 > raíti otò pšabát

raíti otàx be-šabát 'I saw you on Saturday'  
I saw you f.s. in-Saturday

> \*raítiotàx pšabát

anì rocé še-tavóu 'I want you (pl.) to come'  
I want that-you (pl.) will come

> nì rocé štavóu

matáy racít še-navó 'When did you (f.) want us to come?'  
when you wanted that-we will come

> \*matáy racít šnavó

but avoidance of stress clash presents an additional complication: It explains the blocking of deletion in:

(24) hù kará le-xána 'He called Hannah' > \*hù kará lxána  
he called to-Hannah

but does not account for differences in acceptability of deletion following an unstressed syllable, where the presence of an additional unstressed syllable after the vowel to be deleted increases the likelihood of deletion:

(25) tagídu lè-cipóra šalóm 'Say hello to Ziporah'  
you pl. say to-Ziporah hellow

> tagídu lcipóra šalóm

tagídu lè-xédva šalóm 'Say hello to Hedvah!'  
you pl. say to-Hedvah hellow

> ?tagídu lxédva šalóm

Why is *?tagídu lxédva šalóm* less acceptable than *tagídu lcipóra šalóm*, in spite of the fact that it does not appear to involve stress clash? We believe that a form of stress clash *is* actually involved. In Hebrew, penultimate stress is marginal, and it is possible that for purposes of rhythm the vowel following it is 'extra-metrical', in the sense of Liberman and Prince (1977), Hayes (1982), etc., and thus does not count as a clash-preventing beat. In other words, for those speakers who do not accept *?tagídu lxédva šalóm*, stress clash is a viable explanation.

Proclitics preceding an unstressed vowel in stem-initial position (resulting from loss of a low consonant) also tend to lose an unstressed *e* in casual speech, via assimilation, merger and shortening, similarly to *šeoním* 'watches' > *šooním* > *šo:ním* (> *šoním*). The typical environment is a verb-initial vowel resulting from non-realization of *h* in *hif<sup>c</sup>il*, *nif<sup>c</sup>al* and *hitpa<sup>c</sup>el*, preceded by *le* 'to' (e.g., when a form like *lèhasbír* is realized as *lèashbír*):

(26)	lèasbír	'to explain'	>	làasbír	>	la:sbír	>	lazbír
	lèaxnís	'to bring in'	>	làaxnís	>	la:xnís	>	laxnís
	lèapíl	'to drop (tr.)'	>	làapíl	>	la:píl	>	lapíl
	lèarím	'to raise'	>	làarím	>	la:rím	>	larím
	leikanés	'to enter'	>	liikanés	>	li:kanés	>	likanés
	leizaér	'to be careful'	>	liizaér	>	li:zaér	>	lizaér
	leišavér	'to break (int.)'	>	liišavér	>	li:šavér	>	lišavér
	leitlabéš	'to get dressed'	>	liitlabéš	>	li:tlabéš	>	litlabéš
	leitragéz	'to get angry'	>	liitragéz	>	li:tragéz	>	litragéz

As in the case of *l<sup>e</sup>omím* etc. above, one can find BH forms that exhibit what appears to be assimilation, merger and shortening resulting from loss of *h* that is preceded by a clitic, both in *hif<sup>c</sup>il*:

(27)	Dt 3,24	l <sup>e</sup> har?óθ	'to show'	Dt 1,33	lar?óθ
	II Sam 19,16	l <sup>e</sup> ha <sup>c</sup> ávír	'to make cross'	II Sam 19,19	la <sup>c</sup> ávír
	I Kgs 18,12	l <sup>e</sup> haggið	'to tell'	II Kgs 9,15	laggið
	Is 10,7	l <sup>e</sup> hašmíð	'to destroy'	Is 23,11	lašmíð
	Jer 41,5	l <sup>e</sup> haví	'to bring'	Jer 39,7	laví
	II Chr 5,13	l <sup>e</sup> hašmía <sup>c</sup>	'to make hear'	Ps 26,7	lašmía <sup>c</sup>
	Ps 8,3	l <sup>e</sup> hašbíθ	'to still'	Am 8,4	lašbíθ
	Neh 9,19	l <sup>e</sup> hanḥoθám	'to direct them'	Ex 13,21	lanḥoθám

and in *nif<sup>c</sup>al*:

(28)	I Kgs 18,2	l <sup>e</sup> hera?óθ	'to be seen'	Ex 34,24; Dt 31,11; Is 1,12
		lera?óθ		
	Dan 11,34	uv <sup>e</sup> hikkašlám	'and on their failing'	Prv 24,17
		uvikkašló	'and on his failing'	
		l <sup>e</sup> he <sup>c</sup> anóθ	'to humble oneself'	Ex 10,3
		le <sup>c</sup> anóθ		
		b <sup>e</sup> heharéy	'on being killed'	Ezek 26,15
		b <sup>e</sup> he <sup>c</sup> aṭéf	'on fainting'	Lam 2,11
		be <sup>c</sup> aṭéf		

The same phenomenon occurred in Post-Biblical Hebrew—see Segal (1936, 114, 120), Haneman (1980, 132–134, 151). It may also be argued that the transition from *le+ha* 'to the', *be+ha* 'in the' and *ke+ha* 'like the' into *la*, *ba* and *ka*, respectively, is the consequence of the same kinds of processes. Certain 'rule inversions' in BH (primarily in the later books), in which the underlying sequences resurface, may be regarded as indirect supporting evidence:

(29)	I Sam 13,21	ul <sup>e</sup> hakkardummím	'and to the axes'	reg.
		w <sup>e</sup> lakkardummím		
	II Sam 21,20	l <sup>e</sup> harafá	'to the giants'	reg. larafá
	II Kgs 7,21	b <sup>e</sup> haššaḏé	'in the field'	reg. baššaḏé

Ezek 40,25	k <sup>e</sup> haḥallonóθ	'like the windows'	reg. kaḥallonóθ
Ezek 47,22	w <sup>e</sup> haggerím	'and to the aliens'	reg. w <sup>e</sup> laggerím
Ecc 8,1	k <sup>e</sup> heḥaxám	'like the wise one'	reg. keḥaxám
Dan 8,16	l <sup>e</sup> halláz	'to that one'	reg. lalláz
Neh 9,19	b <sup>e</sup> haddérex	'in the road'	reg. baddérex
Neh 12,38	l <sup>e</sup> haḥomá	'to the wall'	reg. laḥomá
II Chr 10,7	l <sup>e</sup> ha <sup>c</sup> ám	'to the people'	reg. la <sup>c</sup> ám
II Chr 25,10	l <sup>e</sup> hagge <sup>e</sup> đúđ	'to the battalion'	reg. lagge <sup>e</sup> đúđ
II Chr 29,27	l <sup>e</sup> hammizbéaḥ	'to the altar'	reg. lammizbéaḥ

Similar processes occur in MH fast speech when the proclitic *še* 'that' is appended to third person singular in the future, in which the prefix-initial *y* has been completely assimilated to the following *i* (e.g., when a form like *šeyikanés* is realized as *šeikanés*):

(30)	šeikanés	'let him in'	> šiikanés	> ši:kanés	> šikanés
	šeitlabés	'let him get dressed'	> šiitlabés	> ši:tlabés	> šitlabés
	šèipól	'let him fall'	> šiipól	> ši:pól	> šipól
	šèihyú	'let them be'	> šiiyú	> ši:yú	> šiyú

A parallel in BH:

(31)	/b <sup>e</sup> y <sup>e</sup> huḏa'/	'in Judea'	> biy <sup>e</sup> huḏa'	> [bihuḏa']
	/l <sup>e</sup> y <sup>e</sup> huḏa'/	'to Judea'	> liy <sup>e</sup> huḏa'	> [lihuḏa']
	/miyy <sup>e</sup> huḏa'/	'from Judea'	> miy <sup>e</sup> huḏa'	> [mihuḏa']

Again, assimilation-and-reduction is caused by the need in fast/casual speech to decrease the number of unstressed syllables between primary stresses, and it also optimizes the syllable structure of the sequences involved.

The behavior of other function words with respect to casual deletion is similar, by virtue of their high frequency of occurrence and easy recoverability from context as grammatical elements. As explained above, function words may lose *any* vowel, and even complete syllables. Below are some illustrations:

(32)	àni ló	'I don't'	> (a)nló	aní	'I'	> ní
	atá	'you (m.s.)'	> tá	atém	'you (m.p.)'	> tém
	et zé	'it acc.'	> dzé	šelxá	'your (m.s.)'	> šxá
	yesh lexá	'you (m.s.) have'	> yéšxa			
	kól exád	'every one'	> kólxad			
	mášehù kazè	'something like this'	> máškazè			
	bèsofó šel davár	'in the final analysis'	> psofóždavár			
	má zot oméret	'What does it mean?'	> mástoméret	~	mástomért	



éyze šehù 'some kind of . . .' > éyššèù  
 má ha-inyaním 'How are things' > mányanim

### 6. *e* in pretonic position

MH *a* or *e* in an open syllable is deleted before a stressed vowel in suffix-initial position; it is a morphophonemic rule restricted to verbal forms:

(33)	3RD MS. SG.	3RD FM. SG.	3RD PL.	GLOSS
	katáv	katvá	katvú	wrote
	sagár	sagrá	sagrú	closed
	dibér	dibrá	dibrú	talked
	liméd	limdá	limdú	taught
	hitlabéš	hitlabšá	hitlabšú	got dressed
	hitragéz	hitragzá	hitragzú	got angry
(34)	PRES. MS. SG.	PRES. MS. PL.	GLOSS	
	kotév	kotvím	write	
	medabér	medabrim	speak	
	mitlabéš	mitlabšim	get dressed	

Deletion would not apply, however, where it would have created a three consonant cluster in the process; instead, a basic *e* is maintained, and *a* is reduced to *e*. [Alternatively, a CCC cluster created in the deletion process is broken with the minimal vowel *e*]:

(35)	3RD MS. SG.	3RD FM. SG.	3RD PL.	GLOSS
	nisgár	nisgerá	nisgerú	be closed
	nixtáv	nixtevá	nixtevú	be written
	huxtáv	huxtevá	huxtevú	be dictated
	husgár	husgerá	husgerú	be delivered up
(36)	PRES. MS. SG.	PRES. MS. PL.	GLOSS	
	megalgél	megalgelím	roll (tr.)	
	mefarnés	mefarnesím	give subsistence	
	mitgalgél	mitgalgelím	roll (int.)	
	mitparnés	mitparnesím	live (on), subsist	

Now, casual *e*-deletion never applies to either the reduced or the basic *e* in this environment. Although Hebrew does contain a few clusters of three consonants (always involving a sonorant consonant, though, and mostly from a non-native source), as in

(37)	psantrán	'pianist'	gandrán	'a dude'
	sandlár	'shoemaker'	ictrubál	'pine cone'
	hišpríc	'he squirted'		

and in spite of the fact that across word boundaries, such clustering is quite common (since Hebrew allows numerous two consonant clusters word-initially), *nisgerá* or *nixtevá* are never reduced to *\*nisgrá* or *\*nixtvá* respectively at any degree of casualness or increased tempo.

It is easy to see that the CV(C) constraint is at work here. Deletion of this *e* would either create a two consonant coda in the syllable to the left, or a two consonant onset in the syllable to the right, neither of which would be optimal. It might be argued, though, that a *preference* for CV(C) cannot explain *total* exclusion of forms like *\*nisgrá* in spite of their not actually being unpronounceable. One can also refer, then, to Bolozky (1985), where this exclusion is attributed to a 'strict cyclicity' condition on structure-changing casual processes. *e*-deletion fails to apply to such cases because the derivational process responsible for its creation had applied earlier, in a previous cycle, which makes it irrelevant for the present one.

Another condition under which basic *a* and *e* in pretonic position in the verb are reduced instead of being deleted is when the second and third radical of the stem are identical. A derived *e* (or the basic *e* itself) prevents the formation of a geminate consonant:

(38)	3RD MS. SG.	3RD FM. SG.	3RD PL.	GLOSS
	xagág	xagegá	xagegú	celebrated
	zalál	zalelá	zalelú	devoured
	xitét	xitetá	xitetú	bored (hole)
	bisés	bisesá	bisesú	solidified
	hitpalél	hitpalelá	hitpalelú	prayed'
	hitkotét	hitkotetá	hitkotetú	quarreled
(39)	PRES. MS. SG.	PRES. MS. PL.	GLOSS	
	xogég	xogegím	celebrate	
	mexatét	mexatetím	bore (hole)	
	mitpalél	mitpalelím	pray	

The same applies to verb-related nouns and adjectives, as in:

(40)	SG.	PL.	GLOSS	
	šodéd	šodedím	robber	(cf. kotév ~ kotvím above)
	domém	domemím	silent	(cf. kotév ~ kotvím above)
	metoféf	metofefím	drummer	(cf. medabér ~ medabrím above)

as well as to other nouns and adjectives, based on canonical pattern similarity as exemplified by the relationship between the (b)-forms and the (a)-forms below:

(41) C(C)aCC(C)+an type nouns and adjectives:

- |     |         |                  |         |                 |
|-----|---------|------------------|---------|-----------------|
| (a) | kamcán  | 'miser, miserly' | batlán  | 'loafer'        |
|     | kablán  | 'contractor'     | šatkán  | 'silent person' |
| (b) | zalelán | 'glutton'        | xašešán | 'timid'         |
|     | lakekán | 'flatterer'      | hasesán | 'hesitant'      |

Now, at most casual styles and speech tempos, this *e* cannot be deleted. Deletion is restricted to *very* fast/casual style, in which reduction is more likely to occur when fricatives are involved, as in:

- (42) hem šàxexú 'they forgot' > hem šaxxú  
 they forgot  
 le-xovèvaním 'for amateurs' > lexòvvaním  
 for-amateurs  
 metòfefím 'drummers' > mètoffím

than in other forms, where it is quite marginal:

- (43) xagegá > xaggá                      šodedím > šoddím  
 xitetú > xittú                          zalelán > zallán  
 hitpalelá > hitpallá

Restricting the deletion of *e* in these forms to the 'fringes' of casual speech is surprising, since MH readily allows geminates resulting from morpheme combinations:

- (44) dán+nu 'we discussed'              yašán+nu 'we slept'  
 hit+tamém 'he feigned naivete'  
 /hit+dardér/ 'he deteriorated' > [hiddardér]

and because one finds geminates resulting from casual reduction across words:

- (45) ló kol kàx roím tov 'One cannot see so well'  
 not all so see m.pl. good  
 > lókkax roím tov  
 éyze šehù 'some kind of . . . ' > éyššeù  
 some whatever

The explanation for why *e*-deletion does not apply to forms like *xagegá* at most casual registers is not related to the preference for CV(C) syllables. It is accounted for by McCarthy's (1986) 'antigemination' principle, which prohibits syncope rules from creating sequences of identical *homomorphic* consonants. The 'strict cyclicity' explanation (Bolzky 1985) will also work here: The reduction from /xagag+á/ to *xagegá* occurs at a cycle preceding the one at which casual *e*-deletion applies, which blocks the latter from applying to it.

7. *Exceptions to e-deletion and the role of frequency*

All forms introduced above involved either *e* from BH schwa or *e* from BH *seghol* (/ε/). *e* originating from BH /e/, however, is less likely to be deleted in the same environment. In the case of ante-pretonic *e* involving the canonical sequence CeCuC (a variant of BH CiCCuC, with /e/ replacing /i/ when followed by a non-geminated *r* or ?), deletion is blocked:

(46)				PL. DEF.	
	SG.	PL.	PL. DEF.	CASUAL	GLOSS
	šerút	šerutím	hašerutím	*hašrutím	service
	terúc	terucím	haterucím	*hatrucím	excuse
	cerúf	cerufím	hacerufím	*hacrufím	combination
	berúr	berurím	haberurím	*habrurím	clarification

In BH, the /e/ in forms like *šerutím* was not reduced to a schwa, as ante-pretonic *a* was. In other cases, where in BH /e/ was reduced, casual *e*-deletion may apply, but only to frequent forms:

(47)				PL. DEF.	
	SG.	PL.	PL. DEF.	CASUAL	GLOSS
	memád	memadím	hamemadím	hammadím	dimension

It cannot delete such *e* in infrequent forms:

(48)				PL. DEF.	
	SG.	PL.	PL. DEF.	CASUAL	GLOSS
	mesáv	mesavím	hamesavím	*hamsavím	ball bearing
	melíc	melicím	hamelicím	*hamlicím	advocate

Is it awareness of the origin of *e* from BH /e/ in the exceptional forms that blocks casual deletion? Not necessarily; deletion of such *e* is possible in at least one form (for those speakers for whom *mexúš* is reasonably frequent):

(49)				PL. DEF.	
	SG.	PL.	PL. DEF.	CASUAL	GLOSS
	mexúš	mexuším	hamexuším	hamxuším	pain

Apparently, then, either deletion is excluded before *r* in the sequence CeCuC+im, or (as proposed by Prof. Rabin, personal communication) there is still some phonetic feature differentiating the *e* of forms of the *šerút* type—perhaps a degree of tenseness, caused by awareness of CeCuC being a variant of the CiCuC pattern before *r*. In any case, the more frequent the form is, the greater the likelihood of reduction.

Like most cases of *e* from BH /e/ in ante-pretonic position, *e* from BH /ε/ does not seem to delete in ante-pretonic position either. Consider the CaCaC/CiCaC pattern, historically with a geminate middle consonant, as in:

(50) SINGULAR	HISTORICAL	PLURAL	GLOSS
tabáx	tabbáḥ	tabaxím	cook
ikár	ʔikkár	ikarím	farmer
šabát	šabbát	šabatót	Saturday
ikár	ʕiqqár	ikarím	principle, essence

Unlike the *a* of *katán* 'small' etc., this *a* is not affected by the morphophonemic deletion rule introduced above—a remnant of the effect of the now-lost gemination, which blocked deletion historically. When the second consonant is *x* (historically *ḥ*, which as a pharyngeal could not be geminated), the vowel *a/i* is replaced by *e* from BH /ε/:

(51) MASC. SING.	HIS-TORICAL	RECON-STRUCTED	MASC. PL.	GLOSS
pexám	pəḥám	paḥḥám	pexamím	coal
gexál	geḥál	gaḥḥál	gexalím	ember

Casual deletion does not apply to such *e*, i.e., sequences like *\*ha##pxamím* or *\*ha##gexalím* do not arise. Although it could be claimed that speakers are aware of the origin of this *e* and distinguish it from deletable *e* by referring to its origin, it is more likely that either speakers memorize that *e* does not delete in the CexaCim pattern when the first consonant is non-sonorant, or that they are aware of the connection between CeCaC and CaCaC (both with a historical geminate), and by analogy with the blocking of *a*-deletion in the latter they also block *e*-deletion in the former. In other words, we are dealing here with morphologically-defined conditioning.

In the stem, pretonic *e* from BH /e/ that has not been affected by morphophonemic *e*-deletion (deletion manifest in *tipéš* 'foolish, m. sg.' ~ *tipším* 'foolish, m. pl.', *ilém* 'mute, m. sg.' ~ *ilmím* 'mute, m. pl.') is not deleted in casual speech, as fast as it may be:

(52) macevá 'tombstone'	> *macvá	xašexá 'darkness'	> *xašxá
magefá 'plague'	> *magfá	xaverá 'friend, member (f)'	> *xavrá

The only manifestations of reduction in such forms can be found in the construct state variants of some, e.g., *xaverá* ~ *xavrat kibúc* 'kibbutz member (f)' or *xašexá* ~ *xeškat láyla* 'darkness of night', where the

collocations are sufficiently frequent. Although it is possible that speakers are still aware of the now-obsolete variant with a tense vowel, it is more plausible to assume that they memorize that in the CaCeC+a pattern, *e* cannot be affected at any casual register. Note that it is not the case that pre-tonic *e* is excluded *per se*. Rather, it is an historical accident that there are very few *e*'s that do not originate from BH /e/ in this position. *e*-deletion does apply to words like *haleváy* 'I wish' (> *halváy*), to a prosodic word like *beyóm* 'on the day of' in *beyóm xamiší* 'on Thursday' (> *byóm xamiší*), to some verbs like *mevín* 'understand' in *àta mevín oti* 'Do you understand me?' below (> *àta mvín oti*), to forms like (see Schwarzwald, in press) *beséder* 'all right' (> *pséder*), *bexól ófen* 'nevertheless' (> *pxól ofèn*), etc.

There is variation among *prefixes* containing *e* from BH /e/. In *pa<sup>c</sup>al*, when the future prefix contains *e* from BH /e/ (which is the case with verbal roots with an initial underlying *y*), e.g.,

(53) *teréd* 'you/she will go down'      *teléx* 'you/she will go'

casual/fast deletion is normally blocked:

(54) *hà-išá*      *teréd*      *me-ha-ótobùs* 'The woman will get off  
the-woman will go down from-the-bus

the bus' > \**haišá tréd mèaótobùs*

*hà-šxená*      *teléx ità*      'The neighbor will go with her'  
the-neighbor (f) will go with her

> \**hàšxená tléx ità*

The same behavior can be observed for cases in which the present-tense *mV* prefix was realized as /e/ in BH (preceding verbs with 'hollow' or 'double' roots in the *hif'il* conjugation). In such forms, e.g.,

(55) *mešív* 'bring back'      *meríc* 'cause to run'  
*menív* 'give fruit'      *mesev* 'sit at table (literary)'  
*meréa* 'worsen'

MH fast/casual deletion does not apply:

(56) *mošé* *meríc*      *et ištó*      'He makes his wife run'  
*Moshe* makes run acc. his wife

> \**mošé mric et ištó*

*ze meréa*      *et à-macáv*      'It worsens the situation'  
this make worse acc. the-situation

> \**ze mréa et àmacáv*

except for frequently used forms in commonly occurring environments:

- (57) atà mevín oti 'Do you understand me?' > ata mvín oti  
you understand me

All of these cases, however, involve *pretonic* vowel, whose deletion yields a closed syllable adjacent to the one that carries the main stress—which would create a stress clash with the normally word-final stress of the preceding word. Although the likelihood of deletion should improve when the preceding word is penultimately stressed, as in, for instance, *xána teréd mehaótobùs* 'Hannah will get off the bus', the improvement is only marginal. We would argue that the marginality of sequences like *??xána tréd meaótobùs* can again be attributed to 'extra-metricity' of the unstressed vowel following the marked penultimate one, i.e., since that vowel does not count, the potential for stress clash *is* there.

On the other hand, when an *a*, *im*, or *ot* suffix is appended to a frequent *hif'il* item with *e* from BH /e/ in the prefix, the likelihood of deletion increases significantly, because the potential for stress clash resulting from deletion has definitely been removed. Also note that for some speakers, (58i) and (58ii) are more acceptable than (58iii), since owing to their frequency, the clitics in the triggering environment facilitate deletion as a means of contraction towards prosodic conglomeration:

- (58) i. hem ló meviním oti 'They do not understand me'  
they not understand, m.pl. me  
> hem ló mviním oti
- ii. hi mèricá et bàalá 'She makes her husband run'  
she makes run acc. her husband  
> hi mricá et bàalá
- iii. rína mèrimá méa kílo bè-kalút 'Rina easily lifts  
Rina raise, f.s. hundred kilogram with-ease  
a hundred kilograms' > rína mrimá méa kílo pkalút

In other words, it is probably not the origin of *e* from BH /e/ that blocks deletion in forms like *teréd* or *meric*, but the triggering environment.

There are also *hif'il* forms that lost a root-initial *n*, in which *a* seems to be elided in similar environments, as in

- (59) má atà mabít alày 'Why are you looking at me?'  
what you look on me  
> má tambít alày
- ani ló makir-á otà 'I don't know her' > anló mkíra otà  
I not know-fm. her

Apparently, it is the sub-standard common variants of such forms, e.g. *mehít*, *mekirá*, which cause the process to apply analogically—see Schwarzwald (1984b).

#### 8. *Conclusion*

It appears, then, that the widespread use of unstressed *e*-deletion and the total assimilation and/or loss of *e* (as well as other weak vowels in comparable positions) is a function of the low prominence of unstressed troughs in the casual register, of word frequency, of the degree to which adjacent words collocate with the word subject to deletion as a result of frequent co-occurrence, and of speech rate. Both processes indicate preference in casual speech for CV(C) syllables—a preference that also functions as a constraint against the formation of other syllabic structures resulting from deletion. Avoidance of stress clash also functions as an output constraint.

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