

Diachronic Phonotactic Development in Latin

The Work of Syllable Structure or Linear Sequence?

1 Phonotactics: Two Approaches (Slide 2)

1.1 Syllable Approach

Range of contrasts in an environment attributed to position within syllable

- Positional Licensing (Fudge 1969; Goldsmith 1990)
- Coda Constraints (Ito 1986, 1989; Lombardi 2001)
- Positional Faithfulness (Beckman 1998; Lombardi 1995a, 1995b, 2001)

1.2 Linear Approach

Range of contrasts in an environment attributed to linear segmental sequence alone (Blevins 1993, 2003; Rubach 1996; Steriade 1997, 1999, 2001)

- Positions of contrast are those where perceptual cues for that contrast are most robust, whereas positions of neutralisation are those where the cues are least salient – support for this approach from directional asymmetries (Steriade).

2 Phonotactic Relevance of the Syllable in Latin (Slide 3)

- Notions “well-formed onset” and “well-formed coda” required in syllabification. A simplified formulation:

ONSETS	CODAS
C: any	C: any
CC: stop (or /f/) + liquid	CC: sonorant + voiceless stop
(/s/- extrasyllabic: Cser 2001)	(-/s/ extrasyllabic: Cser 2001)

- Word-based Syllable Hypothesis (Steriade 1999: 223-232) fails to explain some syllabifications: accent placement requires *im.síg.nis* ‘notable’, but /g/ not found word-finally, whereas /gn/ found word-initially (*gna.rus* ‘having knowledge of’)

3 Voice Assimilation (Slide 4)

Regular regressive assimilation in biconsonantal sequences (C₁C₂)

- Stop + stop: **scri.b-to-s* > *scri.ptus* ‘written’, *obtinui*: ‘I obtained’ = [pt], e.g. OPTINVI
- Stop + fricative: **nu.tsi:* > *nu.psi:* ‘I married’
- Fricative + stop: **is-dem* > **izdem* > *i.dem* ‘same’


Every obstruent in a consonantal sequence agrees in voice regardless of syllabification, e.g. PLEPS ‘people’

4 Place and Friction (Slide 5)

The Place Hierarchy: Dorsal > Labial > Coronal

Stop C₁ lower than or level with C₂ on hierarchy assimilates to C₂ in place and friction

C ₁ \ C ₂	Dor	Lab	Cor
Dor	* <i>ec-ce</i> > <i>ecce</i> 'look!'	<i>ec-p.ɔno:</i> 'I bring out' (= <i>expo.ɔno:</i>)	<i>lact-is</i> 'milk (gen.)'
+ fricative	(no dorsal fricative)	<i>ec-fero:</i> (Plautus) 'I carry out'	* <i>deik-si:</i> > [di:ksi:] 'I said'
Lab	* <i>ob-kaido:</i> > <i>occi.do:</i> 'I knock down'	* <i>ob-peto:</i> > <i>oppeto:</i> 'I encounter (prematurely)'	<i>optimus</i> 'best'
+ fricative	(no dorsal fricative)	<i>opi-fici.na</i> > * <i>opfici.na</i> > <i>offici.na</i> 'workshop'	* <i>nu.b-si:</i> > <i>nu.psi:</i> 'I married'
Cor	* <i>hod-ce</i> > * <i>hocce</i> > <i>hoc</i> 'this (neut.)'	* <i>quid-pe</i> > <i>quippe</i> 'for'	* <i>pat-tos</i> > * <i>patsos</i> > <i>passus</i> 'suffered'
+ fricative	(no dorsal fricative)	<i>ad-fero:</i> > <i>affero:</i> 'I deliver'	* <i>quat-si:</i> > <i>quassi:</i> 'I shook'

 = regressive place and friction assimilation

Fricative C₁ does not assimilate in place to stop C₂: *cre.sco:* 'I grow', *asper* 'rough'

Syllable Approach: "codas stops are unspecified for coronal place regardless of the environment, and labial place if followed by a dorsal stop"

- ➔ Syllable Approach clearly unsatisfactory: no motivation for recourse to syllabic position – linear sequence is necessary and sufficient

5 Manner (Slide 6)

The Manner Hierarchy (for place assimilation): Fricative > Stop > Nasal


Reported at Steriade 2001: 223-24 with references


Fricative C ₁ assimilates in place:	Stop C ₁ assimilates in place:	Nasal C ₁ assimilates in place:
<ul style="list-style-type: none"> • before fricative C₂ only • obeying Place Hierarchy • <i>*disfacilis > difficilis</i> 'difficult' 	<ul style="list-style-type: none"> • before C₂ of any manner • obeying Place Hierarchy • <i>*quidpe > quippe</i> 'for', <i>adfero:</i> > <i>affero:</i> 'I deliver', <i>*kaidmentom > cae(m)mentum</i> 'rubble' 	<ul style="list-style-type: none"> • before any obstruent C₂ regardless of Place Hierarchy • before nasal C₁ obeying Place Hierarchy • <i>*kemtom > centum</i> 'hundred', <i>*in-maneo:</i> > <i>immineo:</i> 'I overhang; threaten' vs. <i>autumnus</i> 'autumn'

6 Nasality (Slide 7)

Nasal C₂ nasalises stop C₁, which also assimilates in place to C₂ obeying Place Hierarchy

C ₁ \ Nasal C ₂	Lab	Cor
	Dor	<i>*sekmentom > segmentum</i> = [gm] 'piece'
Lab	<i>*supmos > summus</i> 'highest'	<i>*swepnos > somnus</i> 'sleep'
Cor	<i>*kaidmentom > *caimmentum > caementum</i> 'rubble'	<i>*atnos > annus</i> 'year'

 = regressive nasal assimilation

 = no nasal or place assimilation

 = regressive nasal and place assimilation

- Exception: failure of nasal assimilation in Dor + /m/ (place assimilation not expected) → Again, Syllable Approach unsatisfactory
- Better starting-point: linear configuration Dor + /m/
- Cf. early epenthesis: Greek *dráchma* → *drac(h)uma* 'Greek coin', *tegmen* > *tegimen/tegumen* 'covering'

7 Hypothesis – Linear Sequence (Slide 8)

Feature *x*, if poorly cued relative to adjacent more robustly cued feature, is neutralised and assimilated to adjacent more robustly cued feature

- External cue: release into vowel, thus C₂ features usually more robustly cued than C₁ features → regressive assimilation commonest
- Internal cue: Place Hierarchy – Dor > Lab > Cor
- Internal cue: Manner Hierarchy for place feature – Fricative > Stop > Nasal

8 Scale for occurrence of contrasts (Slide 9)

A scale for the perceptibility of contrasts can be constructed on the basis of several interacting parameters (the perceptual cues):

More Contrasts	Before vowel	Before liquid	Fricative before nasal/stop	Other C before nasal	Stop before stop	Obstruent before fricative	Nasal before obstruent	Fewer Contrasts
	• Voice	• Voice	• No voice	• No voice	• No voice	• No voice	• No voice	
	• Place	• Place	• Place	• Place per Place	• Place per Place	• Place per Place	• No place	
	• Manner (with exception)	• Manner (all with exceptions)	• Manner	• No manner ex. Dor + /m/	• Manner per Place Hierarchy	• Manner per Place Hierarchy	• Manner	

9 Sonorant Voice Specification (Slides 10 & 11)

Sonorants appear before C₂ of any voice specification: *comparo*: 'I unite; compare' : *combibo*: 'I drink up'; *verpa* 'penis': *verbum* 'word' → sonorants unspecified for voice pre-consonantly

Nasal C₂ triggers voicing of C₁: **sekmentom* > *segmentum* 'piece' → nasals voice-specified pre-vocalically

Liquid C₂ allows voice contrast in C₁: *capra* 'she-goat' : *cribrum* 'sieve' → liquids unspecified for voice pre-vocalically

BUT /s/ > [z] post-vocalically before voiced consonant, **including** liquids: **preslom* > [prezlom] > *prelum* 'wine-/oil-press' → liquids voice-specified pre-vocalically??

- Voicing of /r/ at early stage
 - Early merger in Latin of /sr/ and [ðr] inherited from Proto-Italic (Stuart-Smith 2004) > /br/: **fu:nesris* > *fu:nebris* 'funereal'
 - Voiced epenthetic stop before /r/ vs. voiceless epenthetic stop before /l, n/: **g^heimrinos* > **heimbrinos* > *hi.bernus* 'wintry' vs. **exemlom* > *exemplum* 'example', *autumnus* > *autumpnus* 'autumn'
- /l,m,n/ became voice-specified later (in archaic period)

- /s/ before /l,m,n/ > [z] (with consequent loss of [z] + compensatory lengthening of the preceding vowel): *preslom > pre:lum 'wine-/oil-press', cosmis > co:mis 'friendly', *casnos > ca:mus 'white(-haired)'
- BUT: why then does liquid C₂ appear to allow a voice contrast in C₁: capra vs. cri:brum?

10 Return of the Syllable: TR Onsets (Slide 12)

Why does liquid C₂ allow preceding voice contrast if voice-specified?

→ Unspecified if in stop + liquid onset (not σ-initial)

Phonetically based: cf. English *incline* [ɪn.k^hlaj̃n] vs. *ink-like* [ɪŋk.laj̃k] (Selkirk 1982: 359-60; Cruttenden 2001: 201, 205)

Divergent syllabifications of identical sequence (Sen 2007): *po.plos > *populus* 'people', *pop.li.kos > *poblikos* > pu:blicus 'public' → syllable-structure indirectly affects phonotactics via sonorant voice specification

11 Morphological Pressures (Slide 13)

- More thoroughgoing regressive assimilation in prefix + verbal root contacts: *sub-rego: > *surrigo*: 'I rise' vs. *e.brius* 'drunk'
- More faithful retention of root shape elsewhere in verbal morphology: *sum-to-s > *su.mptus* 'assumed' vs. *kemtom > *centum* 'hundred'
- Some morpheme boundaries conditioned syllable boundaries (Sen 2006), thus determining the voicing of sonorants: *nek-lego: > *neg.le.go*: 'I neglect' vs. *Aiscla.pius* (old spelling of *Aescula.pius*), *po.xlum* 'cup' (> *po.culum*)

12 Conclusions (Slide 14)

- Latin phonotactic development driven by linear segmental sequence, not syllable structure
- Relevant parameters include internal factors (Manner and Place Hierarchies) and external factors (release features, coarticulatory cues)
- Syllables relevant in distribution of voice in sonorants
- Morphology could directly override phonetic considerations in phonotactics, and indirectly via syllable structure
- Only direct influence of syllable structure in Latin phonotactics is in determining well-formed onsets/codas

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