Causes of vowel reduction in English: an argument from word-final consonants

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For English, it is generally argued that there is a symmetrical relationship between vowel reduction and stress, such that the 'reduced' vowel schwa is unstressed, and all other vowels (i.e. 'full' vowels) are stressed (e.g. Ross, 1972; Halle & Vergnaud, 1987; Pater, 2000). This assumption leads to a number of complications in the stress system of English, notably Elfner's (2007) proposal for stress assignment which is sensitive to the place of articulation of word-final stops.

Elfner (2007) is the most recent treatment of phenomena noted by Ross (1972). Ross observes a contrast in the reduction of vowels preceding word-final stops in certain nouns: vowels preceding word-final coronal stops have a tendency to reduce, as in the examples (1), whereas those preceding final velar and labial stops tend to be full, as in the examples in (2) (pronunciations for British English from Wells (2000)).

(1) Word-final coronal stops

chari**o**t [ə]	chevi**o**t [ə]	Connectic**u**t [ə]	idi**o**t [ə]
Ili**a**d [ə/æ]	Lillip**u**t [ʌ/ə]	Mohamm**e**d [ɪ/ə/ɛ]	myri**a**d [ə]
peri**o**d [ə]	pil**o**t [ə]		

(2) Word-final velar and labial stops

Ah**a**b [æ]	Azt**e**c [ɛ]	baob**a**b [æ]	beb**o**p [ɒ]
Beelzeb**u**b [ʌ/ə]	Cant**a**b [æ]	Carn**a**p [æ]	demag**o**g [ɒ]
handic**a**p [æ]	humb**u**g [ʌ]		

In order to account for these tendencies, Elfner proposes that English has contrastive coda-consonant weight: velar and labial stops always count as moraic, but word-final coronals may or may not be moraic. Under the assumption that there is weight-sensitive stress assignment to the final syllables of the words in (1) and (2), Elfner's analysis predicts that words with final non-coronal stops will have stress on their final syllable, ensuring a full vowel, but those with final coronal stops will often not have final stress, leading to vowel reduction in the unstressed instances.

In this talk, I show that Elfner's analysis is problematic – among other things, it requires the sacrifice of word-final consonant extrametricality. Word-final consonant extrametricality (e.g. Hayes, 1982) is a very useful prosodic generalisation: it can, for example, account for verbal stress contrasts like *édi<t>* versus *tormén<t>* , or the distribution of closed-syllable shortening (e.g. *fi<ve>~fif<th>)*. Building upon Burzio's (1994, 2007) work in Dispersion Theory (Steriade, 1994, 1997), I show that an analysis which assumes an **a**symmetrical relationship between vowel reduction and stress can avoid problems like the loss of consonant extrametricality, without introducing different but equivalent flaws. This finding indicates that analyses which consider multiple causes of vowel reduction in English, such as those possible in Dispersion Theory, deserve wider attention.

References

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