

## Chaha labialization and palatalization as coalescence

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## Banksira's claims

- Chaha suffixes causing labialization and palatalization in different positions of the word are not floating affixes.
- They should be analysed as containing underlyingly full segments, /w/ and /y/.
- At the underlying level, their order is fixed.
- The process of coalescence deriving their surface position and realization is phonological rather than morphological in nature.



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## Outline

- 1 The impersonal and the t-converb morphemes
- 2 Impersonal subject and the t-converb in strong verbs
- 3 Impersonal allomorphs in defective verbs

The impersonal and the t-converb morphemes

## The impersonal and the t-converb morphemes



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The impersonal and the t-converb morphemes

### The impersonal - introduction

The impersonal is expressed with rounding, manifested in three ways:

- | (1) Personal  | Impersonal  |
|---|---|
| a. labialization of a root consonant:<br>t'irək'<br>dry.you.m.sg<br>'Dry (2MSG)!'<br>an independent segment [w]:<br>t'irək <sup>y</sup> -tə<br>dry.CON-CON<br>'he/it having dried'<br>a round vowel [o] (result of coalescence with ə):<br>t'irək <sup>y</sup> -t-ə<br>dry.CON-CON-one<br>'one having dried' (used adverbially) | t'irək <sup>w</sup> -im / t'irək <sup>w</sup> -i<br>dry.one-CON / dry.one-MVM<br>'one having dried' / 'Let one dry!'<br>t'irək <sup>y</sup> -tə-w-i<br>dry.CON-CON-one-MVM<br>'one having dried' (used as a verb)<br>t'irək <sup>y</sup> -t-o<br>dry.CON-CON-one<br>'one having dried' (used adverbially) |



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### The t-converb - introduction

The t-converb is expressed with the suffix /tə/ and palatality/frontness:

- | (2) 2MSG Imperative   | 3MSG t-converb   |
|---|--|
| a. surface palatalization of velars:<br>t'irək'<br>dry.you.m.sg<br>'Dry (2MSG)!'<br>deep palatalization of alveolars:<br>kft<br>open.you.m.sg<br>'Open (2MSG)!'<br>fronting of /i, ə/ to [i, e]<br>xirəm<br>spend a year.you.m.sg<br>'Spend a year (2MSG)!' | t'irək <sup>y</sup> -tə<br>dry.CON-CON<br>'he/it having dried'<br>kftç-itə<br>open.CON-CON<br>'he/it having opened'<br>xirəm-tə<br>spend a year.CON-CON<br>'he/it having spent a year' |



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## Floating or regular affixes?

Because reflexes of the impersonal and the *t*-converb can appear in different parts of the word, they have been analysed as floating affixes.

Properties of floating affixes:

- 1 they're less than a full segment (a feature or feature bundle)
- 2 their position is variable



## Floating or regular affixes?

Banksira's claims:

- 1 they're derived from full segments
  - they are sometimes realized as such (see 1b) but the data has gone unnoticed
  - their positional realizations mirror the realization of underlying glides /w/ and /y/
- 2 underlyingly, their position fixed (as in 3 below); their non-local realization is the result of the phonological processes of coalescence

- (3) verb *t*-converb impersonal case 3MSG tense/  
subject object *m*-converb/  
MVM
- ... /yfa/ /w/ ... /wə/



## Allophones of /w, y/ and their contextual realizations

## (4) Pre-vocalic glides

Underlying Representation	/was/	↓	σ	/yfa/	↓	σ
	w ə s	↓	/	y t f a	↓	/
Syllabification		↓	[w]	[y:fa]	↓	'lid'
Surface Representation		↓	'borrowed object'			



## Allophones of /w, y/ and their contextual realizations

## (5) Post-V Coalescence

Underlying Representation	/a-wta/	↓	a w t a	↓	/a-yf/
	[+round]	↓	[ɔ-t'a]	↓	a y f
Coalescence		↓		↓	[-back]
Surface Representation		↓		↓	[ɛ-f]

'Take sth out (MSG)!' 'Cover with a lid (MSG)'



## Allophones of /w, y/ and their contextual realizations

## (6) Post-C Coalescence

Underlying Representation	/k'wɪm/	↓	k' w m	↓	/k'yt/
	[DOR]	↓	[k'w:ɪm]	↓	k' y t
Coalescence (epenthesis)		↓		↓	[COR]
Surface Representation		↓		↓	[k'yt]

'Stand still (MSG)!' 'Weaken (MSG)'



## Allophones of /w, y/: summary

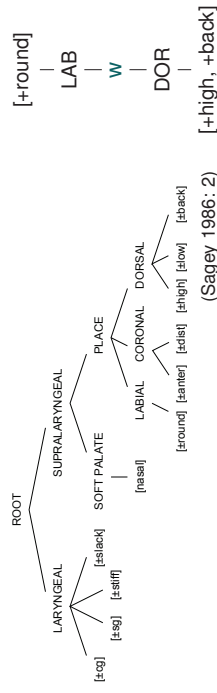
- (7) Context /w/ /y/
- Pre-V: {#, V}\_\_V [w] [y]  
(glides fill in the onset position)  
Compare with [t'ɾək<sup>y</sup>-tə-w-ɪ], 'one having dried' (used as a V)
  - Post-V: V\_\_C, #} [ɔ], [o] or [u] [ɛ], [e] or [i]  
(glides cannot appear in the coda (?) and diphthongs are disallowed)  
Compare with [t'ɾək<sup>y</sup>-t-o], 'one having dried' (used as and Adv)
  - Post-C: C\_\_ C<sup>w</sup>, C<sup>y</sup> or both C<sup>y</sup>  
(glides cannot vocalize and branching onsets are prohibited)  
Compare with [t'ɾək<sup>w</sup>-ɪ], 'Let one dry!'



## Preliminaries

**Strong verbs:** roots that only contain [+consonantal] radicals (as opposed to **defective verbs** that contain /w/, /y/ or /A/).

**Assumptions:** feature geometry and autosegmental representation



## Representation of selected sounds

(8)	/w/	/y/	/kʲ/	/ə/
	[+round]	[+high, -back]	[+high, -back]	[+high, +back]
	LAB	COR	COR	COR?
	w	y	kʲ	ə
	DOR		DOR	DOR?
	[+high, +back]			((+ATR?))

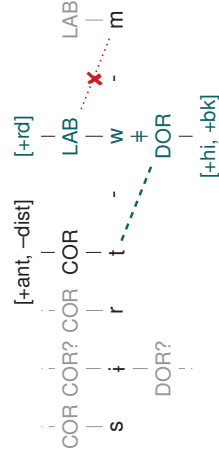


## Deriving the impersonal allomorphs

**Final Palatalization:** the last root consonant becomes alveopalatal when it is an alveolar obstruent.

(Post-C /w/ coalesces with an alveolar obstruent if this is the last root consonant')

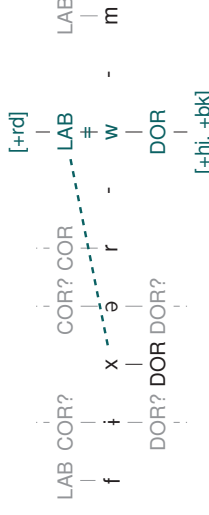
(10)	2MSG imperative	impersonal m-converb (-w-m/)
sirt	sirtč-i-m	'cauterize'



## Deriving the impersonal allomorphs

**Rightmost Labialization:** the rightmost velar or labial is labialized ('Post-C /w/ coalesces with the nearest preceding labial or velar')

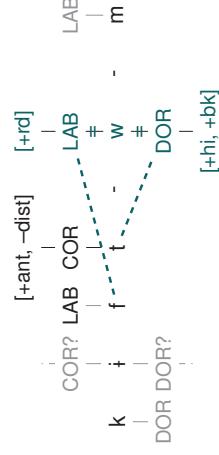
(9)	2MSG imperative	impersonal m-converb (-w-m/)
nɪkʲɪm	nɪkʷɪ-i-m	'cull'
fɪxʲər	fɪxʷər-i-m	'proliferate'
bɪdər	bʷɪdər-i-m	'ahead'



## Deriving the impersonal allomorphs

**Rightmost Labialization and Final Palatalization together.**

(11)	2MSG imperative	impersonal m-converb (-w-m/)
nɪkʲtʰ	nɪkʷtʰ-i-m	'kick'
kɪft	kɪftʷtʰ-i-m	'open'
gɪrɛz	gʷɪrɛz-i-m	'aim'





## Preliminaries

## Impersonal allomorphs in defective verbs

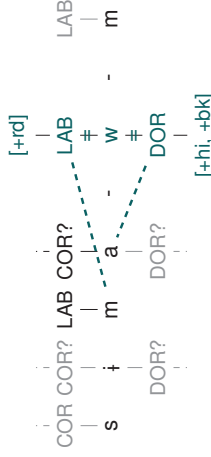
**Defective verbs:** verbs in which /A/, /w/ and /y/ appear as radical consonants.

/A/, which represents an ancient guttural, is realized as [ə] or [a] but patterns with consonants (Kenstowicz & Banksira 1999).

### The impersonal with *a*-final verb stems

#### (18) 2MSG imperative impersonal *m*-converb (/w-m/)

gɪβa	gɪwə-m	'enter'
sɪma	sɪm <sup>w</sup> ə-m	'listen'
nɪsa	nɪçə-m	'pick him/it up'
fɪta	f <sup>w</sup> ɪçə-m	'untie'
sɪra	sɪrə-m	'reach high'



### The impersonal with nonfinal *C<sup>y</sup>* verb stems

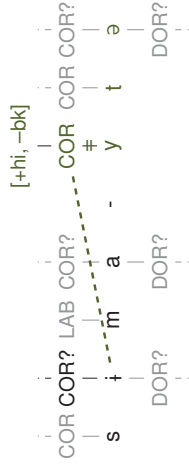
(20)	3MSG	Perfective impersonal	Imperative 2MSG impersonal
a.	k <sup>y</sup> ət'ər-ə-m nək <sup>y</sup> ər-ə-m	k <sup>y</sup> ət'ər-+m nək <sup>y</sup> ər-+m	k'ət'ir nək'ir
			'connect' 'win a lawsuit'
b.	bək <sup>y</sup> ər-ə-m mek <sup>y</sup> ər-ə-m	b <sup>w</sup> ək <sup>y</sup> ər-+m m <sup>w</sup> ək <sup>y</sup> ər-+m	bək'ir mek'ir
			'brew' 'set on fire'

(21) *y* → ∅ / imperative

### The *t*-converb with *a*-final verb stems

#### (19) 2MSG imperative *t*-converb (/y-tə/)

gɪβa	g <sup>y</sup> ɪβə-tə	'enter'
sɪma	sɪmə-tə	'listen'
nɪsa	nɪçə-tə	'pick him/it up'
fɪta	fɪçə-tə	'untie'
sɪra	sɪyə-tə	'reach high'



### The impersonal with final *C<sup>y</sup>* verb stems

(22)	2MSG /verb-r-a/	2MPL /verb-o-ra/	impersonal /verb-w-r-a/
a.	mək <sup>y</sup> -r-a	mək'-o-r-a	mək <sup>w</sup> -r-a
			'Prune for her!'
b.	k'əyə-r-a	k'ər-o-r-a	k <sup>w</sup> ərə-r-a
			'Wait for her!'
c.	bɪrəç'-r-a	bɪrət'-o-r-a	b <sup>w</sup> ɪrəç'-r-a
			'Scatter for her!'

(23) *y* → ∅ / C \_\_\_ + [-cons, -back]

The impersonal with final C<sup>y</sup> verb stems

(24)	UR	2MSG	impersonal	impersonal
		<i>m-converb</i>	(main verb)	<i>m-converb</i>
	$\sqrt{k'nty}$	k'əmt <sup>y</sup> -m	k'əmt <sup>y</sup> -w-i	k'əmt <sup>y</sup> -w-m
		k'əmč'-i-m	k'əm <sup>w</sup> č'-i	k'əm <sup>w</sup> č'-i-m

(25)	UR	3MSG	impersonal	impersonal
		perfective	(main verb)	<i>m-converb</i>
	$\sqrt{k'nty}$	k'imat'əy-m	k'imat'əy-w-i-m	k'imat'əy-w-m
		k'iməč'ə-m	k'imat'ə-w-i-m	k'imat'-o-m

(26) **y** → w / V\_\_w (27) ww → w

The impersonal with final C<sup>y</sup> verb stems

(28)	UR	impersonal	impersonal	3MSG
		'be shy'	(main verb)	<i>m-converb</i>
	$\sqrt{k'nty}$	k'imat'əy-w-i-m	k'imat'əy-w-m	k'imat'əy-m
	(26)	k'imat'əw-w-i-m	k'imat'əw-w-m	—
	(27)	k'imat'ə-w-i-m	k'imat'ə-w-m	—
		k'imat'ə-w-i-m	k'imat'-o-m	k'iməč'ə-m



## Radical independence

(29)	UR	impersonal	impersonal	3MSG
		(main verb)	<i>m-converb</i>	perfective
	$\sqrt{t'rkw}$	t'irək'əw-w-i-m	t'irək'əw-w-m	t'irək'əw-m
	(26)	t'irək'əw-w-i-m	t'irək'əw-w-m	—
	(27)	t'irək'ə-w-i-m	t'irək'ə-w-m	—
		t'irək'ə-w-i-m	t'irək'-o-m	t'irək'əw-m

(30) **Radical independence:** Radical /w,y/ cannot coalesce with a vowel except when deletion would ensue otherwise.



## Deriving radical independence

(31)	'become deaf'	impersonal	impersonal	3MSG
	UR	(main verb)	<i>m-converb</i>	perfective
	Post-C		$\sqrt{t'rkw}$	
	Coalescence		t'rk <sup>w</sup>	
	Tier conflation & affixation	t'irək <sup>w</sup> ə-w-i-m	t'irək <sup>w</sup> ə-w-m	t'irək <sup>w</sup> ə-m
	Post-V			
	Coalescence	—	t'irək <sup>w</sup> o-m	—
	SR	[t'irək <sup>w</sup> əwim]	[t'irək <sup>w</sup> om]	[t'irək <sup>w</sup> əm]



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- Kenstowicz, Michael & Banksira, Degif Petros. 1999. Reduplicative identity in Chaha. *Linguistic Inquiry* 4.
- Sagey, Elizabeth. 1986. The representation of features and relations in non-linear phonology. Doctoral dissertation, Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts.

Thank you!

