Empirical support for minimality-driven moraic coercion

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The hypothesis that the smallest possible word in a language corresponds to the smallest possible metrical foot, due originally to Prince 1980 and McCarthy and Prince 1986, has been subject to extensive typological testing (Hayes 1995, Kager 1995, Gordon 2006[1999], Garrett 1999, among others). The hypothesis has come under attack for its less than perfect match with the observed typology (Garrett 1999, Gordon 2006[1999]).

A particularly common type of mismatch between a language's smallest word and smallest foot involves closed syllables in cases where codas are not moraic. In many languages where CVC counts as light for the purposes of stress and other processes, CVC words are allowed while CV words are not. All but one of the weight mismatches between minimality and other weight criteria observed by Gordon 2006[1999] fall into this category, as do the majority of the mismatches between minimal words and minimal feet listed by Garrett 1999 (he lists Hupa, Yupik, Wintu, Paamese, and Buriat in this category, for example). The pattern is especially significant given the absence of the reverse situation, viz. languages where CVC words are excluded but CVC counts as heavy for stress.

In OT, the moraicity of segments is negotiated by rankable constraints (Morén 1999). If the foot minimality constraint FTBIN outranks the constraint that prohibits consonantal moras *C_{μ}, which in turn outranks the constraint calling for codas to be moraic – call it BEMORAIC(C) – then precisely the commonly observed pattern is generated: CVC is light in longer words but heavy in monosyllables. This pattern is illustrated abstractly in (1) (the input /CV/ is included to show the minimality pattern with a vocalic mora). To use Morén's term (1999), consonants are COERCED to be moraic under pressure of word minimality (FTBIN), even if normally they are not moraic.

Moraic coercion of this sort is perfectly ordinary in OT thinking, where phonological interactions arise from violable and ranked constraints. The challenge, however, is to find evidence independent of minimality that the consonant in CVC words in languages with apparent moraic coercion is indeed moraic. In this talk I present three distinct types of empirical arguments for the analysis schematized in (1), from three languages.

First, in Djaru (Tsunoda 1981), the ergative allomorphy pattern that is sensitive to the mora count of the stem diagnoses CVC items as bimoraic, in contrast to CVC syllables in longer words. Second, in Ancient Greek (Smyth 1956), coercion trumps final consonant extrametricality in CVC words. The effect is readily visible in the stress pattern of compounds built from those CVC stems.

The third and most intricate pattern comes from Walmatjari (Hudson and Richard 1969, Hudson 1978). When a monosyllabic CVC preverb is compounded with certain verb stems, the initial consonant of the second stem either deletes or denasalizes, depending on the identity of neighboring segments (2). The presence of secondary stress depends on deletion: the initial vowels of the second member are stressed only if deletion has not taken place (2c).

I will show that this peculiar interaction is due to the interplay between coercion, alignment between morphological and prosodic constituents, and foot minimality, and points to the same basic ranking required for moraic coercion, FTBIN $\rangle\rangle$ *C_{μ} $\rangle\rangle$ BEMORAIC(C) (see tableau (3)). Because Walmatjari has a CVC minimum and non-moraic codas, this analysis lends further support to coercion.

Given the empirical confirmation and the sound theoretical motivation for coercion, many of the alleged counterexamples to the hypothesis that the minimal word is identical to the minimal foot find an alternative explanation.

(1)

		FtBin	Dep-μ(V)	*$C_μ$	BeMoraic(C)
/CVCCV/ ☞	($CV_μCCV_μ$)				*
	($CV_μC_μCV_μ$)			*!	
/CVC/	($CV_μC$)	*!			*
☞	($CV_μC_μ$)			*	
	($CV_{μμ}C$)		*!		*
CV	($CV_μ$)	*!			
☞	($CV_{μμ}$)		*		

(2)

a.	/yut-wanti/	→	yútanti	'sit down!'
	/jup-wanti/	→	yúpanti	'jump down!'
	/taly-wanti/	→	tályanti	'break and fall [as a tree]'
b.	/kirr-manyja/	→	kírranyja	'sit!'
	/yuk-manyja/	→	yúkanyja	'lie down!'
	/yung-manta/	→	yúnganta	'cut it!'
	/lap-manyja/	→	lápanyja	'run!'
c.	/kit-manta/	→	kítpànta	'stick to it!'
	/turt-manta/	→	túrtpànta	'pluck it out!'
	/paj-manyja/	→	pájpànyja	'stink!'

(3)

		Onset	Align(Rt,Ft)	FtBin	*$C_μ$	BeMoraic(C)
/yut-wanti/ ☞	(yú.t-an).ti		*			*
	(yú.)(t-ànti)		*	*!		*
	($yút_μ$).-(ànti)	*!			*	*
	(yút).-(ànti)	*!		*		**
/kit-manta/ ☞	($kít_μ$).-(pànta)				*	*
	(kít).-(pànta)			*!		**
	(kít.-pan)ta		*!			**

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