

Synchrony, Diachrony and Early Latin Feet

1 Mester (1994)/Prince & Smolensky (1993)

(1) Strictly bimoraic trochees: H (inc. closed syllables: WBP), or LL; (2) final-syllable extrametricality (violable). Avoidance of ‘trapped’ light syllables triggered:

- ❖ Iambic shortening: LH → (́LL) *homo:* → *hómo* ‘human’, *vere:ba:mini:* → *(věřě)bá:mini:* ‘you (pl.) were afraid’
- ❖ Cretic shortening: HLH → (́H)(LL) *di:cito:* → *dí:cito* ‘say (fut.impve)’
- ❖ Minimal word lengthening: L → (́H) **da* → *da:* ‘give (imve)’
- ❖ Syncope: HLH → (́H)H *la:ridi:* → *lárdi:* ‘bacon (gen.)’
- ❖ Allomorphy: (L + i) ~ (H)/(LL) + (i:) *sapimus* ‘we taste’ ~ *resipi:mus* ‘we taste of’
See also Ito & Mester (2006) for allomorphy

2 Jacobs (2000, 2003a, 2003b, 2004)

Optimality-Theoretic account; low-ranking *(HL); multi-level for syncope:

- ❖ Iambic/cretic shortening: fallacy word-finally (also in HH, LLH; Lahiri, Riad & Jacobs 1999)
 - *canto:* → *cánto* ‘I sing’
 - FINMON (final syllable is monomoraic) » MAX-μ
- ❖ Word-initial iambic shortening: predominantly pre-stress closed syllables
 - *volupta:tem* → *(vǒlǔp)tá:tem* ‘desire’
 - CLASH » WEIGHT-TO-STRESS PRINCIPLE (WSP) » WEIGHT-BY-POSITION (WBP)
- ❖ Syncope: not restricted to H<L>H, but also (H)<L>L, L<L>H, L<L>LH (not trapped)
 - *la:mina* → *lámna* ‘plate’; *calidus* → *cáldus* ‘hot’; *opitumus* → *óptimus* ‘best’
 - NONF (a foot may not be final) » PARSE-σ » *(HL)
 - Syncopated vowel uniformly in weak position (LL)/(HL): *V IN (X.) » MAX-V
 - Syncope in post-lexical phonology:
 - IDENT-STRESS » PARSE-σ » *V IN (X.) » MAX-V » CLASH: *(à:r(i))(dó:)rem*
 - Lexical ranking: CLASH » WSP » PARSE-σ
fē(nés)tra not *(fēnes)tra*
- ❖ Accent placement by alignment constraints:
 - Archaic: PRWD, L, FT, L (W/L) » W/R and HEAD-FOOT, L, PRWD, L (H/L) » H/R
 - Initial stress: *(fēnes)tra*, *(ópi)tumus*, *(mále)(fici)um*, *(sími)li(tù:di)nem*

Early: W/L » W/R, but H/R » H/L

- Penultimate stress unless L, then antepenult (if trisyllabic or more), but initial stress in tetrasyllable with initial LLL (´LLLσ): (*fāci*)*lius*, but (*sīmi*)*li(tú:di)**nem*

Classical: W/R » W/L and H/R » H/L

- As Early, without tetrasyllabic exception: *fā(cīli)**us*

3 Final Iambic Shortening in Early Latin Not a Fallacy

- ❖ Final *-o:* long except in iambs (*lego* ‘I choose’) and less frequently cretics (*dicito* ‘say’)
 - Only universally shortened by 4th cent A.D. (*canto* ‘I sing’)
- ❖ Shortening of long vowels before final *-t*, *-r* only in iambs in Plautus (*tenet* ‘he holds’, *amat* ‘he loves’, and to a lesser extent *soror* ‘sister’, *moror* ‘I delay’)
 - Only universally shortened by classical times (*calcar* ‘spur’)
- ❖ Light treatment of doubly closed final syllables only in iambs/cretics (*legunt* ‘they choose’, *dixerunt* ‘they said’)
- ❖ Shortened forms continued as standard in classical Latin only in iambs (*bene* ‘well’, *modo* ‘only’, *ego* ‘I’, *sibi* ‘him (dat.)’)
- ❖ See especially Lindsay (1894: 207-215)

3.1 Ranking for Iambic Shortening

- ➔ FTBIN » NONF, PARSE-σ (and/or W/L) » WBP, MAX-μ
 - Modify FTBIN to ‘feet are bimoraic’; » NONF prevents (´)H
 - PARSE-σ (and/or W/L) » WBP, MAX-μ prevents L(´) (N.B. unnecessary if post-lexical and so stress fixed at lexical level, i.e. FTBIN violated, see §3.2)
 - (*lego*), (*tenet*), (*legunt*), (*bene*), but (*can*)*to:*, (*cal*)*car*

3.2 Cretic Shortening

- ❖ MUST be post-lexical if triggered by foot-formation – accent fixed on initial syllable:
 - (*dí*)*cito*: → (*dí:*)(*cito*)
- ➔ FTBIN, IDENT-STRESS » PARSE-σ (and/or W/R) » NONF, WBP, MAX-μ
 - Not a widespread phenomenon: Ennius’s hexameters (only V-final words), Plautus (only first foot of line), not in Terence
 - PARSE-σ (or W/R) » NONF cannot be lexical ranking – no final stress
 - Resembles Mester’s ‘subsidiary footing’, ‘shortening had no effect on stress’
 - Subsidiary footing either stipulated to assign no stress, or CLASH, H/L both low-ranking and IDENT-STRESS refers only to primary stress.

4 Word-initial Iambic Shortening

Word-initial iambic shortening: pre-stress H (not just closed syllables, Allen 1973: 181):
(àmi(:))(cíti)am, (vère(:))(bá:)mini, (pàte(:))(fáci)o:, (càle(:))(fáci)o: – uncommon due to phonologically significant length distinction

➔ NONF » FTBIN » 2NDARY-STRESS » CLASH » WBP, MAX-μ » PARSE-σ, W/L:

○ (vǒlǔp)(tá:)tem, do(mès)ti(cá:)tim

❖ NONF » 2NDARY-STRESS (assign a secondary stress) » CLASH, WBP, MAX-μ prevents
volup(tá:)tem, vo(lúp)ta:tem, vo(lùp)ta:(tém)

❖ CLASH » WBP, MAX-μ prevents *vo(lùp)(tá:)tem*

❖ WBP, MAX-μ » W/L, PARSE-σ prevents *(dòmès)ti(cá:)tim, (déco(:))re:s*

❖ Cannot be post-lexical as stress would have been fixed on *vo(lùp)(tá:)tem*: any lexical ranking giving *(vòlup)(tá:)tem* (breaking only FTBIN) would also give *(dòmes)ti(cá:)tim, (déco:)re:s*; therefore shortening at lexical level

❖ THEREFORE: PARSE-σ (and/or W/L) » WBP, MAX-μ preventing L(Ĥ) in final iambic shortening (§3.1) cannot be lexical, BUT post-lexical ranking FTBIN, IDENT-STRESS » NONF, WBP, MAX-μ required for final iambic shortening

❖ Recall post-lexical PARSE-σ (and/or W/R) » NONF, WBP, MAX-μ for cretic shortening

❖ Final iambic and cretic shortenings post-lexical; word-initial is lexical

But stress fixed lexically on (L)H in iambs, breaking FTBIN – not (LĤ) breaking both NONF and FTBIN, nor L(Ĥ) breaking only NONF as then stress fixed incorrectly:

➔ Lexical ranking:

○ NONF » FTBIN » 2NDARY-STRESS » CLASH » WBP, MAX-μ » PARSE-σ, W/L

○ *(lé)go:, (dí:)cito:, (vǒlǔp)(tá:)tem, de(có:)re:s, do(mès)ti(cá:)tim*

➔ Post-lexical ranking:

○ FTBIN, IDENT-STRESS » PARSE-σ, W/R » NONF, WBP, MAX-μ

○ *(légo), (dí:)(cito), (vǒlǔp)(tá:)(tem), de(có:)(re:s), do(mès)ti(cá:)(tim)*

5 Later Vowel Shortenings

○ NONF » WSP » MAX-μ predicts final shortening everywhere

○ As happens later in Latin and in Jacobs' analysis

○ No need for FINMON, which Jacobs uses to prevent long-vowel word-initial iambic shortening

6 Syncope

- ❖ Jacobs: syncope post-lexical as CLASH » WSP » PARSE- σ required lexically for *(vòlŭp)(tá:)(tem)*, *de(có:)(re:s)*, but PARSE- σ » CLASH for *(à:r(i))(dó:)(rem)*. We did not invoke WSP, but still need lexical CLASH » PARSE- σ for word-initial iambic shortening.
- ❖ Syncope occurred in all stages of Latin, targeting different structures as phonology changed: archaic and early synscopes were subject to high-ranking phonotactic (PHON) and morphological (MORPH) constraints (not considered here); imperial and late synscopes were less constrained, e.g. *soliculum* → *soliclum* ‘sun’
- ❖ Evidence in this discussion taken from standard handbooks of Latin phonology (e.g. Leumann 1977)

6.1 Prehistoric Latin (before syncope)

- ❖ ‘Strong initial stress’ expressed by ALIGN-FT-L (align every foot with the left edge of the prosodic word)
 - ALIGN-FT-L » MAX-V » PARSE- σ
(If FTBIN low-ranking, then trimoraic feet)

6.2 Archaic Latin

- ❖ PARSE- σ » ALIGN-FT-L » MAX-V

(More parsing triggered by promoting FTBIN so banning trimoraic feet?)

- Triggers syncope without a specific targeting constraint, e.g. *V IN (X.), but rather minimises unparsed material (as PHON and MORPH allow) regardless of previous position in metrical structure
- Targets:
 - trissyllabic* H⟨L⟩ σ **pri:s.mo.kaps* > *pri:n.ceps*
 - tetrasyllabic* LL⟨L⟩ σ **se.pe.li.tos* > *se.pul.tus*, L⟨L⟩H σ **a.po.dou.kor* > *ab.du.co:*, H⟨LL⟩ σ **dek.si.te.ros* > **deks.tr̄s* (> *dexter*), H⟨L⟩H σ **eks.te.re:mos* > *ex.tre:mus*, σ H⟨L⟩ σ **ko.ro:ne.la* > *co.ro:l.la*
 - pentasyllabic* L⟨L⟩L σ **o.pi.fà.ki.om* > *of.fi.ci.um*, H⟨L⟩HL σ **wi.no.de.mi.a* > *vin.de.mi.a*

6.3 Early Latin

- ❖ PARSE- σ » *V IN (X.) » MAX-V: syncope in the weak position of (LL)

- Targets
 - trissyllabic* L⟨L⟩ σ *va.li.de:* → *val.de:*
 - tetrasyllabic* L⟨L⟩L σ *ba.li.ne.um* → *bal.ne.um*
 - pentasyllabic* L⟨L-⟩LL σ *ca.le:fà.ce.re* → *ca.le(:).fà.ce.re* → *cal.fà.ce.re*
- N.B. pentasyllabic syncope only as a result of word-initial iambic shortening

6.4 Is Early Latin Syncope Lexical or Post-lexical?

If lexical (omitting higher ranking NONF, FTBIN in the first two tableaux):

	/LLσ/ <i>valide:</i>	CLASH	MAX-μ	W/L	PARSE-σ	*V IN (X.)	MAX-V
	(́L)σ				*	*	
☞	(́L+)(L)σ				*		*
	⟨L⟩(́L)σ		*		*		*

	/LLLσ/ <i>balineum</i>	CLASH	MAX-μ	W/L	PARSE-σ	*V IN (X.)	MAX-V
	(́L)Lσ				**	*	
	L(́L)σ			*	**	*	
☞	(́L+)(L)Lσ				**		*
	⟨L⟩(́L)Lσ		*		*	*	*

	/LHLLσ/ <i>cale:facere</i>	NON-F	FTBIN	2 ND ARY-STRESS	CLASH	MAX-μ	W/L	PARSE-σ	*V IN (X.)	MAX-V
	(̀H)(́L)σ		*					*	**	
	L(̀H)(́L)σ				*		*	**	*	
	(́H)LLσ		*	*				****	*	
	L(̀H)LLσ			*			*	****		
☞	(̀L-)(́L)σ					*		*	**	
	(́L-)LLσ			*		*		****	*	
	(̀L+)(L)(́L)σ				*	*		*	*	*
	(́L+)(L)LLσ			*		*		*		*
	L+⟨L⟩(́L)σ			*		*	*	**	*	*

If post-lexical:

	(́L)σ <i>válide:</i>	IDENT-STRESS	PARSE-σ	W/R	*V IN (X.)	MAX-V	NONF	MAX-μ	W/L
	(́L)σ		*	*	*				
☞	(́L+)(L)σ		*	*		*			
	⟨L⟩(́L)σ	*	*	*		*		*	

	($\acute{L}L$) $L\sigma$ <i>bálineum</i>	IDENT- STRESS	PARSE- σ	W/R	*V IN (X.)	MAX-V	NONF	MAX- μ	W/L
	($\acute{L}L$) $L\sigma$		**	**	*				
	L($\acute{L}L$) σ	*	**	*	*				*
	($\acute{L}L$)($L\sigma$)				**		*	(*)	
	($\acute{L}+$)(L) $L\sigma$		**	**		*			
☞	($\acute{L}+$)(L)($L\sigma$)					*	*	(*)	
	$\langle L \rangle$ ($\acute{L}L$) σ	*	*	*	*	*		*	

	($\grave{L}L$ -)($\acute{L}L$) σ <i>cálefácere</i>	IDENT- STRESS	PARSE- σ	W/R	*V IN (X.)	MAX-V	NONF	MAX- μ	W/L
	($\grave{L}L$ -)($\acute{L}L$) σ		*	*	**			*	
	($\acute{L}L$ -) $LL\sigma$	*	***	***	*			*	
☞	($\grave{L}+$)(L)($\acute{L}L$) σ		*	*	*	*		*	
	($\acute{L}+$)(L) $LL\sigma$	*	***	***		*		*	
	L+ $\langle L \rangle$ ($\acute{L}L$) σ	*	**	*	*	*		*	*

- ❖ If lexical: *va.li.de:* → (*vál*)*de:*, *ba.li.ne.um* → (*bál*)*neum*, BUT *ca.le.fá.ce.re* → (*càle*)(*fáce*)*re*, NOT ⁺(*càl*)(*fáce*)*re*, because of CLASH
- ❖ If post-lexical: *vá.li.de:* → (*val*)*de:*, *bá.li.ne.um* → (*bál*)(*neum*), cf. (*dí:*)(*cito*), AND lexical *cà.le.fá.ce.re* → (*càl*)(*fáce*)*re*
- ➔ Early syncope is post-lexical
 - Neatly matches evidence: optional syncope in early Latin
 - PHON, MORPH and frequency conditioning which forms became lexicalised

7 Conclusions

- ❖ Word-final iambic/cretic shortening is post-lexical
- ❖ Word-initial iambic shortening (targeting any H) is lexical
- ❖ Early syncope targeting weak position of foot is post-lexical and can apply to vowel affected by lexical iambic shortening
- ❖ Archaic syncope targets unparsed material in other structures – same phonology cannot account for it
- ❖ Early Latin feet are strictly bimoraic
- ❖ Two-level phonology required to account for all early Latin phenomena

8 References

- Allen, W. Sidney. (1973). *Accent and Rhythm: prosodic features of Latin and Greek: a study in theory and reconstruction*. Cambridge: Cambridge University Press.
- Ito, Junko & R. Armin Mester. (2006). ‘*Indulgentia Parentum Filiorum Pernicies*: lexical allomorphy in Latin and Japanese’, in Eric Bakovic, Junko Ito & John McCarthy (eds.), *Wondering at the Natural Fecundity of Things: essays in Honor of Alan Prince*. California Digital Library. Linguistic Research Center, University of California, Santa Cruz.
- Jacobs, Haike. (2000). ‘The revenge of the uneven trochee: Latin main stress, metrical constituency, stress-related phenomena and OT’, in Aditi Lahiri (ed.), *Analogy, Levelling, Markedness: principles of change in Phonology and Morphology*. Berlin; New York: Mouton de Gruyter, 333-352.
- . (2003a). ‘Why preantepenultimate stress in Latin requires an OT-account’, in Paula Fikkert & Haike Jacobs (eds.), *Development in Prosodic Systems*. Berlin; New York: Mouton de Gruyter, 395-418.
- . (2003b). ‘The emergence of quantity-sensitivity in Latin: secondary stress, iambic shortening, and theoretical implications for “mixed” stress systems’, in D. Eric Holt (ed.), *Optimality Theory and Language Change*. Dordrecht; Boston; London: Kluwer, 229-247.
- . (2004). ‘Rhythmic vowel deletion in OT: syncope in Latin’, *Probus* 16: 63-90.
- Lahiri, Aditi, Tomas Riad and Haike Jacobs. (1999). ‘Diachronic prosody’, in Harry van der Hulst (ed.), *Word Prosodic Systems in the Languages of Europe*. Berlin; New York: Mouton de Gruyter, 335-422.
- Leumann, Manu. (1977). *Lateinische Laut- und Formenlehre*. Munich: C. H. Beck
- Lindsay, Wallace M. (1894). *The Latin Language: an historical account of Latin sounds, stems, and flexions*. Oxford: Clarendon Press.
- Mester, R. Armin. (1994). ‘The quantitative trochee in Latin’, *Natural Language and Linguistic Theory* 12: 1-61.
- Prince, Alan S. & Paul Smolensky. (1993). *Optimality Theory: Constraint Interaction in Generative Grammar*. Rutgers Optimality Archive 537. Rutgers University Center for Cognitive Science Technical Report 2.