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Vowel Quantity Alternations in English

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In *Natural language and Linguistic Theory 5* (1987), two articles, namely Yip (1987) and Myers (1987), deal with vowel quantity alternations in English such as those in (1) from quite different points of view.

(1)	[ay]/[i]	divine/divinity
	[iy]/[e]	deep/depth
	[ey]/[A]	nation/national
	[ow]/[a]	cone/conic
	[uw]/[ʌ]	deduce/deduction
	[aw]/[ʌ]	profound/profundity

Assuming that suffix-initial /i/ in English is absent underlyingly, Yip argues that virtually all alternations in (1) can be dealt with Pre-cluster Shortening, which shortens vowel before consonant clusters. On the other hand, based on the fact that the shortened vowel is always in a stressed syllable in suffixed forms, Myers argues that the stressed syllable in question is closed by Resyllabification, and that the alternations are due to the shortening of long vowels in closed syllables. In this talk, I offered arguments of different type which supports the Myers's Resyllabification approach. More specifically, I argued that a stressed syllable in underived trochaic native words is not only closed but also maximizes its coda, and claimed that a stressed syllable in derived environment must be closed, assuming the principle of Structure Preservation (hereafter SP). The spirit of SP can be summarized as follows; Generalization applicable to underived lexical representations must also be applicable to derived lexical representations. As for more detailed discussion of SP, see Kiparsky (1985) in *Phonology Yearbook 2*.

One of the arguments for the claim that a stressed syllable in underived environment maximizes its coda is presented in Cairns (1988) in *Phonology 5*. Cairns shows that the class of consonant clusters in /m/-final rhymes (namely, /lm/, /rm/, /ym/, /wm/) exemplified in (2a) is exactly identical to the class of intervocalic clusters which end in /m/ such as in (2b), with the exceptions of Greek loans (plasma, magma, bregma, dogma, smegma, sigma, stigma).

(2) a. elm, film; arm, farm; time, rhyme; bloom, room
b. Wilma; Norma; lima (l[ay]ma); coma (c[ow]ma)

This fact suggests that the intervocalic clusters are syllabified with the stressed vowels as the word-final codas are.

The other arguments for the same conclusion is given by Honma (1990) in *TES 9*. For example, consider the rhymes which end in one of {p,b,k,g,f,v} exemplified in (3). Neglecting few apparent exceptions, we can find all and only the coda sequences in (3) as the intervocalic clusters as in (4).

(3)

a.	task	tank	milk	mark	break	oak
b.		long	____	burg	vague	vogue
c.	wasp	lamp	help	carp	tape	rope
d.		bomb	bulb	herb	tribe	globe
e.		(lymph)	self	scarf	life	loaf
f.		____	solve	carve	five	glove

(4)

a.	mascot,	donkey,	falcon,	Arcady,	trachea, trochee
b.		linger,	Elgar,	argo,	tiger, bogus
c.	gospel,	lampas,	palpus,	orpine,	apish, Cowper
d.		limber,	album,	arbor,	labor, hobo
e.		comfit,	dolphin,	orphan,	typhus, Brophy
f.		canvas,	Elva,	carven,	peavey, Grover

Halle and Clements (1983) suggest in their *Problem Book in Phonology* that only coronals can appear after the vowel /aw/ in monosyllabic words as in (5a). Honma (1992) shows that the same is true for trochaic words as in (5b). Some exceptions are given in (5c).

(5) a. out, loud, mouse(N), mouse(V), mouth(N), mouth(V),
couch, gouge, down, cowl, hour, roust, count, mound,
b. Audi, Bowdler, bowser, Chaudhury, chouder, countenance
cowdray, foundry, fowler, kauri, router, rowdy
c. Baum, fowke, gowk[aw/ou]
August, Bauhaus, Bowker, Cowper[aw/uw], graupel, Lauper, Mowgli

The above facts all suggest that a stressed syllable is closed (and maximizes its coda) in ***underived*** environment. SP requires a stressed syllable in ***derived*** environment also be closed (and maximize its coda). This is a raison d'être of Resyllabification.