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Malagasy Reduplication is Compounding[1]

1 Introduction

Malagasy (Merina dialect; central Madagascar) has **partial reduplication** which applies productively to adjective, verb, noun, and quantifier stems. Reduplication generally expresses attenuation or durative/frequentative aspect: e.g., *mainty* 'black' > *maintimainty* 'blackish, somewhat black'; *trano* 'house' > *tranotrano* 'house-like thing'; *mandeha* 'walk' > *mandehandeha* 'walk around, go for a walk'. There are also lexical stems, e.g., *karakara* 'caretaking', that occur only in reduplicated form. (See Keenan and Razafimamonjy 1995, Keenan and Polinsky 1998:570-571.)

1.1 Reduplication patterns

The syllable bearing primary stress is copied along with the immediately following syllable, if any (1)–(2). I assume here that the first copy is (part of) the BASE while the second copy (underlined below) is the REDUPLICANT. Primary stress appears on the reduplicant. Here and below, forms are given in standard orthography (periods mark syllable boundaries; diacritics show the position of primary and secondary stress).[2]

(1) **Stress on penultimate syllable:**

a.	á.vo	à.vo.á.vo	'high'
b.	fó.tsy	fò.tsi.fó.tsy	'white'
c.	mái.nty	mài.nti.mái.nty	'black'
d.	sa.lá.ma	sa.là.ma.lá.ma	'healthy'
e.	ha.dí.no	ha.dì.no.dí.no	'forgotten'
f.	ma.ndé.ha	ma.ndè.ha.ndé.ha	'walk, go'
g.	mà.la.hé.lo	mà.la.hè.lo.hé.lo	'sad'

(2) **Stress on final syllable:**

a.	váo	vào.váo	'new(s)'
b.	i.ndráy	i.ndrài.ndráy	'again; sometimes'
c.	mì.la.láo	mì.la.lào.láo	'play (AT)'
d.	lè.hi.bé	lè.hi.bè.bé	'large'

[1]Many thanks to Bill Palmer from the University of Newcastle. Some of the ideas in this paper originated from our discussions and unpublished collaborative work done as a follow-up to Palmer (2012).

[2]The following abbreviations occur in the examples: AT: actor-topic voice, CT: circumstantial-topic voice, Imp: imperative, Pfx: verb-forming prefix, RED: reduplicant, TT: theme-topic voice.

Complications arise with reduplication of a **weak-final stem** (**WFS**)—i.e., a stem ending in one of the so-called **'weak' final syllables**: *ka*, *tra*, or *na*. WFSs generally have 3+ syllables with primary stress on the antepenultimate syllable. As in (1), the syllable bearing primary stress and the immediately following syllable are copied; the weak final syllable appears in full only in the reduplicant while the base is reduced (e.g., BASE *tà.pa* + RED *tá.pa.**ka***):

(3) **WFSs with antepenultimate stress:**

a.	tá.pa.ka	tà.pa.tá.pa.ka	'cut, split'
b.	pé.ra.tra	pè.ra.pé.ra.tra	'ring'
c.	má.si.na	mà.si.má.si.na	'holy'
d.	má.sa.ka	mà.sa.má.sa.ka	'cooked; ripe'
e.	la.tá.ba.tra	la.tà.ba.tá.ba.tra	'table'

When a vowel-initial WFS reduplicates, the C of the weak syllable (*k*,*tr*,*n*) surfaces at the end of the base, syllabified as an onset with the initial V of the reduplicant:

(4) **Vowel-initial WFSs:**

a.	á.lo.ka	à.lo.**k**á.lo.ka	'shady'
b.	é.vo.tra	è.vo.**tr**é.vo.tra	'rebounding'
c.	á.da.na	à.da.**n**á.da.na	'slow'

When a consonant-initial *ka* or *tra* WFS reduplicates, the final *k*,*tr* of the base manifests as a [–CONT] feature associated to the initial C of the reduplicant: if the initial C is a continuant it becomes the closest corresponding non-continuant (5). When a consonant-initial *na* WFS reduplicates, the final *n* of the base manifests as [–CONT,+NAS] features associated to the initial C of the reduplicant, which becomes a prenasalized segment (6). I refer to this phenomenon as **C-Fusion**.

(5) **Consonant-initial *ka*,*tra* WFSs with C-Fusion:**

a.	fá.si.ka	fà.si.**p**á.si.ka	'sand(y)'	[k]+[f] → [p]
b.	vá.ro.tra	và.ro.**b**á.ro.tra	'selling'	[tr]+[v] → [b]
c.	sí.tra.ka	sì.tra.**ts**í.tra.ka	'pleasing'	[k]+[s] → [t͡s]
d.	zá.va.tra	zà.va.**j**á.va.tra	'thing'	[tr]+[z] → [d͡z]
e.	lá.vi.tra	là.vi.**d**á.vi.tra	'far'	[tr]+[l] → [d]
f.	ré.sa.ka	rè.sa.**dr**é.sa.ka	'conversation'	[k]+[r] → [ɖ͡ʐ]
g.	hé.lo.ka	hè.lo.**k**é.lo.ka	'fault'	[k]+[h] → [k]

(6) **Consonant-initial *na* WFSs with C-Fusion:**

a.	táo.la.na	tào.la.**nt**áo.la.na	'bone'	[n]+[t] → [n͡t]
b.	tsá.nga.na	tsà.nga.**nts**á.nga.na	'standing'	[n]+[t͡s] → [n͡ts]
c.	ká.to.na	kà.to.**nk**á.to.na	'shutting'	[n]+[k] → [ŋ͡k]
d.	vé.lo.na	vè.lo.**mb**é.lo.na	'alive'	[n]+[v] → [m͡b]
e.	sí.tra.na	sì.tra.**nts**í.tra.na	'cured'	[n]+[s] → [n͡ts]
f.	rá.vi.na	rà.vi.**ndr**á.vi.na	'leaf'	[n]+[r] → [ɳ͡ɖʐ]
g.	hái.nga.na	hài.nga.**nk**ái.nga.na	'fast'	[n]+[h] → [ŋ͡k]

A handful of WFSs are disyllabic with initial stress. These stems reduplicate according to the patterns in (4)–(6) for trisyllabic WFSs, but the base appears as a single syllable, yielding adjacent stressed syllables:

(7) **Disyllabic WFSs:**

a.	pé.tra	pè.pé.tra	‘injunction’
b.	dó.na	dò.**nd**ó.na	‘knock’
c.	rí.tra	rì.**dr**í.tra	‘evaporated’
d.	zái.tra	zài.**j**ái.tra	‘sewing’

Note that not all final *ka*, *tra*, and *na* behave as weak syllables. There exist (near-)minimal pairs for reduplication, where one stem patterns as a WFS and the other does not:

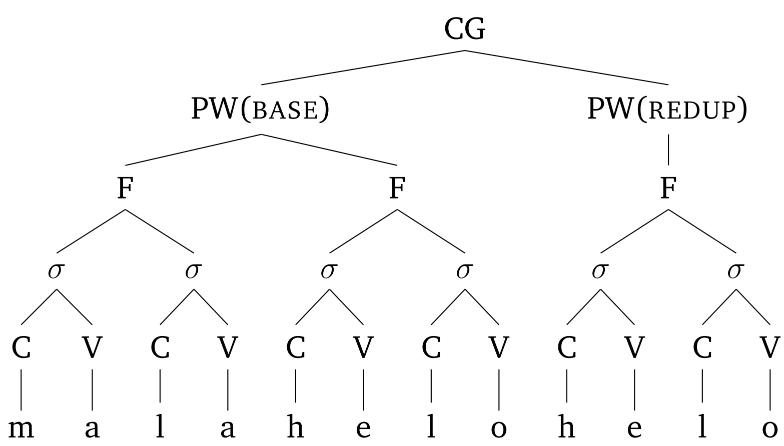
(8)	a.	fó.ka	fò.ka.fó.ka	‘idiot’	
	b.	fó.ka	fò.**p**ó.ka	‘inhale’	← *WFS*
	c.	mé.na	mè.na.mé.na	‘red’	
	d.	lé.na	lè.**nd**é.na	‘wet’	← *WFS*

1.2 The proposal

Previous accounts of Malagasy reduplication treat the reduplicant as an affix. Keenan and Polinsky (1998) and Lin (2005) both analyze the reduplicant as a *suffix*. Hannahs (2004) argues that that the reduplicant is an *infix* inserted before the final foot of the base.

Here I propose that reduplication is instead a type of **compounding**, inasmuch as the base and reduplicant belong to separate **prosodic word** (**PW**) domains. The PWs containing the base and reduplicant combine to form a larger ‘word’ constituent, the **composite group** (**CG**) (Vogel 2009). The prosodic constituency of reduplicated stems is illustrated in (9); here and below, I use an equals sign (=) to indicate PW boundaries within a CG.

(9)	a.	mèna=ména	[$_{CG}$ [$_{PW}$ mèna] [$_{PW}$ ména]]
	b.	dàni=dánika	[$_{CG}$ [$_{PW}$ dàni] [$_{PW}$ dánika]]
	c.	salàma=láma	[$_{CG}$ [$_{PW}$ salàma] [$_{PW}$ láma]]
	d.	latàba=tábatra	[$_{CG}$ [$_{PW}$ latàba] [$_{PW}$ tábatra]]
	e.	màlahèlo=hélo	[$_{CG}$ [$_{PW}$ màlahèlo] [$_{PW}$ hélo]]



My analysis incorporates the following claims:

(10) a. *The base and reduplicant are separated by a PW boundary:*

- Stress assignment shows that the base and reduplicant are parsed separately into feet.
- Morpho-phonological changes occurring at the boundary between base and reduplicant are the same as those that occur between stems in non-reduplicative compounds—and <u>distinct</u> from those that occur at the boundary between a stem and an affix (stem–affix boundaries are internal to a PW constituent).

b. *Roots and stems can be underlyingly C-final, despite the surface ban on coda consonants* (Erwin 1996). The surface realization of this final C depends on its value for [±CONT], and on whether it occurs:

i. PW-internally, before a suffix: ... **C** $]_{stem}$ -Sfx $]_{PW}$
ii. PW-finally, internal to a CG: ... **C** $]_{PW}$ ... $]_{CG}$
iii. at the right edge of a CG: ... **C** $]_{PW}$ $]_{CG}$

2 Phonological background

2.1 Phoneme inventory

Merina Malagasy has the following phonemes:

(11) **Consonants:**

Non-continuant:										
plosive,affricate	p	[p]	t	[t]	ts	[ts]	tr	[ʈʂ]	k	[k]
(plain vs.	b	[b]	d	[d]	j	[dz]	dr	[ɖʐ]	g	[g]
prenasalized)	mp	[mp]	nt	[nt]	nts	[nts]	ntr	[ɳʈʂ]	nk	[ŋk]
	mb	[mb]	nd	[nd]	nj	[ndz]	ndr	[ɳɖʐ]	ng	[ŋg]
nasal	m	[m]	n	[n]						
Continuant:										
fricative	f	[f]			s	[s]			h	[h]
	v	[v]			z	[z]				
liquid,trill			l	[l]			r	[r]		

(12) **Vowels, diphthongs:**

i,y	[i]	o	[u]	ai,ay	[a͜i]
e	[e]	a	[a]	ao	[a͜u]

- Orthographic note: [i] is spelled *y* word-finally and *i* elsewhere.

I follow previous authors in analyzing *ts*, *j*, *tr*, and *dr* as affricates rather than CC clusters, and NC sequences such as *mp*, *mb*, *nts*, *ndr*, etc. as prenasalized segments (Rahajarizafy 1960, Keenan and Polinsky 1998, Rasoloson and Rubino 2005, Howe 2021).

2.2 Syllable structure

Codas and complex onsets are strictly prohibited. **V**, **VV**, **CV**, **CVV** syllable types are permitted, where VV is a diphthong: *ai,ay* or *ao*. Erwin (1996) gives evidence from syllabification and stress placement that *ai,ay* and *ao* are diphthongs whereas other VV sequences are separated by a syllable boundary:

(13)	a.	b**ai**ko	bái.ko	(*ba.í.ko)	'foreign word; command'
	b.	t**ao**na	táo.na	(*ta.ó.na)	'year'
	c.	ak**ai**ky	a.kái.ky	(*à.ka.í.ky)	'nearby'
	d.	t**ia**va	ti.á.va		'want.TT:Imp'
	e.	d**io**vy	di.ó.vy		'clean.TT:Imp'
	f.	at**ao**vy	a.táo.vy		'make.TT:Imp'
	g.	at**oa**vy	à.to.á.vy		'be:celebrated.TT:Imp'

2.3 Stress assignment: basic pattern

Syllables containing a diphthong are heavy ($\mu\mu$), other syllables are light (μ). **Prosodic words (PWs) are parsed right-to-left** into **moraic trochees**, and primary stress associates to the final foot (14) (parentheses indicate foot domains; primary stress is underlined):[3]

(14) **Foot parsing; primary stress assignment:**

a.	lasa	[$_{PW}$ (lá.sa)]	'gone'
b.	rano	[$_{PW}$ (rá.no)]	'water'
c.	omby	[$_{PW}$ (ó.mby)]	'zebu, cow'
d.	baiko	[$_{PW}$ (bái.ko)]	'foreign word; command'
e.	sakay	[$_{PW}$ sa(káy)]	'hot pepper'
f.	manao	[$_{PW}$ ma(náo)]	'do, make' (AT)
g.	vaovao	[$_{PW}$ (vào)(váo)]	'news'
h.	adala	[$_{PW}$ a(dá.la)]	'fool(ish)'
i.	tanora	[$_{PW}$ ta(nó.ra)]	'young'
j.	bemiray	[$_{PW}$ (bè.mi)(ráy)]	'patched together'
k.	milalao	[$_{PW}$ (mì.la)(láo)]	'play' (AT)
l.	alahelo	[$_{PW}$ (à.la)(hé.lo)]	'sadness'
m.	bararata	[$_{PW}$ (bà.ra)(rá.ta)]	'bamboo sp.'
n.	mihainoa	[$_{PW}$ mi(hài)(nó.a)]	'listen' (AT:Imp)
o.	sakamalaho	[$_{PW}$ sa(kà.ma)(lá.ho)]	'ginger'

[3] Phonetic correlates of stress in Malagasy include pitch and duration (see Howe 2021 for discussion). In Pearson (1994) I argue that vowel reduction (devoicing, glide formation) can also be used to determine the position of stress: unstressed [i] and [u] undergo reduction in non-careful speech, as does unstressed [a] word-finally and after a vowel; however, stressed vowels—including those bearing secondary stress—never undergo reduction. Note also that the primary-stressed syllable is routinely marked on words in Malagasy dictionaries and teaching materials.

Note that adjacent stressed syllables are permitted (*vào.váo*, *mi.hài.nó.a*). However, the initial light syllables in words such as *sa.káy* and *a.dá.la* do not bear secondary stress and are therefore not parsed as degenerate (monomoraic) feet (Erwin 1996:10).

Stress shifts rightward when a suffix is added to a stem (15), showing that foot parsing is not sensitive to PW-internal morphological structure:

(15) **Rightward stress shift:**

a.	ámpy	[$_{PW}$ (á.mpy)]	'increase'
b.	ampí-o	[$_{PW}$ a(mpí.o)]	'increase-TT:Imp'
a.	ráva	[$_{PW}$ (rá.va)]	'be:dispersed'
b.	ravá-o	[$_{PW}$ ra(váo)]	'be:dispersed-TT:Imp'
e.	m-i-háino	[$_{PW}$ mi(hái.no)]	'AT-Pfx-listen'
f.	m-i-hainó-a	[$_{PW}$ mi(hài)(nó.a)]	'AT-Pfx-listen-Imp'
g.	m-i-tomány	[$_{PW}$ (mì.to)(má.ny)]	'AT-Pfx-cry'
h.	m-i-tomaní-a	[$_{PW}$ mi(tò.ma)(ní.a)]	'AT-Pfx-cry-Imp

2.4 Composite groups (CGs)

Two stems can combine to form a **compound**, sometimes connected by the linker =*n*. The boundary between stems in a compound is indicated here with an equals sign (=):

(16)	a.	maso	'eye'	+	andro	'day'	→	maso=andro	'sun'
	b.	antsy	'knife'	+	pika	'click'	→	antsi=pika	'pocketknife'
	c.	fiara	'vehicle'	+	kodia	'wheel'	→	fiara=kodia	'car'
	d.	trano	'house'	+	omby	'cow'	→	trano=n=omby	'stable'
	e.	trano	'house'	+	tantely	'honey'	→	trano=n=tantely	'beehive'

The stems in a compound are parsed separately into feet, resulting in adjacent unstressed syllables when the second stem begins with an unfooted syllable: cf. (17)c,e. Since compounding does not trigger refooting, I assume that each stem in a compound constitutes its own PW domain. These PWs combine to form a **composite group** (**CG**) (Vogel 2009). Primary stress associates to the rightmost foot in the CG.

(17) **Foot parsing in compounds:**

a.	màso=ándro	[$_{CG}$ [$_{PW}$ (mà.so)] [$_{PW}$ (á.ndro)]]	'sun'
b.	àntsi=píka	[$_{CG}$ [$_{PW}$ (à.ntsi)] [$_{PW}$ (pí.ka)]]	'pocketknife'
c.	fiàra=kodía	[$_{CG}$ [$_{PW}$ fi(à.ra)] [$_{PW}$ ko(dí.a)]]	'car'
d.	tràno=n=ómby	[$_{CG}$ [$_{PW}$ (trà.no)] [$_{PW}$ (nó.mby)]]	'stable'
e.	trào=n=tantély	[$_{CG}$ [$_{PW}$ (trà.no)] [$_{PW}$ nta(nté.ly)]]	'beehive'

Encliticization and **'n-bonding'** of a possessor/agent to its host (Keenan and Razafimamonjy 1996, Paul 1996) also involve concatenating multiple PWs to form a CG (notice bi- and trimoraic enclitics receive the primary stress):[4]

[4]Since the monomoraic clitics =*ko* and =*ny* are unstressed, I assume they do not form a foot and thus do not project a PW constituent. Unlike clitics, monomoraic roots can form a degenerate foot, as discussed in section 7.

(18) **Encliticization, ‘n-bonding’:**

a.	tráno=ko	[$_{CG}$ [$_{PW}$ (trá.no)] ko]	‘my house’
b.	tráno=ny	[$_{CG}$ [$_{PW}$ (trá.no)] ny]	‘his/her/their house’
c.	tràno=náo	[$_{CG}$ [$_{PW}$ (trà.no)] [$_{PW}$ (náo)]]	‘your [sg] house’
d.	tràno=ntsíka	[$_{CG}$ [$_{PW}$ (trà.no)] [$_{PW}$ (ntsí.ka)]]	‘our [incl] house’
e.	tràno=naréo	[$_{CG}$ [$_{PW}$ (trà.no)] [$_{PW}$ na(ré.o)]]	‘your [pl] house’
f.	tràno=n=dRasóa	[$_{CG}$ [$_{PW}$ (trà.no)] [$_{PW}$ ndra(só.a)]]	‘Rasoa’s house’
g.	àmi=n=dRasóa	[$_{CG}$ [$_{PW}$ (à.mi)] [$_{PW}$ ndra(só.a)]]	‘with Rasoa’

3 Reduplication as compounding

3.1 The reduplication rule

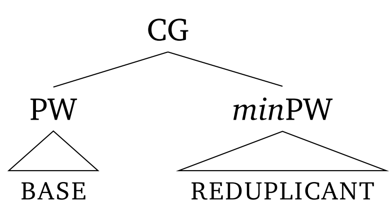
In reduplication the **rightmost foot** of the base is copied (cf. Hannahs 2004). Malagasy is thus consistent with McCarthy and Prince’s (1995, et al.) proposal that templates for reduplication are defined in terms of prosodic units.

(19)	a.	/vao/	+	/RED/	→	[(vào)(váo)]	‘new(s)’
	b.	/mena/	+	/RED/	→	[(mè.na)(mé.na)]	‘red’
	c.	/baiko/	+	/RED/	→	[(bài.ko)(bái.ko)]	‘foreign word’
	d.	/indray/	+	/RED/	→	[i(ndrài)(ndráy)]	‘once > sometimes’
	d.	/salama/	+	/RED/	→	[sa(là.ma)(lá.ma)]	‘healthy’
	e.	/milalao/	+	/RED/	→	[(mì.la)(lào)(láo)]	‘play (AT)’
	f.	/malahelo/	+	/RED/	→	[(mà.la)(hè.lo)(hé.lo)]	‘sad’

I propose that:

(20) a. The reduplicative morpheme (RED) takes the form of a **minimal prosodic word** (*min*PW) template.

b. Reduplication concatenates this *min*PW template with the base, also a PW, to form a compound. As in regular compounding, the base and reduplicant form a composite group (CG) constituent:



In accordance with the Prosodic Hierarchy, a PW must contain at least one foot; a minimal PW consists of a single foot (*min*PW = F). Thus in reduplication the **final foot of the base is copied** to fill the *min*PW template, creating the reduplicant (21). Primary stress falls on the reduplicant since it contains the rightmost foot in the CG.

(21)	a.	[$_{CG}$ [$_{PW}$ (vao)] [$_{minPW}$ RED]]	→	[$_{CG}$ [$_{PW}$ (vào)] [$_{PW}$ (váo)]]
	b.	[$_{CG}$ [$_{PW}$ (me.na)] [$_{minPW}$ RED]]	→	[$_{CG}$ [$_{PW}$ (mè.na)] [$_{PW}$ (mé.na)]]
	c.	[$_{CG}$ [$_{PW}$ sa(la.ma)] [$_{minPW}$ RED]]	→	[$_{CG}$ [$_{PW}$ sa(là.ma)] [$_{PW}$ (lá.ma)]]

3.2 Stress shift in suffixed reduplicated stems

Initial evidence for my analysis comes from stress shift. When a suffix is added to a reduplicated stem, the reduplicant shows rightward stress shift; however, the base does not:[5]

(22)	a.	kara=kara	[(kà.ra)(ká.ra)]	'caretaking=RED'
	b.	kara=kara**-o**	[(kà.ra)ka(ráo)]	'be:looked:after=RED-TT:Imp'
	c.	avo=avo	[(à.vo)(á.vo)]	'high=RED'
	d.	avo=avo**-y**	[(à.vo)a(vó.y)]	'high=RED-TT:Imp'
	e.	m-i-toto	[mi(tó.to)]	'AT-Pfx-pound'
	f.	m-i-toto**-a**	[(mì.to)(tó.a)]	'AT-Pfx-pound-Imp'
	g.	m-i-toto=toto	[mi(tò.to)(tó.to)]	'AT-Pfx-pound=RED'
	h.	m-i-toto=toto**-a**	[mi(tò.to)to(tó.a)]	'AT-Pfx-pound=RED-Imp'

This shows that the reduplicant and base are parsed into feet independently of each other (23)a, just like the stems in a non-reduplicative compound (cf. (17)). If the reduplicant were an affix, the base and reduplicant would belong to a single PW and undergo right-to-left foot-parsing together, as in (23)b; however, this analysis makes incorrect predictions for secondary stress placement:

(23) **Foot parsing in suffixed reduplicated stems:**

a.	*compound analysis*:	/kara=kara-o/	→	✓	[$_{CG}$ [$_{PW}$ (kà.ra)] [$_{PW}$ ka(ráo)]]
		/avo=avo-y/	→	✓	[$_{CG}$ [$_{PW}$ (à.vo)] [$_{PW}$ a(vó.y)]]
		/m-i-toto=toto-a/	→	✓	[$_{CG}$ [$_{PW}$ mi(tò.to)] [$_{PW}$ to(tó.a)]]
b.	*affixation analysis*:	/kara-kara-o/	→	*	[$_{CG}$ [$_{PW}$ ka(rà.ka)(ráo)]]
		/avo-avo-y/	→	*	[$_{CG}$ [$_{PW}$ a(vò.a)(vó.y)]]
		/m-i-toto-toto-a/	→	*	[$_{CG}$ [$_{PW}$ (mì.to)(tò.to)(tó.a)]]

I now consider how analyzing reduplication as compounding captures certain root alternations in reduplicated stems, including the sound changes in (5)–(6) above and other changes that can lead to **base–reduplicant non-identity** in the output.

4 Root allomorphy

4.1 Thematic consonants

Certain roots include a so-called **thematic consonant** (*v*, *s*, or *z*), which appears at the end of the root before a suffix but is absent when the root is word-final (note that all suffixes in Malagasy are V-initial). Examples are given in (24)—contrasted with the non-alternating roots in (25), which are uniformly vowel-final:

[5] Verb and adjective stems mark the imperative with the suffix *-a* in the AT voice and *-o/-y* elsewhere. The latter suffix is underlyingly *-o* but surfaces as *-y* when the preceding syllable contains *o* (dissimilation).

(24) **Thematic consonant appears in suffixed forms:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-tía	m-ì-tiá**v**-a	ì-tiá**v**-o	'love'	/tia**v**/
b.	m-i-laláo	m-ì-laláo**v**-a	ì-laláo**v**-y	'play'	/lalao**v**/
c.	m-i-fóno	m-ì-fonó**s**-a	ì-fonó**s**-y	'be wrapped'	/fono**s**/
d.	m-ì-lománo	m-i-lòmanó**s**-a	i-lòmanó**s**-y	'swim'	/lomano**s**/
e.	m-i-fóha	m-ì-fohá**z**-a	ì-fohá**z**-o	'wake up'	/foha**z**/
f.	m-i-tóhy	m-ì-tohí**z**-a	ì-tohí**z**-o	'continue'	/tohi**z**/

(25) **No root allomorphy:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-ántso	m-ì-antsó-a	ì-antsó-y	'call'	/antso/
b.	m-i-hítsy	m-ì-hitsí-a	ì-hitsí-o	'be in line'	/hitsi/
c.	m-i-sángy	m-ì-sangí-a	ì-sangí-o	'tease'	/sangi/
d.	m-i-sólo	m-ì-soló-a	ì-soló-y	'replace'	/solo/

The unsuffixed forms in (24) can be predicted from the suffixed forms, but not vice versa. I therefore assume that the thematic consonant is part of the underlying representation (UR) of the root (cf. Erwin 1996). This is contra previous authors (Keenan and Razafimamonjy 1996:46, Keenan and Polinsky 1998:582,592-593, etc.), who treat the consonant as part of the suffix and must thus posit multiple lexically-conditioned allomorphs for each suffix: *-a/-va/-sa/-za*, *-o/-vo/-so/-zo*, etc.

Hannahs (2003:12), Rasoloson and Rubino (2005:461,474,479) have suggested that thematic consonants are epenthetic segments inserted to avoid V hiatus. This is implausible since VV sequences are permitted (and fairly common) in Malagasy, and since the presence/quality of the thematic consonant is idiosyncratic. Cf. these near-minimal pairs:

(26)

	AT	AT:Imp	CT:Imp		UR
a.	m-i-áro	m-ì-aró**v**-a	ì-aró**v**-y	'protect'	/aro**v**/
b.	m-i-háro	m-ì-haró-a	ì-haró-y	'be mixed'	/haro/
c.	m-àha-fóno	m-ahà-fonó**s**-a	ahà-fonó**s**-y	'able to envelop'	/fono**s**/
d.	m-àha-vóno	m-ahà-vonó-a	ahà-vonó-y	'able to kill'	/vono/

Deletion of the thematic C in word-final position follows from the **No Coda constraint** on Malagasy surface representations (SR). For concreteness, I treat deletion as erasure of a PW-final consonant left unparsed by the syllabification algorithm (**Stray Erasure**):

(27) **Syllabification:**

Within a prosodic word (PW) domain:

i. Parse VV and CVV sequences into syllables just in case VV is a permissible diphthong: *ai,ay* or *ao*.
ii. Parse remaining V and CV sequences into syllables.
iii. A PW-final C remains unsyllabified, and is deleted:

Stray Erasure (first version): $\mathbf{C} \rightarrow \varnothing$ / __ $]_{PW}$

Before a suffix, the final consonant is parsed as an onset and escapes deletion:

(28)	/m-i-foha**z**/	→	$[_{\sigma}$ mi $][_{\sigma}$ fo $][_{\sigma}$ ha] **z**	SR: $[_{PW}$ mi(fó.ha)]
	/m-i-foha**z**-a/	→	$[_{\sigma}$ mi $][_{\sigma}$ fo $][_{\sigma}$ ha $][_{\sigma}$ **z**a]	SR: $[_{PW}$ (mì.fo)(há.**z**a)]

4.2 Post-tonic [e]→[i]

Certain roots (with or without a final thematic consonant) show an alternation in their final vowel, with *e* occurring in stressed position before a suffix and *i* (written *y*) in unstressed word-final position (29). Cf. the non-alternating roots in (30), with *i/y* in all positions.

(29) **Stem-final [i] (unsuffixed) ∼ [e] (suffixed):**[6]

	AT	AT:Imp	CT:Imp		UR
a.	m-i-báb**y**	m-ì-bab**é**-a*	ì-bab**é**-o	'carry on o.'s back'	/bab**e**/
b.	m-i-étr**y**	m-ì-etr**é**-a*	ì-etr**é**-o	'be demoted'	/etr**e**/
c.	m-i-jér**y**	m-ì-jer**é**-a*	ì-jer**é**-o	'look at'	/jer**e**/
d.	m-i-tét**y**	m-ì-tet**é**z-a	ì-tet**é**z-o	'cross'	/tet**e**z/
e.	m-i-vél**y**	m-ì-vel**é**z-a	ì-vel**é**z-o	'beat, thresh'	/vel**e**z/
f.	m-àha-fát**y**	m-ahà-fat**é**s-a	ahà-fat**é**s-o	'be deadly'	/fat**e**s/

(30) **Stem-final [i] (no alternation):**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-híts**y**	m-ì-hits**í**-a	ì-hits**í**-o	'go straight'	/hits**i**/
b.	m-i-táf**y**	m-ì-taf**í**-a	ì-taf**í**-o	'get dressed'	/taf**i**/
c.	m-i-vór**y**	m-ì-vor**í**-a	ì-vor**í**-o	'gather'	/vor**i**/
d.	m-i-tóh**y**	m-ì-toh**í**z-a	ì-toh**í**z-o	'continue'	/toh**i**z/

Contrasting (29) with (30) shows that the unsuffixed allomorphs of these roots can be predicted from the suffixed allomorphs, but not vice versa. I therefore assume (with Erwin 1996) that the URs for the roots in (29) have *e* as their final vowel, and posit a rule which merges [e] with [i] in the unstressed final syllable of a PW:

(31) **Post-tonic [e]→[i]**:
When [e] is in unstressed position in the rightmost foot of a PW, it raises to [i]:

Unstressed [e] → [i] / __ C_0 $]_{PW}$

This rule only applies to unstressed [e] in the final foot of the PW; unstressed [e] in earlier positions does not raise: e.g., /i-j**e**re-o/ → [(ì.j**e**)(ré.o)], not *[(ì.j**i**)(ré.o)].

Sample derivations for suffixed and unsuffixed stems showing the (non-)application of Stray Erasure and Post-tonic [e]→[i]:

[6]The AT imperative forms *mìbabéa**, *mìetréa**, and *mìjeréa** surface as *mìbabé*, *mìetré*, and *mìjeré*, respectively, due to a rule which deletes an unstressed non-high vowel after another non-high vowel: [éa]→[é], [áa]→[á]. For reasons of space I will not discuss this rule further here.

(32)	UR:	/m-i-bab**e**/	/m-i-vel**ez**/	/i-vel**e**z-o/
	prosodic parsing:	[$_{PW}$ mi(bá.b**e**)]	[$_{PW}$ mi(vé.l**e**)z]	[$_{PW}$ (ì.ve)(l**é**.zo)]
	stray erasure:	[$_{PW}$ mi(bá.b**e**)]	[$_{PW}$ mi(vé.l**e**)]	[$_{PW}$ (ì.ve)(l**é**.zo)]
	post-tonic [e]→[i]:	[$_{PW}$ mi(bá.b**y**)]	[$_{PW}$ mi(vé.l**y**)]	[$_{PW}$ (ì.ve)(l**é**.zo)]
	SR:	mi.bá.b**y**	mi.vé.l**y**	ì.ve.l**é**.zo

4.3 Reduplication of alternating roots

Stray Erasure and Post-tonic [e]→[i] apply at **the right edge of a prosodic word (PW)**. They fail to apply at the boundary between a stem and a suffix, since the stem and suffix belong to a single PW.

(33)	**Stray Erasure (first version)**:	C	→	∅	/	__		]$_{PW}$
	Post-tonic [e]→[i]:	Unstressed [e]	→	[i]	/	__	C_0	]$_{PW}$

However, Stray Erasure and Post-tonic [e]→[i] do apply to non-final stems in a compound, since the stems in a compound are separated by a (CG-internal) PW boundary. Likewise these rules apply before an enclitic, since the enclitic and its host are separated by a PW boundary. Compare how the roots /babe/, /velez/, and /fates/ are realized before a suffix, before an enclitic, and as the first member of a compound:

(34)	a.	/a-bab**e**-o/	→	à-bab**é**-o	'carry on o.'s back' (TT:Imp)
	b.	/a-bab**e**=ko/	→	a-báb**i**=ko	'I carry on my back' (TT)
	c.	/bab**e**=kamban/	→	bàb**i**=kámbana	'carrying twins on o.'s back'
	d.	/a-vel**ez**-o/	→	à-vel**éz**-o	'beat' (TT:Imp)
	e.	/a-vel**ez**=nao/	→	a-vèl**i**=náo	'you beat' (TT)
	f.	/vel**ez**=vato/	→	vèl**i**=váto	'shrub sp.' (lit. 'beat-stone')
	g.	/m-aha-fat**es**/	→	m-à-ha-fát**y**	'deadly' (AT)
	h.	/m-aha-fat**es**-a/	→	m-a-hà-fat**és-a**	'deadly' (AT:Imp)
	i.	/fat**es**=antoh/	→	fàt**i**=ántoka	'financial loss' (lit. 'death-guarantee')

(34)i shows that Stray Deletion applies to the first member in a compound even when the second member begins with a vowel. If the stray C were retained, it could be syllabified as an onset with the following V, avoiding hiatus; however, this does not happen. Compare:

(35)	a.	/m-a-ha-fat**es**-a/	→	[ma(hà.fa)(té.**s**a)]	
	b.	/fat**es**=antoh/	→	[(fà.ti)(á.nto)ka]	*[(fà.te)(**s**á.nto)ka]
					*[(fà.ti)(**s**á.nto)ka]

If reduplication is compounding, we predict that in reduplicated stems Stray Erasure and Post-tonic [e]→[i] will invariably apply to the base—whether or not they also apply to the reduplicant—since the base aligns to the right edge of a PW. This prediction is borne out:

(36)	a.	/aro**v**=aro**v**/	→	àro=áro	'protect' (TT)
				*àro**v**=áro	
	b.	/aro**v**=aro**v**-y/	→	àro=aró**v**-y	'protect' (TT:Imp)
				*àro**v**=aró**v**-y	

(37)	a.	/a-veze**e**=veze**e**/ →	a-vèz**i**=véz**y**	‘wander’ (TT)
			*a-vèz**e**=véz**y**	
	b.	/a-vez**e**=vez**e**-o/ →	a-vèz**i**=vez**é**o	‘wander’ (TT:Imp)
			*a-vèz**e**=vez**é**o	
(38)	a.	/m-an-el**ez**=el**ez**/ →	m-an-èl**i**=él**y**	‘scatter’ (AT)
			*m-an-èl**ez**=él**y**	
	b.	/m-an-el**ez**=el**ez**-a/ →	m-an-èl**i**=el**éz**-a	‘scatter’ (AT:Imp)
			*m-an-èl**ez**=el**éz**-a	

As predicted, Stray Erasure applies to the base even when the reduplicant begins with a vowel and the final C could be syllabified as an onset (cf. (35)b):

(39)	a.	/aro**v**=arov/ →	[(à.ro)(á.ro)]	*[(à.ro)(**v**á.ro)]
	b.	/aro**v**=arov-y/ →	[(à.ro)a(ró.vy)]	*[(à.ro)**v**a(ró.vy)]

Sample derivations showing (non-)application of Stray Erasure and Post-tonic [e]→[i] to suffixed and unsuffixed reduplicated stems:

(40)	UR:	/m-an-el**ez**=el**ez**/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ ma(nè.l**e**)**z**] [$_{PW}$ (é.l**e**)**z**]]
	stray erasure:	[$_{CG}$ [$_{PW}$ ma(nè.l**e**)] [$_{PW}$ (é.l**e**)]]
	post-tonic [e]→[i]:	[$_{CG}$ [$_{PW}$ ma(nè.l**i**)] [$_{PW}$ (é.l**y**)]]
	SR:	ma.nè.li.é.ly
	UR:	/m-an-el**ez**=el**ez**-a/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ ma(nè.l**e**)**z**] [$_{PW}$ e(l**é**.**z**a)]]
	stray erasure:	[$_{CG}$ [$_{PW}$ ma(nè.l**e**)] [$_{PW}$ e(l**é**.**z**a)]]
	post-tonic [e]→[i]:	[$_{CG}$ [$_{PW}$ ma(nè.l**i**)] [$_{PW}$ e(l**é**.**z**a)]]
	SR:	ma.nè.li.e.lé.za

Morpho-phonological alternations which distinguish PW-internal from PW-final domains thus support my claim that the base and reduplicant are separated by a PW boundary within a larger compound (CG) structure.

5 More root allomorphy: Weak-final stems (WFSs)

Weak-final stems (WFSs) end in one of the **‘weak’ final syllables**: *ka*, *tra*, or *na*. These syllables pattern as extrametrical (unfooted), so primary stress falls on the syllable with the antepenultimate mora (underlined):

(41) **Foot parsing in WFSs:**

a.	zaitra	[$_{PW}$ (zái)tra]	‘sewing’
b.	aloka	[$_{PW}$ (á.lo)ka]	‘shady’
c.	fantatra	[$_{PW}$ (fá.nta)tra]	‘known’
d.	masina	[$_{PW}$ (má.si)na]	‘holy’

	e.	manjaitra	[$_{PW}$ ma(njái)tra]	‘sew’ (AT)
	f.	milaoka	[$_{PW}$ mi(láo)ka]	‘eat meat/veg. with o.’s rice’ (AT)
	g.	kaikitra	[$_{PW}$ (kái.ki)tra]	‘bite’
	h.	taolana	[$_{PW}$ (táo.la)na]	‘bone’
	i.	manoratra	[$_{PW}$ ma(nó.ra)tra]	‘write’ (AT)
	j.	aoriana	[$_{PW}$ (ào)(rí.a)na]	‘after’
	k.	mifanoratra	[$_{PW}$ (mì.fa)(nó.ra)tra]	‘write to each other’ (AT)

The final *na* in the voice suffixes *-ana* and *-ina* patterns as a weak final syllable:

(42)	a.	vali-ana	[$_{PW}$ va(lí.a)na]	‘ask’ (TT)
	b.	fohaz-ina	[$_{PW}$ fo(há.zi)na]	‘wake up’ (TT)
	a.	tsapa-ina	[$_{PW}$ tsa(pái)na]	‘touch, feel’ (TT)
	e.	i-lomanos-ana	[$_{PW}$ i(lò.ma)(nó.sa)na]	‘swim’ (CT)

It is well known that historically, weak final syllables derived from final consonants through word-final C fortition/merger plus final vowel epenthesis (Adelaar 2012:125–139, et al.). Cf. the following cognates for Merina Malagasy and closely-related Ma’anyan (SE Barito, Borneo), which permits coda consonants (data from Adelaar 2012:130):

(43)		Merina	Ma’anyan	
	a.	láta**ka**	lata**k**	‘penis’
	b.	vítsi**ka**	wisi**k**	‘ant’
	c.	háto**ka**	katu**k**	‘neck’ (Mrn); ‘nod’ (Mny)
	d.	rívo**tra**	riwu**t**	‘wind’
	e.	táho**tra**	taku**t**	‘afraid’
	f.	lála**na**	lala**n**	‘path’
	g.	ólo**na**	ulu**n**	‘person’

Synchronically, WFSs have C-final allomorphs before a suffix, where C = {*n,m,t,r,h*}:

(44) **WFS ending in *na* ∼ {*n,m*}:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-sáka**na**	m-ì-sakán**n**-a	ì-sakán**n**-o	‘impede’	/sakan/
b.	m-i-tóno**na**	m-ì-tonó**n**-a	ì-tonó**n**-y	‘give o.’s name’	/tonon/
c.	m-i-vélo**na**	m-ì-veló**m**-a	ì-veló**m**-y	‘make a living’	/velom/

(45) **WFS ending in *tra* ∼ {*r,t*}:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-áka**tra**	m-ì-aká**r**-a	ì-aká**r**-o	‘ascend’	/akar/
b.	m-i-fáto**tra**	m-ì-fató**r**-a	ì-fató**r**-y	‘be bound’	/fator/
c.	m-i-ávo**tra**	m-ì-avó**t**-a	ì-avó**t**-y	‘root up’	/avot/
d.	m-i-sóra**tra**	m-ì-sorá**t**-a	ì-sorá**t**-o	‘enroll’	/sorat/

(46) **WFS ending in *ka* ∼ *h*:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-kási**ka**	m-ì-kasí**h**-a	ì-kasí**h**-o	‘touch’	/kasih/
b.	m-i-tápa**ka**	m-ì-tapá**h**-a	ì-tapá**h**-o	‘split’	/tapah/

As in previously-discussed cases of root alternation, the unsuffixed allomorphs in (44)–(46) can be predicted from the suffixed allomorphs but not vice versa: e.g., if a root ends in *na* word-finally, we can't predict whether it will end in *n* or *m* before a suffix. I therefore assume (with Erwin 1996, Lin 2005; contra Keenan and Polinsky 1998) that WFSs are not only historically C-final, but also synchronically C-final in their underlying representations (UR). By the same token, the suffixes *-ana* and *-ina* are underlyingly /-an/ and /-in/.

Post-tonic [e]→[i] can occur in WFSs (47) (cf. the roots in (48) with no vowel alternation); I assume these stems end underlyingly in [e] + final C:

(47) **WFSs with post-tonic [e]→[i]:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-óri**na**	m-ì-or**é**n-a	ì-or**é**n-o	'be founded'	/oren/
b.	m-i-tándr**i**na	m-ì-tandr**é**m-a	ì-tandr**é**m-o	'take care of'	/tandrem/
c.	m-i-énj**i**ka	m-ì-enj**é**h-a	ì-enj**é**h-o	'run away'	/enjeh/
d.	m-i-ráik**i**tra	m-i-ràik**é**t-a	i-ràik**é**t-o	'stick to'	/raiket/
e.	m-i-tát**i**tra	m-ì-tat**é**r-a	ì-tat**é**r-o	'take care of'	/tater/

(48) **WFS with no [e] ∼ [i]:**

	AT	AT:Imp	CT:Imp		UR
a.	m-i-kás**i**ka	m-ì-kas**í**h-a	ì-kas**í**h-o	'touch'	/kasih/
b.	m-i-sítr**i**ka	m-ì-sitr**í**h-a	ì-sitr**í**h-o	'hide; dive'	/sitrih/
c.	m-i-vín**i**tra	m-ì-vin**í**r-a	ì-vin**í**r-o	'be angry'	/vinir/

To derive the consonant in the weak final syllable (*k,tr,n*) from the underlying stem-final C, I posit a synchronic morpho-phonological rule called **Mutation**, which operates on certain consonants at the right edge of a PW:

(49) **PW-final Mutation** (*fortition, merger*):

h	→	k	$/ \_\_]_{PW}$
t	→	tr	$/ \_\_]_{PW}$
r	→	tr	$/ \_\_]_{PW}$
m	→	n	$/ \_\_]_{PW}$

After stem-final C undergoes Mutation, an epenthetic *a* is inserted, enabling C to syllabify as an onset (50)a,b,c. Epenthesis does not trigger refooting of the PW, and so the resulting syllable (*ka*, *tra*, *na*) is extrametrical.

(50)							
	a.	álo**k**	→	álok<u>a</u>	[(á.lo)**k**a]	'shady'	
	b.	córa**tr**	→	sóratr<u>a</u>	[(só.ra)**tr**a]	'writing'	← Final Epenthesis
	c.	áda**n**	→	ádan<u>a</u>	[(á.da)**n**a]	'slow'	
	d.	áro**v**	→	áro	[(á.ro)]	'protection'	
	e.	fóno**s**	→	fóno	[(fó.no)]	'cover, envelope'	← Stray Erasure
	f.	tóhi**z**	→	tóhy	[(tó.hy)]	'connection'	

Epenthesis and Stray Erasure—(50)d,e,f—are alternative strategies for repairing a stray C to satisfy the No Coda constraint. Epenthesis applies when the C is [–CONT] while Stray Erasure applies when the C is [+CONT]. I propose that C-deletion is preferred over V-insertion to satisfy No Coda, but this preference is overridden by a constraint requiring a [–CONT] feature in the input to be realized in the output.

The Epenthesis rule and amended Stray Erasure rule are presented below. Importantly, Epenthesis is taken to apply at the right edge of a CG, whereas Stray Erasure applies at the right edge of a PW. The rationale for this is provided in section 6.2 below.

(51) **CG-final Epenthesis** (plus syllabification): When a [–CONT] consonant (*k*,*tr*,*n*) occurs at the right edge of a composite group (CG), a default *a* vowel is inserted after that consonant, which then syllabifies as an onset:

$$\varnothing \rightarrow \text{[a]} \;/\; \mathbf{C}_{[-cont]} \;\_\_\;]_{CG}$$

(52) **Stray Erasure (revised)**: A [–CONT] consonant is deleted from the right edge of a prosodic word (PW):

$$\mathbf{C}_{[+cont]} \rightarrow \varnothing \;/\; \_\_\;]_{PW}$$

Sample derivations for unsuffixed and suffixed WFSs, illustrating Mutation and Epenthesis:

(53)

UR:	/tapa**h**/	/tapa**h**-o/
prosodic parsing:	$[_{CG}\ [_{PW}$ (tá.pa)**h**]]	$[_{CG}\ [_{PW}$ ta(pá.**h**o)]]
PW-final mutation:	$[_{CG}\ [_{PW}$ (tá.pa)**k̲**]]	$[_{CG}\ [_{PW}$ ta(pá.**h**o)]]
CG-final epenthesis:	$[_{CG}\ [_{PW}$ (tá.pa)**k**a̲]]	$[_{CG}\ [_{PW}$ ta(pá.**h**o)]]
SR:	tá.pa.ka	ta.pá.ho
UR:	/m-i-tat**er**/	/m-i-tat**er**-a/
prosodic parsing:	$[_{CG}\ [_{PW}$ mi(tá.t**e**)**r**]]	$[_{CG}\ [_{PW}$ (mì.ta)(t**é**.**r**a)]]
PW-final mutation:	$[_{CG}\ [_{PW}$ mi(tá.t**e**)**t̲r̲**]]	$[_{CG}\ [_{PW}$ (mì.ta)(t**é**.**r**a)]]
post-tonic [e]→[i]:	$[_{CG}\ [_{PW}$ mi(tá.t**i̲**)**tr**]]	$[_{CG}\ [_{PW}$ (mì.ta)(t**é**.**r**a)]]
CG-final epenthesis:	$[_{CG}\ [_{PW}$ mi(tá.t**i**)**tr**a̲]]	$[_{CG}\ [_{PW}$ (mì.ta)(t**é**.**r**a)]]
SR:	mi.tá.ti.tra	mì.ta.té.ra

6 Reduplication of WFSs

I now show how this analysis of WFSs yields the correct reduplication patterns, as well as correct predictions for how WFSs behave in non-reduplicative compounds.

Note that, to get the correct surface forms, I must assume that reduplication copies not only the final foot of the base, but any unsyllabified C following the final foot—i.e., a 'maximal' *min*PW is copied from the base: e.g.: [(á.da)**n**] 'slow' + RED → [[(à.da)**n**][(á.da)**n**]]. This follows from McCarthy and Prince's (1995:336) Maximality condition.

6.1 Vowel-initial WFSs

When a vowel-initial WFS reduplicates, the stem-final C in the reduplicant surfaces before a suffix and undergoes Mutation, followed by Epenthesis, when it is CG-final (just as in non-reduplicated stems). In the base, however, Mutation applies to the stem-final C regardless of whether it also applies in the reduplicant, as shown in (54)c,d,g,h:

(54) **Root-final C in WFSs: Suffixed vs. unsuffixed:**

a.	/avo**t**/	ávo**tr**a	'redemption'
b.	/avo**t**-an/	avó**t**-ana	'redeemed' (TT)
c.	/avo**t**=avo**t**/	àvo**tr**=ávo**tr**a	'redemption' (Redup)
d.	/avo**t**=avo**t**-an/	àvo**tr**=avó**t**-ana (*àvo**t**=avót-ana)	'redeemed' (Redup,TT)
e.	/ere**t**/	éri**tr**a	'thought'
f.	/ere**t**-in/	eré**t**-ina	'thought over' (TT)
g.	/ere**t**=ere**t**/	èri**tr**=éri**tr**a	'thought' (Redup)
h.	/ere**t**=ere**t**-in/	èri**tr**=eré**t**-ina (*èri**t**=eré**t**-ana)	'thought over' (Redup,TT)

Since Mutation targets PW-final consonants only, this further demonstrates that the base is at the right edge of a PW domain—i.e., the base and reduplicant are separated by a PW boundary.

Final {*k*,*tr*,*n*} do not delete at the end of the base, since their [–CONT] feature must be preserved in the output. Instead, they syllabify with the initial V of the reduplicant:

(55)

a.	àlo**k**=álok	→	àlo**k**=áloka	[(à.lo)(**k**á.lo)ka]	'shady'
b.	òli**k**=ólik	→	òli**k**=ólika	[(ò.li)(**k**ó.li)ka]	'twisted'
c.	èvo**tr**=évotr	→	èvo**tr**=évotra	[(è.vo)(**tr**é.vo)tra]	'rebounding'
a.	àda**n**=ádan	→	àda**n**=ádana	[(à.da)(**n**á.da)na]	'slow'
e.	àvo**tr**=ávot-an	→	àvo**tr**=avót-ana	[(à.vo)**tr**a(vó.ta)na]	'redeemed' (TT)
f.	èri**tr**=erét-in	→	èri**tr**=erét-ina	[(è.ri)**tr**e(ré.ti)na]	'thought over' (TT)

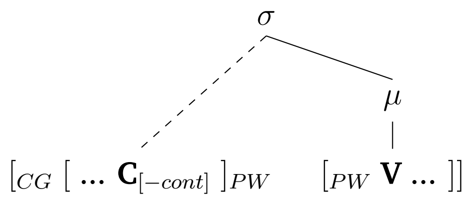
This is in contrast to [+CONT] root-final C (*v*, *s*, or *z*). Recall that these consonants delete at the end of the base even when the following reduplicant begins with a vowel: Stray Erasure applies to base-final {*v*,*s*,*z*} even though these consonants could syllabify as an onset with the following V.

(56)

a.	àro**v**=árov	→	àro=áro	[(à.ro)(á.ro)] *[(à.ro)(**v**á.ro)]	'protect'
b.	àro**v**=aróv-y	→	àro=aróv-y	[(à.ro)a(ró.vy)] *[(à.ro)**v**a(ró.vy)]	'protect-TT:Imp'

I posit a rule which syllabifies a stray [–CONT] C with a following V across a PW boundary, just in case C+V is internal to a CG constituent (rather than at the right edge of a CG):

(57) **Stray Syllabification:** Within a CG constituent, a PW-final [–CONT] consonant syllabifies as an onset with a following PW-initial vowel:



Sample derivations for reduplicated V-initial WFSs, illustrating Stray Syllabification:

(58)	UR:	/aloh=aloh/	
	prosodic parsing:	$[_{CG}$ $[_{PW}$ (à.lo)h] $[_{PW}$ (á.lo)h]]	
	PW-final mutation:	$[_{CG}$ $[_{PW}$ (à.lo)**k**] $[_{PW}$ (á.lo)**k**]]	
	stray syllabification:	$[_{CG}$ $[_{PW}$ (à.lo)] $[_{PW}$ (**ká**.lo)k]]	←
	CG-final epenthesis:	$[_{CG}$ $[_{PW}$ (à.lo)] $[_{PW}$ (ká.lo)**ka**]]	
	SR:	à.lo.ká.lo.ka	
	UR:	/eret=eret-in/	
	prosodic parsing:	$[_{CG}$ $[_{PW}$ (è.re)t] $[_{PW}$ e(ré.ti)n]]	
	PW-final mutation:	$[_{CG}$ $[_{PW}$ (è.re)**tr**] $[_{PW}$ e(ré.ti)n]]	
	post-tonic [e]→[i]:	$[_{CG}$ $[_{PW}$ (è.**ri**)tr] $[_{PW}$ e(ré.ti)n]]	
	stray syllabification:	$[_{CG}$ $[_{PW}$ (è.ri)] $[_{PW}$ **tre**(ré.ti)n]]	←
	CG-final epenthesis:	$[_{CG}$ $[_{PW}$ (è.ri)] $[_{PW}$ tre(ré.ti)**na**]]	
	SR:	è.ri.tre.ré.ti.na	

Stray Syllabification applies in the exact same way in non-reduplicative compounds whose first member is a WFS and whose second member is V-initial:

(59)	a.	há**tra**	+	ény	→	hà**tr**=ény	'up to there'
		/har/		/eny/		[(hà)(**tré**.ny)]	(lit. 'up:to=there')
	b.	tána**na**	+	akánjo	→	tàna**n**=akánjo	'sleeve'
		/tanan/		/akanjo/		[(tà.na)**na**(ká.njo)]	(lit. 'hand=garment')
	c.	áfa**ka**	+	omály	→	àfa**k**=omály	'day before yesterday'
		/afah/		/omaly/		[(à.fa)**ko**(má.ly)]	(lit. 'freed=yesterday')
	d.	éla**tra**	+	angídina	→	èla**tr**=angídina	'sheer fabric'
		/elar/		/angidin/		[(è.la)**tra**(ngí.di)na]	(lit. 'wing=dragonfly')

(60)	UR:	/afah=omaly/	
	prosodic parsing:	$[_{CG}$ $[_{PW}$ (à.fa)h] $[_{PW}$ o(má.ly)]]	
	PW-final mutation:	$[_{CG}$ $[_{PW}$ (à.fa)**k**] $[_{PW}$ o(má.ly)]]	
	stray syllabification:	$[_{CG}$ $[_{PW}$ (à.fa)] $[_{PW}$ **ko**(má.ly)]]	←
	SR:	à.fa.ko.má.ly	
	UR:	/elar=angidin/	
	prosodic parsing:	$[_{CG}$ $[_{PW}$ (è.la)r] $[_{PW}$ a(ngí.di)n]]	
	PW-final mutation:	$[_{CG}$ $[_{PW}$ (è.la)**tr**] $[_{PW}$ a(ngí.di)n]]	
	stray syllabification:	$[_{CG}$ $[_{PW}$ (è.la)] $[_{PW}$ **tra**(ngí.di)n]]	←
	CG-final epenthesis:	$[_{CG}$ $[_{PW}$ (è.la)] $[_{PW}$ tra(ngí.di)**na**]]	
	SR:	è.la.tra.ngí.di.na	

Note Keenan and Polinsky (1998:584–585) point to reduplication of V-initial WFSs as an argument against Erwin's (1996) analysis of WFSs as underlyingly C-final. K&P argue that if a root like *avotra* is underlyingly /avot/ (instead of /avotra/, as they assume), then we'd incorrectly predict a form like *avot-ana* to reduplicate as **avo**t**-avot-ana* rather than *avo**tr**-avot-ana*. K&P's argument relies on the implicit assumption that a base–reduplicant boundary is of the same morpho-phonological type as the stem–suffix boundary. Under my analysis this assumption does not hold (the structure is *avotr=avot-ana*), and accordingly this argument against C-final roots does not go through.

6.2 Consonant-initial WFSs and C-Fusion

When a consonant-initial WFS is reduplicated, the final C in the base invariably undergoes Mutation to become {*k*,*tr*,*n*}, since it is at the right edge of a PW. In the reduplicant, the underlying final C surfaces before a suffix and undergoes Mutation PW-finally:

(61)	a.	/fanta**r**=fanta**r**/	→	fànta**tr**=fánta**tr**	'known=RED'
	b.	/fanta**r**=fanta**r**-in/	→	fànta**tr**=fantá**r**-in	'known=RED-TT'

When the reduplicant ends in {*k*,*tr*,*n*}, Epenthesis applies to allow syllabification of the final C. However, Epenthesis does not apply between the base and the reduplicant to break up an illicit CC sequence. This is because **Epenthesis only targets the right edge of a CG**. Instead of triggering Epenthesis, the final C of the base merges across the PW boundary with the initial C of the reduplicant to form a single segment: e.g., *tr* and *f* merge to form *p*. I refer to this as **C-Fusion**.

(62)	a.	fànta**tr**=**f**ántatr	→	fànta=**p**ántatr**a**	'known=RED'
				*fàntatr**a**=fántatr**a**	
	b.	fànta**tr**=**f**antár-in	→	fànta=**p**antárin**a**	'known=RED-TT'
				*fàntatr**a**=fantárin**a**	

The output of C-Fusion depends on the [±CONT] feature of the initial C in the reduplicant:

- **WFS begins with [–CONT] C:**
  Base-final *k* and *tr* disappear as a result of merger, leaving the initial C of the reduplicant unchanged (63); final *n* merges with the initial C of the reduplicant to form a prenasalized segment (64):

(63)	a.	tàpa**k**=**t**ápak	→	tàpa=**t**ápaka	[(tà.pa)(**t**á.pa)ka]	'cut, split'
	b.	màsa**k**=**m**ásak	→	màsa=**m**ásaka	[(mà.sa)(**m**á.sa)ka]	'cooked; ripe'
	c.	pèra**tr**=**p**ératr	→	pèra=**p**ératra	[(pè.ra)(**p**é.ra)tra]	'ring'
	d.	latàba**tr**=**t**ábatr	→	latàba=**t**ábatra	[la(tà.ba)(**t**á.ba)tra]	'table'

(64)	a.	kàto**n**=**k**áton	→	kàto=**nk**átona	[(kà.to)(**nk**á.to)na]	'shutting'
	b.	tàola**n**=**t**áolan	→	tàola=**nt**áolana	[(tào.la)(**nt**áo.la)na]	'bone'
	c.	tsànga**n**=**ts**ángan	→	tsànga=**nts**ángana	[(tsà.nga)(**nts**á.nga)na]	'standing'

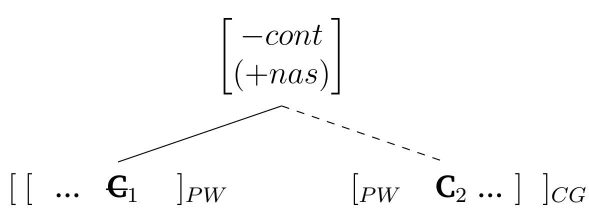
- **WFS begins with [+cont] C:**
  Merger of base-final *k*, *tr* with the initial C of the reduplicant causes that C to become the closest corresponding non-continuant (65); base-final *n* merges with the initial C to form the corresponding prenasalized non-continuant (66):

(65)	a.	fàsi**k**=**f**ásik	→	fàsi=**p**ásika	[(fà.si)(**p**á.si)ka]	'sand(y)'
	b.	vàro**tr**=**v**árotr	→	vàro=**b**árotra	[(và.ro)(**b**á.ro)tra]	'selling'
	c.	sìtra**k**=**s**ítrak	→	sìtra=**ts**ítraka	[(sì.tra)(**ts**í.tra)ka]	'pleasing'
	d.	zàva**tr**=**z**ávatr	→	zàva=**j**ávatra	[(zà.va)(**j**á.va)tra]	'thing'
	e.	làvi**tr**=**l**ávitr	→	làvi=**d**ávitra	[(là.vi)(**d**á.vi)tra]	'far'
	f.	rèsa**k**=**r**ésak	→	rèsa=**dr**ésaka	[(rè.sa)(**dr**é.sa)ka]	'conversation'
	g.	hèlo**k**=**h**élok	→	hèlo=**k**éloka	[(hè.lo)(**k**é.lo)ka]	'fault'

(66)	a.	vèlo**n**=**v**élon	→	vèlo=**mb**élona	[(vè.lo)(**mb**é.lo)na]	'alive'
	b.	sìtra**n**=**s**ítran	→	sìtra=**nts**ítrana	[(sì.tra)(**nts**í.tra)na]	'cured'
	c.	ràvi**n**=**r**ávin	→	ràvi=**ndr**ávina	[(rà.vi)(**ndr**á.vi)na]	'leaf'
	d.	hàinga**n**=**h**áingan	→	hàinga=**nk**áingana	[(hài.nga)(**nk**ái.nga)na]	'fast'

I derive these changes through a CG-internal rule which spreads the [–cont,(+nas)] features of the PW-final C onto the following PW-initial C, followed by segmental deletion of PW-final C:

(67) **CG-internal C-Fusion:** Internal to a CG domain, when a PW-final [–cont] consonant C_1 (= *k*,*tr*,*n*) comes before a PW-initial consonant C_2, the [–cont] and [+nas] features of C_1 associate to C_2, and C_1 deletes:



Sample outputs of C-Fusion are shown below. Note spreading of [+nas] onto a [–sonorant] C is spelled out as a prenasalized obstruent; spreading of [–cont] onto *l* results in *d*.

(68)	{k,tr}	+	f	→	p	n	+	f	→	mp
	{k,tr}	+	v	→	b	n	+	v	→	mb
	{k,tr}	+	l	→	d	n	+	l	→	nd
	{k,tr}	+	r	→	dr	n	+	r	→	ndr
	{k,tr}	+	s	→	ts	n	+	s	→	nts
	{k,tr}	+	h	→	k	n	+	h	→	nk

C-Fusion, Stray Syllabification, and Epenthesis all apply in order to 'fix' a structure where a [–cont] occurs at the end of a PW (in violation of the No Coda constraint). However, these rules apply in different domains: C-Fusion and Stray Syllabification apply CG-internally (before a consonant and vowel, respectively), whereas Epenthesis applies when the PW is at the right edge of a CG.

Sample derivations showing application of Mutation, C-Fusion, and Epenthesis when a C-initial WFS is reduplicated:

(69)	UR:	/resah=resah/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (rè.sa)h] [$_{PW}$ (ré.sa)h]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (rè.sa)**k**] [$_{PW}$ (ré.sa)**k**]]
	CG-internal C-fusion:	[$_{CG}$ [$_{PW}$ (rè.sa)] [$_{PW}$ (**dr**é.sa)k]]
	CG-final epenthesis:	[$_{CG}$ [$_{PW}$ (rè.sa)] [$_{PW}$ (dré.sa)**ka**]]
	SR:	rè.sa.dré.sa.ka
	UR:	/velom=velom/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (vè.lo)m] [$_{PW}$ (vé.lo)m]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (vè.lo)**n**] [$_{PW}$ (vé.lo)**n**]]
	CG-internal C-fusion:	[$_{CG}$ [$_{PW}$ (vè.lo)] [$_{PW}$ (**mb**é.lo)n]]
	CG-final epenthesis:	[$_{CG}$ [$_{PW}$ (vè.lo)] [$_{PW}$ (mbé.lo)**na**]]
	SR:	vè.lo.mbé.lo.na
	UR:	/fantar=fantar-in/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (fà.nta)r] [$_{PW}$ fa(ntá.ri)n]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (fà.nta)**tr**] [$_{PW}$ fa(ntá.ri)n]]
	CG-internal C-fusion:	[$_{CG}$ [$_{PW}$ (fà.nta)] [$_{PW}$ **p**a(ntá.ri)n]]
	CG-final epenthesis:	[$_{CG}$ [$_{PW}$ (fà.nta)] [$_{PW}$ pa(ntá.ri)**na**]]
	SR:	fà.nta.pa.ntá.ri.na

As predicted by my analysis, the same C-Fusion process applies in non-reduplicative compounds whose first member is a WFS and whose second member is C-initial:

(70)	a.	áfa**ka**	+	**l**óza	→	àfa=**d**óza	'free of danger'
		/afah/		/loza/		[(à.fa)(**d**ó.za)]	(lit. 'freed=danger')
	b.	tápa**ka**	+	**v**ólana	→	tàpa=**b**ólana	'fortnight'
		/tapah/		/volan/		[(tà.pa)(**b**ó.la)na]	(lit. 'split=month')
	c.	hévi**tra**	+	**r**átsy	→	hèvi=**dr**átsy	'bad thoughts'
		/hever/		/ratsy/		[(hè.vi)(**dr**á.tsy)]	(lit. 'thought=bad')
	d.	sóra**tra**	+	**f**óhy	→	sòra=**p**óhy	'shorthand'
		/sorat/		/fohy/		[(sò.ra)(**p**ó.hy)]	(lit. 'writing=short')
	e.	sóra**tra**	+	**t**ánana	→	sòra=**t**ánana	'manuscript'
		/sorat/		/tanan/		[(sò.ra)(**t**á.na)na]	(lit. 'writing=hand')
	f.	záva**tra**	+	**m**anéno	→	zàva=**m**anéno	'musical instrument'
		/zavar/		/m-an-neno/		[(zà.va)**m**a(né.no)]	(lit. 'thing=make:noise')
	g.	vóro**na**	+	**v**azáha	→	vòro=**mb**azáha	'duck'
		/voron/		/vazaha/		[(vò.ro)**mb**a(zá.ha)]	(lit. 'bird=foreigner')
	h.	óro**na**	+	**s**áka	→	òro=**nts**áka	'cat's nose'
		/oron/		/saka/		[(ò.ro)(**nts**á.ka)]	(lit. 'nose=cat')
	i.	énti**na**	+	**m**iláza	→	ènti=**m**iláza	'predicate'
		/ent-in/		/m-i-laza/		[(è.nti)**m**i(lá.za)]	(lit. 'carried=say')

(71) UR: /voron=vazaha/
prosodic parsing: $[_{CG}$ $[_{PW}$ (vò.ro)**n**] $[_{PW}$ **v**a(zá.ha)]]
CG-internal C-fusion: $[_{CG}$ $[_{PW}$ (vò.ro)] $[_{PW}$ **mb**a(zá.ha)]] ←
SR: vò.ro.mba.zá.ha

UR: /hever=ratsy/
prosodic parsing: $[_{CG}$ $[_{PW}$ (hè.ve)**r**] $[_{PW}$ (**r**á.tsy)]]
PW-final mutation: $[_{CG}$ $[_{PW}$ (hè.ve)**tr**] $[_{PW}$ (rá.tsy)]]
post-tonic [e]→[i]: $[_{CG}$ $[_{PW}$ (hè.v**i**)**tr**] $[_{PW}$ (**r**á.tsy)]]
CG-internal C-fusion: $[_{CG}$ $[_{PW}$ (hè.vi)] $[_{PW}$ (**dr**á.tsy)]] ←
SR: hè.vi.drá.tsy

The outputs of *n*+C Fusion are reminiscent of, but crucially not identical to, the outputs that obtain when a prefix ending in a nasal attaches to a C-initial stem (**Nasal Substitution**). As an example of the difference: *n* and *s* undergo C-Fusion to become *nts*; but when a prefix ending in *n* attaches to a stem beginning with *s*, they surface as *n*:

(72) a. **C-Fusion:** /sitra**n**=**s**itran/ → sìtra**nts**ítrana 'cured=RED'
b. **Nasal substitution:** /m-a**n**-**s**orat/ → ma**n**óratra 'write' (AT)

The fact that Nasal Substitution and C-Fusion yield distinct outputs further supports my claim that the reduplication involves compounding, not affixation. Nasal Substitution applies at prefix–stem boundaries within a PW domain, whereas C-Fusion applies across a PW boundary within a CG.

7 Residual cases: Monomoraic roots and stems with final stress

A handful of lexical roots have URs consisting of a single stressed light syllable, often with a final consonant:

(73) **Monomoraic roots:**

	Root	TT:Imp	TT		UR
a.	zó	zó-y	zó-ina	'afflicted'	/zo/
b.	lá	láv-o	láv-ina	'refuse'	/lav/
c.	ló	lóv-y	lóv-ina	'rotten'	/lov/
d.	pý	píz-o	píz-ina	'twinkle'	/piz/
e.	dóna	dón-y	dón-ina	'knock'	/don/
f.	fóka	fóh-y	fóh-ina	'inhale'	/foh/
g.	léna	lém-o	lém-ana	'wet'	/lem/
h.	rítra	rít-o	rít-ina	'evaporated'	/rit/

I interpret this to mean that a PW can consist of a **degenerate (monomoraic) foot** just in case it does not include enough segmental material to form a binary foot:[7]

[7] There's a bit more to be said here. Note when a monomoraic root like /lav/ 'refuse' carries a prefix but no suffix, the root is still parsed as a degenerate foot: e.g., /m-an-lav/ 'refuse (AT)' is realized as [ma(ndá)]

(74)	a.	/zo/	→	[$_{PW}$ (zó)]	d.	/lem/	→	[$_{PW}$ (lé)na]
	b.	/lav/	→	[$_{PW}$ (lá)]	e.	/lem-o/	→	[$_{PW}$ (lé.mo)]
	c.	/lav-o/	→	[$_{PW}$ (lá.vo)]	f.	/lem-an/	→	[$_{PW}$ (lé.ma)na]

When a monomoraic root undergoes reduplication, the root is copied and the output derived in accordance with the rules laid out in the previous sections:

(75)	a.	/zo=zo/	→	zò=zó	d.	/do**n**=do**n**/	→	dò=**nd**ó**na**
	b.	/la**v**=la**v**/	→	là=lá	e.	/le**m**=le**m**/	→	lè=**nd**é**na**
	c.	/la**v**=la**v**-o/	→	là=lá**v**o	f.	/le**m**=le**m**-an/	→	lè=**nd**é**m**-ana

(76)	UR:	/rit=rit/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (rì)t] [$_{PW}$ (rí)t]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (rì)**tr**] [$_{PW}$ (rí)**tr**]]
	CG-internal C-fusion:	[$_{CG}$ [$_{PW}$ (rì)] [$_{PW}$ (**dr**í)tr]]
	CG-final epenthesis:	[$_{CG}$ [$_{PW}$ (rì)] [$_{PW}$ (drí)**tra**]]
	SR:	rì.drí.tra
	UR:	/lem=lem-an/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (lè)m] [$_{PW}$ (lé.ma)n]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (lè)**n**] [$_{PW}$ (lé.ma)n]]
	CG-internal C-fusion:	[$_{CG}$ [$_{PW}$ (lè)] [$_{PW}$ (**nd**é.ma)n]]
	CG-final epenthesis:	[$_{CG}$ [$_{PW}$ (lè)] [$_{PW}$ (ndé.ma)**na**]]
	SR:	lè.ndé.ma.na

Notice these reduplicated forms feature adjacent stressed light syllables (e.g., *dò.ndó.na*). This provides further evidence for a PW boundary between the base and the reduplicant. Internal to a PW, right-to-left parsing of light syllables into feet will necessarily result in a sequence of alternating stressed and unstressed syllables: [$_{PW}$ ...(CV̀.CV)(CV́.CV)].

Positing monomoraic URs for the roots in (73), we capture (near-)minimal pairs for reduplication in terms of the underlying shape of the root:

(77)	a.	fóka	fòka=fóka	'idiot(ic)'	UR: /foka/	(TT: foká-ina)
	b.	fóka	fò=**p**óka	'inhale'	UR: /foh/	(TT: fóh-ina)
	c.	ména	mèna=ména	'red'	UR: /mena/	(TT: mená-ina)
	d.	léna	lè=**nd**éna	'wet'	UR: /lem/	(TT: lém-ana)
	e.	sáina	sàina=sáina	'flag'	UR: /saina/	
	f.	sáina	sài=**nts**áina	'mind'	UR: /sain/	

rather than *[(má.nda)]. This suggests a constraint requiring that primary stress fall on the root. I leave an account of this for future research.

Note also that some roots which appear monomoraic on the surface may be underlyingly bimoraic. E.g., *bé* 'many' has the suffixed imperative form *beáz-o*, suggesting the UR is /beaz/; in unsuffixed forms, the [a] would be unstressed and would thus delete following stressed [e] (see footnote 6).

(78)

	UR:	/foka=foka/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (fò.ka)] [$_{PW}$ (fó.ka)]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (fò.ka)] [$_{PW}$ (fó.ka)]]
	CG-int. fusion:	[$_{CG}$ [$_{PW}$ (fò.ka)] [$_{PW}$ (fó.ka)]]
	CG-final epenth:	[$_{CG}$ [$_{PW}$ (fò.ka)] [$_{PW}$ (fó.ka)]]
	SR:	fò.ka.fó.ka
	UR:	/foh=foh/
	prosodic parsing:	[$_{CG}$ [$_{PW}$ (fò)h] [$_{PW}$ (fó)h]]
	PW-final mutation:	[$_{CG}$ [$_{PW}$ (fò)**k**] [$_{PW}$ (fó)**k**]]
	CG-int. fusion:	[$_{CG}$ [$_{PW}$ (fò)] [$_{PW}$ (**p**ó)k]]
	CG-final epenth:	[$_{CG}$ [$_{PW}$ (fò)] [$_{PW}$ (pó)**ka**]]
	SR:	fò.pó.ka

The fact that degenerate feet are permitted might provide a way to handle apparent exceptions to the Malagasy stress rule, where a 2- or 3-syllable stem ends in a stressed light syllable. As with monomoraic roots, only the final syllable is copied in reduplication, yielding a reduplicated stem with adjacent stressed light syllables:

(79) **Reduplication of stems with a stressed final light syllable:**

a.	vovó	vovò=vó	'barking'
b.	omé	omè=mé	'gift'
c.	lèhibé	lèhibè=bé	'large'

In the case of *vovó* and *omé*, which appear to be roots, we might postulate that they are lexically specified such that the final light syllable projects a degenerate foot, with URs /vo($_{F}$vo)/ and /o($_{F}$me)z/ respectively (evidence for a thematic consonant in /o($_{F}$me)z/ comes from suffixed forms such as *àn-omé**z**-ana* 'give' (CT)). Reduplication would then proceed as expected, with the final foot of the base copied to fill the minimal PW template for the reduplicant:

(80)

a.	[$_{CG}$ [$_{PW}$ vo(vo)] [$_{minPW}$ RED]]	→	[$_{CG}$ [$_{PW}$ vo(vò)] [$_{PW}$ (vó)]]
b.	[$_{CG}$ [$_{PW}$ o(me)z] [$_{minPW}$ RED]]	→	[$_{CG}$ [$_{PW}$ o(mè)] [$_{PW}$ (mé)]]

Lèhibé, on the other hand, might be analyzable as a compound: *lèhi=bé*. Plausibly it is comprised of the stem *bé* 'many', which can function independently as a PW (reduplicated form *bè=bé*), plus a stem *lèhi*, which also appears in *lèhiláhy* 'man' (the latter is possibly a compound *lèhi=láhy*, given that *láhy* 'male' occurs independently as a morpheme).

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