

Word-final prevocalic consonants in English: representation vs derivation

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In present-day English, word-final consonants in immediately prevocalic position simultaneously display properties characteristic of onsets (i, ii) and of codas (iii, iv, v):

- (i) In nonrhotic accents, [ɹ] is licensed only in the onset. Most such accents allow [ɹ] in word-final prevocalic position, either as linking *r* or as intrusive *r* (Gick 2002: 171).
- (ii) In many accents, /l/ undergoes categorical vocalization in the coda, but word-final /l/ retains its linguoalveolar contact when a vowel follows (Scobbie & Wrench 2003).
- (iii) Word-final prevocalic [ɹ], including linking and intrusive *r* in nonrhotic accents, is less consonantal, i.e. has more energy at all frequencies, than onset [ɹ] (McCarthy 1993: 179; Gick 1999).
- (iv) In many accents, /l/ is clear in the onset, but dark (i.e. articulated with a delayed coronal gesture) in the coda and in word-final prevocalic position (Sproat & Fujimura 1993, Gick 2003).
- (v) Word-final prevocalic stops are unaspirated and lenited (unreleased, preglottalized, or flapped according to dialect).

In principle, this ambiguous behaviour, illustrated in (1) below, may yield to either broadly representational or broadly derivational solutions. However, representational accounts invoking ambisyllabicity (e.g. Kahn 1976, McCarthy 1993) incur two paradoxes:

- (i) Analyses in which /t/ undergoes flapping when ambisyllabic predict that all word-final intervocalic consonants (e.g. *a[r] ease*) will exhibit the same syllabically conditioned allophony as morpheme-internal foot-medial intervocalic consonants (e.g. *ci[r]y*). This is disproved by dialects with ordinary /t/-flapping in which intervocalic /l/ is dark word-finally (e.g. *sea[t] in*) but clear foot-medially (e.g. *Sea[l]ey*): Sproat & Fujimura (1993).
- (ii) Those who postulate ambisyllabicity analyse prefortis clipping as being triggered by coda consonants (including flapped /t/, as in *utter* [ʌr̥ə] vs *udder* [ʌr̥ə]: see Zue & Laferriere 1979, Patterson & Connine 2001). Accordingly, the pronunciation of *látèx* in dialects with /t/-flapping is predicted to be either [leɪr̥ɛks], with a clipped diphthong and a flapped /t/, or [le:ɪtɛks], with no clipping and no flapping. However, the realization [leɪtɛks], with clipping but without flapping, is widespread (Wells 1990): see (2) below.

These arguments indicate that, in English, word-final prevocalic consonants surface in the onset and acquire their coda-like properties through some derivational mechanism:

- (i) In frameworks allowing transderivational correspondence (e.g. Benua 1997), a word-final prevocalic consonant must be faithful to its lenited coda correspondent in the output representation of the citation form.
- (ii) In cyclic frameworks (e.g. Kiparsky 2000, Bermúdez-Otero forthcoming), word-final consonants are in the coda at the word level, where they may undergo lenition before being resyllabified into the onset at the phrase level if a vowel follows.

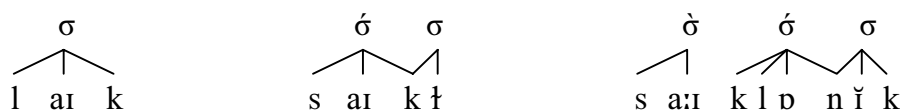
These two approaches differ in their treatment of the typology of /l/-darkening shown in (3) below. To capture the facts, transderivational accounts (e.g. Hayes 2000: 102) must stipulate a universally fixed ranking whereby base-output identity constraints on words (e.g. *hea[t]*, so *hea[t] it*) dominate base-output identity constraints on stems (e.g. *hea[t]*, so *hea[t]ing*). In Stratal Optimality Theory, in contrast, the typology in (3) emerges diachronically through the normal life cycle of phonological processes, as /l/-darkening enters the grammar from below and climbs to progressively higher levels (Bermúdez-Otero 2006).

- (1) *Ambiguous behaviour of word-final prevocalic /l/ in some English accents* (Gick 2003, Scobbie & Wrench 2003)

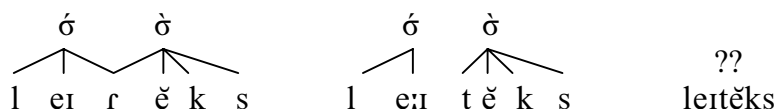
Position	Example	Loss of linguoalveolar contact?	Coronal gesture delayed?	Percept
V#IV	<i>see Lynn</i>	NO	NO	consonantal, clear
VI#V	<i>seal in</i>	NO	YES	consonantal, dark
VI#C	<i>seal him</i>	YES	YES	vocalic, dark

- (2) *The látèx paradox*

a. In analyses assuming ambisyllabicity, prefortis clipping is triggered by codas:



b. But the pronunciation [leitěks] in dialects with /t/-flapping creates a paradox:



- (3) *Partial dialectal typology of /l/-darkening* (Hayes 2000)

		<i>lip</i>	<i>Healey</i>	<i>healing</i>	<i>heal it</i>	<i>heal</i>
advanced ↑	Am 2	clear	clear	dark	dark	dark
	Am 1	clear	clear	clear	dark	dark
conservative ↓	RP	clear	clear	clear	clear	dark

References

- Bermúdez-Otero, Ricardo (2006). Phonological change in Optimality Theory. In Keith Brown (ed.), *Encyclopedia of language and linguistics*, 2nd edn, vol. 9, 497-505. Oxford: Elsevier.
- Bermúdez-Otero, Ricardo (forthcoming). *Stratal Optimality Theory*. Oxford: Oxford University Press.
- Benua, Laura (1997). *Transderivational identity: phonological relations between words*. PhD dissertation, University of Massachusetts, Amherst.
- Gick, Bryan (1999). A gesture-based account of intrusive consonants in English. *Phonology* 16: 29-54.
- Gick, Bryan (2002). The American intrusive *l*. *American Speech* 77.2: 167-183.
- Gick, Bryan (2003). Articulatory correlates of ambisyllabicity in English glides and liquids. In John Local, Richard Ogden & Rosalind Temple (eds), *Phonetic interpretation: papers in laboratory phonology VI*. Cambridge: Cambridge University Press.
- Hayes, Bruce (2000). 'Gradient well-formedness in Optimality Theory' In Joost Dekkers, Frank van der Leeuw, & Jeroen van de Weijer (eds), *Optimality Theory: phonology, syntax, and acquisition*, 88-120. Oxford: Oxford University Press.
- Kahn, Daniel (1976). *Syllable-based generalizations in English phonology*. PhD dissertation, MIT.
- Kiparsky, Paul (2000). Opacity and cyclicity. *The Linguistic Review* 17: 351-365.
- McCarthy, John J. (1993). A case of surface constraint violation. *Canadian Journal of Linguistics* 38: 169-195.
- Patterson, David & Cynthia M. Connine (2001). Variant frequency in flap production: a corpus analysis of variant frequency in American English flap production. *Phonetica* 58: 254-275.
- Scobbie, James M. & Alan A. Wrench (2003). An articulatory investigation of word final /l/ and /l/-sandhi in three dialects of English. *Proceedings of the International Congress of Phonetic Sciences* 15: 1871-1874.
- Sproat, Richard & Osamu Fujimura (1993). Allophonic variation of English /l/ and its implications for phonetic implementation. *Journal of Phonetics* 21: 291-311.
- Wells, J. C. (1990). *Longman pronunciation dictionary*. Harlow: Longman.
- Zue, V. W. & M. Laferriere (1979). Acoustic study of medial /t, d/ in American English. *Journal of the Acoustical Society of America* 66: 1039-1050.