

Stress and final exceptionality in West Tarangan

Philip Spaelti
UC Santa Cruz
spaelti@ling.ucsc.edu

1. Introduction

Word final consonants show special behavior in at least four different ways in WT:

- the inventory of consonants permitted in word final position is considerably larger than the inventory of word internal codas
- word final consonants do not generally count for stress, while word internal CVC syllables always count as heavy
- in reduplication, copied word final consonants are not subject to markedness conditions¹
- word final consonants are excluded for suffixation of person suffixes to adjectives and inalienably possessed nouns, resulting in infixation

Inventory

(1) The consonant inventory of WT:

voiceless stop	p (ϕ)	t		k
voiced stop	b	d	j	g
fricative		s		
nasal	m	n		ŋ
flap		r		
lateral		l		
glide			y	w

(2) Word final consonants: p, t, k, s, m, n, ŋ, r, l, y, w

(3) Word internal codas: r, l, (y)

Reduplication

- (4) 'key key'kɛy 'wood'
'tok tok'tok 'dance'
- (5) ε-y-'ləka εylε'ləka '3s-r-play' *εylεk'ləka
ε-r-gayat-na erga'gayat '3s-r-lying down-3s' *ergay'gayat

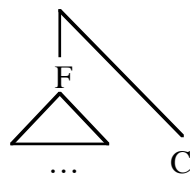
¹ See Orgun 1995 for an alternative approach to the problem.

Infixation

- (6) mata-ŋ eye-1s
 mata-m eye-2s
 mata-y eye-3s
- (7) tubur (< tuba-ŋ-r) belly-1s
 tubur (< tuba-m-r) belly-2s
 tubir (< tuba-y-r) belly-3s

⇒ Claim: stress facts argue against a uniform approach to final exceptionality. In particular they argue against the following ‘geometric’ solution:

(8) PrWd



2. Stress pattern and foot structure of WT

Syllable and Foot Structure

- (9) Syllable structure:
- there are no long vowels or geminate consonants in WT.
 - CV syllables are light
 - CVC syllables are heavy
- (10) Basic stress pattern:
 stress heavy syllables and alternating light syllables
 Foot types: H, LL → *moraic trochees*
- (11) ,sara¹mina ‘large gong’
 ,dar,tama¹rer ‘3p-r-stand’
 ta¹mata ‘person’
 ,gay¹kapa ‘crab (sp)’
- (12) Correlating properties:
- vowel reduction (a → ə in unstressed position)
 - [g] and [j] only foot/word initially

(13)	ᵀsara'mina	[ᵀsarə'minə]	'large gong'
	ᵀdarᵀtama'rer	[ᵀdarᵀtamə'rer]	'3p-r-stand'
	ta'mata	[tə'matə]	'person'
	ᵀgay'kapa	[ᵀgay'kapə]	'crab (sp)'
(14)	'gaka	'swamp'	*'kaga
	su'gakan	'elephant tusk'	*su'kagan
	ji'rua	'tree (sp)'	*i'ruja
	bi'jarum	'whale'	*bi'rajum

Stress Patterns

Final stress:

(15)	Cvc	'bəl	'coast'	
			'gur	'grass'
(16)	CvCec	gu'rep	'nail'	
			ma'ney	'leaf'
			tama'rer	'stand'
			pa'low	'naked'
(17)	CvcCvc	gay'bun	'large'	
			mar'nam	'turtle (sp.)'
			kil'dum	'turtle (sp.)'
(18)	combination of (16) and (17)			
	CvcCec	kar'tow	'rat'	
			gar'kow	'orphaned'
			el'key	'black cockatoo'

Penult stress:

(19)	CvCv	'taba	'carrying stick'	
			'tama	'flesh'
			'gowa	'blossom'
(20)	CvcCv	'korba	'bat (sp.)'	
			'barda	'shrimp (sp.)'
			'garsu	'crab (sp.)'
(21)	CvCvc	'maᵀjar	'fish (sp.)'	
			'samay	'bad'
			'epur-ka	'good 2s-2s'

Contrast (17) and (21) ‘reverse’ stress attraction

- | | | | | |
|------|---------|-------------------------|--|-----------------|
| (22) | CvCvCv | sa ¹ riba | ‘knife’ | |
| | | | ta ¹ mata | ‘person’ |
| | | | ta ¹ nira | ‘have diarrhea’ |
| | | | ji ¹ rua | ‘tree (sp)’ |
| (23) | ...v | ana ¹ kota | ‘plate’ | |
| | | | sara ¹ mina | ‘large gong’ |
| | | | may ¹ lewa | ‘tree (sp)’ |
| (24) | CvCvCvc | su ¹ gakan | ‘elephant tusk’ | |
| | | | bi ¹ jarum | ‘whale’ |
| | | | ŋa ¹ uan | ‘honey’ |
| | | | ta ¹ poran | ‘middle’ |
| | | | bi ¹ tawur | ‘tree (sp.)’ |
| | | | ji ¹ kodam | ‘snake (sp.)’ |
| (25) | ...c | kaba ¹ daraw | ‘bird (sp)’ | |
| | | | galse ¹ ra ¹ seran | ‘tuber (sp)’ |
| | | | dala ¹ buar | ‘3p-twist’ |

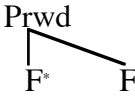
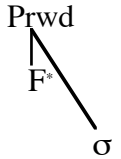
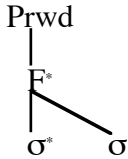

(26) Generalizations:

- A. build moraic trochees from the right word edge
- B. treat a final heavy as light (final consonant extrametricality) unless...
 - i) it is the only syllable
 - ii) its vowel is a mid vowel
 - iii) the penult is heavy

3. Analysis

(27) RightMost
Align-R (Ft',Prwd)

(28) NonFinality
No head of Prwd is final in Prwd

- (29) a.  , b.  γ c.  γ d. 

The ranking:

(30) NonFinality » RightMost

leads to syllable extrametricality of the familiar sort (cf. P&S 1993, ch.4). On the other hand, the ranking

(31) RightMost » NonFinality

results in a system where the effects of NonFinality are restricted to the foot internal domain. A final heavy syllable is treated as light so it may be included as the weak member of a final foot, rather than being footed by itself. This derives the penult stress pattern.

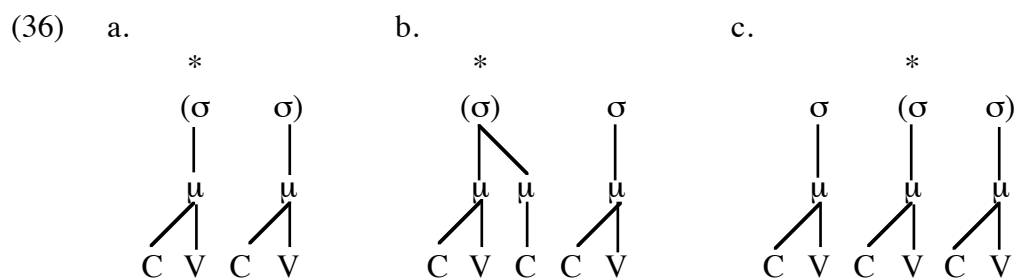
The final stress patterns result form.

(32) Case (i): Monosyllables
FtBin » NonFinality

(33) Case (ii): Words with mid vowel in the final syllable
License (mid) » NonFinality

(34) License (mid)
mid vowels are licensed only foot initially (cf. Padgett 1995)

(35) Case (iii): Final heavy after heavy penult
RightMost » NonFinality !



(37)

data set (22)	RightMost	NonFin
a. (CvCv)Cv	*!	
b. Cvc(CvCv)		F

Ranking Argument: RightMost » NonFin

(38)

data set (19)	FtBin	RtMost	NonFin
a. Cvc(CvCv)			F
b. (Cv)Cv	*!	*	

(39)

data set (20)	FtBin	FtForm	σ -Trans	RtMost	NonFin
a. $\text{Cv}\{\text{c}\}\text{Cv}$				*	
b. (CvcCv)			*!		F
c. $(\text{Cv}\{\text{c}\}\text{Cv})$		*!			F
d. $(\text{Cv}\{\text{c}\})(\text{Cv})$	*!				F, σ , μ

Ranking Arguments: FtBin » RightMost, NonFin

FtForm » RightMost

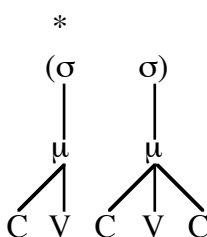
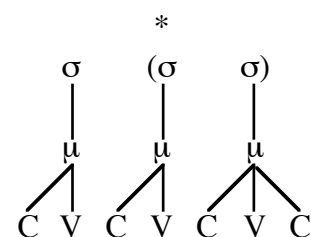
σ -Transition » RightMost

The following constraint represents an alternative to the usual ‘Weight by Position’

- (40) σ -Transition
Align (σ , L, μ , R)

The basic idea is that the weight contribution of word internal segments is more robust than at the word edges. Cf. also Mester’s (1994) discussion of iambic shortening.

‘Final C extrametrical’ cases

- (41) a.  b. 

(42)

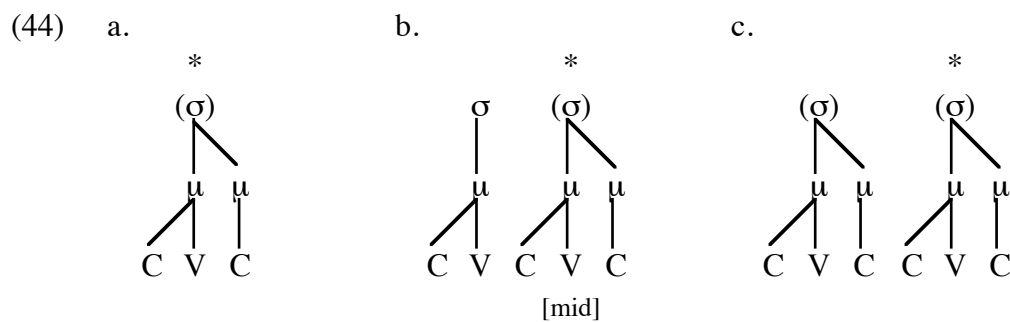
data set (21)	FtBin	FtForm	σ -Trans	RtMost	NonFin
a. $\text{Cv}(\text{Cv}\{\text{c}\})$					F, σ !
b. $\text{Cv}\{\text{c}\}\text{Cvc}$					F
c. $(\text{CvCv})\text{c}$				*!	
d. $(\text{CvCv}\{\text{c}\})$		*!			F

(43)	data set (24)	Rightmost	NonFin	Parse- σ
a.	$\text{Cv}(\text{CvCvc})$		F	*
b.	$\text{Cv}(\text{CvCv})\text{c}$	*!		*
c.	$(\text{CvCv})(\text{Cv}\{\text{c}\})$		F, σ !	
d.	$(\text{CvCv})\text{Cvc}$	*!		*

Ranking Argument: NonFin » Parse- σ

Note the non-local effects of Parse- σ .

Final stress cases



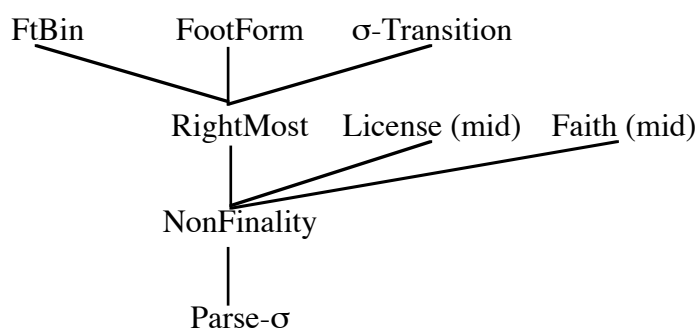
(45)	data set (15)	Lex \approx Pr	FtBin	RtMost	NonFin
a.	$\text{Cv}\{\text{c}\}$				F, σ
b.	(Cvc)		*!		F, σ
c.	$(\text{Cv})\text{c}$		*!	*	
d.	Cvc	*!			

(46)	data set (16)	Lic (mid)	Faith (mid)	Rightmost	NonFin
a.	$\text{Cv}(\text{Ce}\{\text{c}\})$				F, σ
b.	(CvCec)	*!			F
c.	(CvCac)		*!		F

(47)

data set (17)	FtBin	FtForm	σ -Trans	RtMost	NonFin
a. (Cv{c})Cvc				*!	
b. ☞ (Cv{c})(Cv{c})					F, σ
c. (CvcCvc)			*!		F
d. (CvcCv)c			*!	*	
e. (Cv{c})(Cvc)	*!				F
f. (Cv{c}Cvc)		*!			F

(48) Summary of the important rankings of the analysis



Conclusion

The formulation of RightMost is critical to the analysis presented here. Compare:

- (49) RightMost
Align-R (Ft',Prwd)
- (50) EdgeMost [P&S 1993, chap.4]
Align-R (σ' ,Prwd)
- (51) AllFootRight [M&P 1994]
Align-R (Ft,Prwd)

In fact in WT AllFootRight is active as well, but is ranked below NonFinality.

(52)

	RightMost	NonFin	AllFootRight
a. ☞ ,kaba'daraw		F	$\sigma\sigma$
b. ka,bada'raw		F, $\sigma!$	σ

Appendix

Exceptional stress patterns:

(53)	CvCvc	ma ¹ ŋar	‘sky’	
			a ¹ nik	‘large bat’
			pu ¹ ga	‘crocodile’
			ta ¹ mil	‘woodworm’
			la ¹ jir	‘white’
			ta ¹ kur	‘coconut shell’
(54)	CvCvCvc	rata ¹ un	‘sago paste’	
(55)	CvcCvc	¹ gɔrpan	‘white hair’	
			¹ kɔrŋam	‘parrot’
			¹ tɔlŋum	‘plant (sp.)’

References

- McCarthy, John and Alan Prince (1993a) *Prosodic Morphology I*. Ms.
- McCarthy, John and Alan Prince (1993b) Generalized Alignment. *Yearbook of Morphology* 1993, 79–153.
- Mester, R. Armin (1994) ‘The quantitative Trochee in Latin.’ *Natural Language and Linguistic Theory* 12:1, 1–61.
- Nivens, Richard (1992) ‘A Lexical Phonology of West Tarangan.’ In *Phonological Studies in Four Languages of Maluku*, Donald A. Burquest and Wyn D. Laidig eds.
- Nivens, Richard (1993) ‘Reduplication in Four Dialects of West Tarangan.’ *Oceanic Linguistics*, 32:2, 353–388.
- Orgun, C. Orhan (1995) ‘Correspondence and Identity Constraints in Two-level Optimality Theory.’ To appear in *Proceedings of WCCFL 14*.
- Padgett, Jaye (1995) ‘Feature Classes.’ In *University of Massachusetts Occasional Papers in Linguistics* 18.
- Prince, Alan and Paul Smolensky (1993) *Optimality Theory*. Ms.