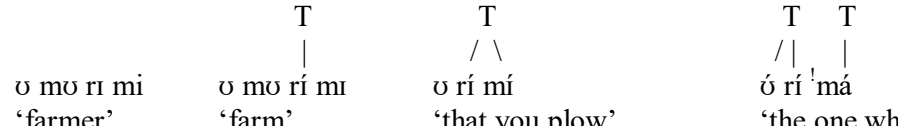


<https://bit.ly/3Svzdge> for full paper

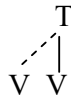
- (1) omorimi 'farmer' omorími 'farm'
orími 'that you plow' órí'má 'the one who will plow'

- (2) 


o mu ri mi 'farmer' o mu rí mi 'farm' o rí mí 'that you plow' ó rí 'má 'the one who will plow'

- (3) omoundo 'person' moritu 'heavy'
móráhi 'good' omoundo moritu 'heavy person'
ómóúndó móritú móráhi 'good, heavy person'

- (4) *Leftward Spread* (Optionality and word-initial exclusion require further study)



- (5) am'béere malla 'some milk' am'bée'ré mállá márahi 'some good milk'

- (6) 

ambée'ré mállá márahi

- (7) *Toneless* *Toned*
ko[ganagana 'to think' ko[vódong'ana 'to go around'
ko[taandora 'to tear' ko[chéeriza 'to greet'
ko[goriza 'to buy' ko[káraga 'to judge'
ko[biima 'to measure' ko[déeka 'to cook'
ko[raga 'to promise' ko[véga 'to shave'
ko[sha 'to grind' ko[tyá 'to fear'

- (8) → vááka[rakooriza vááka[káraangiza completive-focus recent past
→ váá[rakoorizi váá[káraangizi completive-focus hesternal perfective
vara[rakooriza vara[káraangiza immediate future
vaako[rakooriza vaako[káraangiza immediate past
varika[rakoorizi varika[káraangizi future rika-e
vari[rakoorizi vari[káraangizi future ri-e
umo[rakoorizi umo[káraangizi i-nominalization

- (9) *M* *Toneless* *Toned* *exemplar tense* *melody*
2 vari[rákóúrizá vara[karáángízá indefinite future $T_{\beta,F}$
3 ni va[rákóúrizi ni va[karáángizi crastinal future T_2
4 váá[rákooriza váá[káraangiza remote past T_1
5 rakooriza karáángízá imperative $T_{\beta,F}$
6 ta[rákóúrizá ta[karaanga negative imperative $T_{\beta,F} \sim T_{\beta}$
~ta[karáángá
7a ka[rákóú'rizí ka[karáá'ngízí immediate imperative $T_2 + T_F$
7b vaaka[rá'kóúrizá vaaka[ká'ráángízá explanatory past $T_1 + T_F$
8 váá[rakooriza váá[karaangiza stative T_l
9 vaa[rákóúrizí vaa[karáángízí hesternal perfective T_F
10 va[rákóúrizi va[karaangizi hodiernal perfective T_{β}
11 vara[rakooriza vara[karaangiza counterfactual $T_{F,L}$

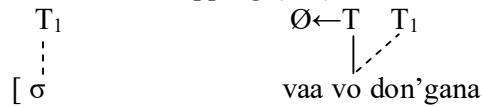
- (10) $T \rightarrow \emptyset$ T' *Tone Deletion*
 \downarrow
 V

- (11) *Elementary tone feature synopsis*

T_1	First stem syllable	T_2	Second stem syllable
T_{I}	Word-initial	T_{β}	Second stem vowel
T_F	Word-final	T_L	Not raised pitch
T_L	(final or result of deletion)		

- (12) **M4** *remote: toneless* *remote: toned*
 váá[ríma ‘they plowed’ váá[véga ‘they shaved’
 váá[várizá ‘they counted’ váá[káraga ‘they judged’
 váá[gánagana ‘they thought’ váá[vódong’ana ‘they went around’

- (13) *Stem-initial mapping (M4)*



- (14) **M8** *stative: toneless*

váá[ríma	‘they are having plowed’	váá[vega	‘they are having shaved’
váá[variza	‘they are having counted’	váá[karaga	‘they are having judged’
váá[ganagana	‘they are having thought’	váá[vodong’ana	‘they are having gone around’

- stative: toned*

- (15) T_{I} *Word-initial mapping (M8)*

\vdots
 $[\# \sigma$

- (16) **M3** *subjunctive toneless*

ni va[rákóórizi	‘make release’	ni va[karáángizi	‘make fry’	<i>toned</i> gloss: ‘they will __’
ni va[gánágániri	‘think for’	ni va[vódóng’ániri	‘go around for’	
ni va[gánágáne	‘think’	ni va[vódóng’áne	‘go around’	
ni va[rákóóri	‘release’	ni va[karáange	‘fry’	
ni va[táándóri	‘tear’	ni va[chéérízi	‘greet’	
ni va[górizáange	‘continue selling’	ni va[karágáange	‘continue judging’	
ni va[bíimí	‘measure’	ni va[dééké	‘cook’	
ni va[rágé	‘promise’	ni va[végé	‘shave’	
ni va[shí	‘grind’	ni va[tyí	‘fear’	

- (17) T_2 *Second-syllable mapping (M3)*

\vdots
 $[\sigma \sigma$

- (18) T_2 *Rightward Doubling*

$\begin{array}{c} T_2 \\ \downarrow \quad \downarrow \\ V \quad V \end{array}$
 ni va[táándóri → ni va[táándóri ‘they will tear’
 váátaandora (*váátáandora) ‘they are in the state of tearing’
 váátáandora (*váátáandóra) ‘they tore’

(19)	M2 indefinite toneless		M2 toned	
	vari[véézegera	‘belch’	vari[soundóranyá	‘pour’
	vari[gánágana	‘think’	vari[vodóng’áná	‘go around’
	vari[rákóóra	‘release’	vari[karáángá	‘fry’
	vari[táándora	‘tear’	vari[cheerízá	‘greet’
	vari[góríza	‘sell’	vari[karágá	‘judge’
	vari[bííma	‘measure’	vari[deeká	‘cook’
	vari[rágá	‘promise’	vari[vega	‘shave’
	vari[shá	‘grind’	vari[tya	‘fear’

(20)	M3 toneless	M2 toneless	M3 toned	M2 toned
	ni va[véézegére	vari[véézegera	ni va[sóóndóranyí	vari[soundóranyá
	ni va[gánágáne	vari[gánágana	ni va[vodóng’áne	vari[vodóng’áná
	ni va[rákóori	vari[rákóóra	ni va[karáange	vari[karáángá
	ni va[táándóri	vari[táándora	ni va[chéerízí	vari[cheerízá
	ni va[górízì	vari[góríza	ni va[karágé	vari[karágá
	ni va[bíímí	vari[bííma	ni va[dééké	vari[deeká

(21)	$T \rightarrow T_L \quad T_\beta'$	<i>Tone Suppression</i>
	V	

(22)	a. <i>V2 linking</i>	b. <i>Final linking</i>
	*T T' _β	*T T' _F
	⋮ ⋮	⋮ ⋮
	[V V	V V]#

(23)	<i>Toned</i>		<i>Untoned</i>	
	L	L	L	
	T T _{β,F}	T T _{β,F}	T T _{β,F}	T _{β,F}
	vari[d e e k á	vari[v e g a	vari[ty a	vari[sh á vari[r á g á

(24)	M10 hodiernal perf. toneless		M10 toned	
	va[gánágani	‘they thought’	va[vodong’ani	‘they went around’
	va[rákóóri	‘they released’	va[karaanji	‘they fried’
	va[táándori	‘they tore’	va[cheerizi	‘they greeted’
	va[górízi	‘they sold’	va[karaji	‘they judged’
	va[bíími	‘they measured’	va[deechi	‘they cooked’
	va[ráji	‘they promised’	va[veji	‘they shaved’
	va[shíi	‘they ground’	va[tyii	‘they feared’

(25)	T _β	L ← T T _β
	⋮	⋮
	va[górízi	va[ka ra ji

(26)	M9 hesternal perf. toneless		M9 toned	
	vaa[gánáganí	‘they thought’	vaa[vodóng’ání	‘they went around’
	vaa[górízì	‘they sold’	vaa[karájì	‘they judged’
	vaa[bíímí	‘they measured’	vaa[dééchi	‘they cooked’
	vaa[ráji	‘they promised’	vaa[véji	‘they shaved’
	vaa[shíi	‘they ground’	vaa[tyíi	‘they feared’

(27)	T _F	Ø ← T T _F
	⋮	⋮
	vaa [rá jì	vaa [vé jì

- (28) *M11 Toneless* *Toned*
- | | | | |
|--------------|-------------------|---------------|-------------------|
| vara[rakoora | ‘if they release’ | vara[karaanga | ‘if they fry’ |
| vara[goriza | ‘if they sell’ | vara[karaga | ‘if they judge’ |
| vara[raga | ‘if they promise’ | vara[vega | ‘if they promise’ |
| vara[sha | ‘if they grind’ | vara[tya | ‘if they grind’ |
- (29) varavariza dáave ‘if they had not counted’
varakooŋa mááma ‘if they had helped mother’
orasúúvír-oó¹físá ‘if you had believed the officer’
- (30) varávárizá dáave ‘they will not count’
varákóó¹ŋá mááma ‘they will help mother’
orasúúvír-oó¹físá ‘you will believe the officer’
- (31) $\emptyset \leftarrow T$ $T_{F,L}$
 $\quad \quad \quad | \quad \quad \quad \vdots$
ku ra [vo hoo lla
- (32) *M7a toneless* *M7a toned*
- | | | | |
|------------------------------|-----------------|------------------------------|--------------------|
| ka[haanzóó ¹ kízí | ‘now make yell’ | ka[taangáá ¹ zírí | ‘now announce for’ |
| ka[veezé ¹ géré | ‘now belch’ | ka[sóondó ¹ rányí | ‘now pour’ |
| ka[ganá ¹ gáné | ‘now think’ | ka[vodó ¹ ng’áné | ‘now go around’ |
| ka[rakó ¹ óri | ‘now release’ | ka[kará ¹ ángé | ‘now fry’ |
| ka[taandóri | ‘now tear’ | ka[cheerízí | ‘now greet’ |
| ka[gorízí | ‘now sell’ | ka[karáge | ‘now judge’ |
| ka[bimí | ‘now measure’ | ka[deeké | ‘now cook’ |
| ka[ragé | ‘now promise’ | ka[vegé | ‘now shave’ |
| ka[shí | ‘now grind’ | ka[tyí | ‘now fear’ |
- (33) T_2 T_F T_2 T_F
 $\quad \quad \quad | \quad \quad \quad |$ $| \quad \quad \quad |$
ka[haanzóó¹kízí ka[rakó¹óri
- T_2 T_F T_2 T_F
 $\quad \quad \quad |$ $|$
ka[gorízí ka[ragé
- (34) *M7b toneless* *M7b toned*
- | | | | |
|-------------------------------|-----------------|---------------------------------|----------------|
| vaaká[véé ¹ zégérá | ‘they belched’ | vaaká[sóó ¹ ndóranyá | ‘they poured’ |
| vaaká[gá ¹ nágáná | ‘they thought’ | vaaká[vó ¹ dóng’áná | ‘they thought’ |
| vaaká[rá ¹ kóórá | ‘they released’ | vaaká[ká ¹ ráángá | ‘they fried’ |
| vaaká[gó ¹ rízá | ‘they sold’ | vaaká[ká ¹ rágá | ‘they judged’ |
| vaaká[bíí ¹ má | ‘they measured’ | vaaká[déé ¹ ká | ‘they cooked’ |
| vaaká[rá ¹ gá | ‘they promised’ | vaaká[vé ¹ gá | ‘they shaved’ |
| vaaká[shá | ‘they ground’ | vaaká[tyá | ‘they feared’ |
- (35) *Tone Suppression*
- | | | |
|-------------------|-------------------|--|
| T_1 T_F | L | |
| | $ $ | |
| | T T_1 T_F | |
| | \backslash | |
| v a a k a r a g a | v a a k a v e g a | |
- Final Linking*
- | | | |
|-------------------|-------------------|--|
| T_1 T_F | L | |
| | $ $ | |
| | T T_1 T_F | |
| | \backslash | |
| v a a k a r a g a | v a a k a v e g a | |

Stem Initial Mapping

			L	Stem Initial Mapping		
			T	T ₁	T _F	
			⋮	⋮	⋮	
v a a k a r a g a			v a a k a v e g a			
(36)	m1	kokétema				kokívariza
		kokíkaraanga				kovárakuora
	m2	variketéma				varikigórá
		varikíkáraanga~varikíká ¹ ráángá				varikírakóóra~varikirá ¹ kóóra
	m3	nɪ vaketéme				nɪ vakigóri~nɪ vakigóri
		nɪ vakíkáraangi				nɪ vakirákúori~vakirákóori
	m4	vaakétema~(vaaké ¹ téma)				vaakí ¹ góra
		(vaakédeeka)~vaakédeeka				vaakí ¹ chóóra
	m6	otaketéma				otakigórá
		otakíkáraanga				otakírakóóra
	m7a	kaketéme				kakigóri
		kakíká ¹ ráángé				kakirá ¹ kóóri
	m7b	vaakaké ¹ témá				vaakakí ¹ góra
		vaakakí ¹ karáángá				vaakakí ¹ rakóóra
	m8	vááketema~(vááketéma)				váákigóra~(váákigóra)
		váákikaraanga~(váákikáraanga)				váákirakuora ~ (váákirákúora)
	m9	vaaketémi~vaaketé ¹ mí				vaakigóri~vaakigó ¹ rí
		vaakikaraanji~vaakiká ¹ ráánjí				vaakírakóóri~vaakirá ¹ kóóri
	m10	vaketémi				vakigóri
		vakikaraanji				vakirákóóri