

Nonuniformity in Cyclic Phonological Frameworks: Strata vs. Cophonologies

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INTRODUCTION

The issue

§1 Non-uniformity in the phonological behaviour of affixes often exceeds a binary distinction between stem-level and word-level behaviour:

e.g. English (see e.g. Kager 1989)

- stem-level → stress-affecting

final consonant extrametricality	<i>métal</i>	~	<i>metállic</i>
final syllable extrametricality	<i>óorigin</i>	~	<i>oríginal</i>
stressed monosyllabic weak retractor	<i>pýramid</i>	~	<i>pyrámidòid</i>
unstressed disyllabic weak retractor	<i>rémédy</i>	~	<i>remédiáble</i>
etc.			
- word-level → stress-neutral

	<i>mémory</i>	~	<i>mémorylessness</i>
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It has been claimed that dealing with such extensive non-uniformity requires the full power of constraint indexation (Pater 2009) or cophonologies (Inkelas & Zoll 2007).

See e.g. Raffelsiefen (2004), Zama (2012).

Main claims

- §2
- Phonological non-uniformity within a stratum involves underlying pre-specification, not indexation or cophonologies.
 - Handling non-uniformity through underlying pre-specification enables the single constraint hierarchy of a stratum to capture the similarities between affixes that otherwise behave non-uniformly.
 - At the stem level, a single constraint hierarchy captures the similarities between

- monomorphemic stems,	<i>álbatròss</i>
- stems derived by deradical affixation	<i>bómin-òid</i>
- stems derived by stem-level affixation to a stem	<i>pyrámid-òid</i>
 - In English, underlying pre-specification explains the behaviour of dual-level affixes.

METRICAL UNIFORMITY AND NON-UNIFORMITY IN ENGLISH STEM-LEVEL AFFIXATION

Handling metrical non-uniformity through underlying-prespecification

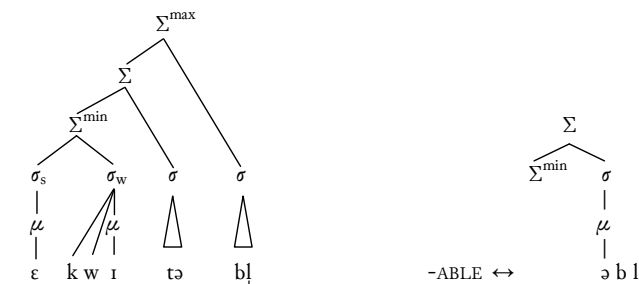
§3 Four apparently non-uniform metrical behaviours:

	<i>underived / bound base</i>	<i>free base</i>	
a. <C>	de.(vé.lo)<p> co.(lláp)<se>	me.(tá.lli)<c> —	<i>cf. métal</i>
b. < σ >	a.(spá.ra.)<gus> ve.(rán.)<da>	o.(rí.gi.)<nal> pa.(rén.)<tal>	<i>cf. óorigin</i> <i>cf. párent</i>
c. < $\acute{\sigma}$ >	Di.(ó.ge.)<nès> La.(ér.)<tès>	py.(rá.mi.)<dòid> cy.(lín.)<dròid>	<i>cf. pýramid</i> <i>cf. cýlinder</i>
c. < $\sigma\sigma$ >	in.(dó.mi.)<ta.ble> a.(méc.)<na.ble>	re.(mé.di.)<a.ble> con.(dém.)<[n]a.ble>	<i>cf. rémédy</i> <i>cf. con.dé[m]</i>

Differences: Different amounts of material excluded at the right edge of the domain.

Similarities: Right-aligned moraic trochee, *modulo* right-edge exclusions.

§4 Analysis (Bermúdez-Otero 2018): metrical prespecification



IDENT- σ - Σ° : If a σ is sister to Σ^{\min} in the input, its output correspondent is sister to Σ^{\min} .

Metrical similarities between morphologically heterogeneous items

§5 Types of item subject to the stem-level constraint hierarchy:

- | | | | | |
|-------------------------------|------------|------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------|
| a. <i>Monomorphemic item:</i> | one cycle | $\left\{ \begin{array}{l} [\text{SL albatross}] \\ [\text{SL homin-oid}] \end{array} \right.$ | álbatròss | $\left. \begin{array}{l} \text{no suffix} \\ \text{suffix} \end{array} \right\}$ |
| b. <i>Root-based item:</i> | | | hómin-òid | |
| c. <i>Stem-based item:</i> | two cycles | $\left[\begin{array}{l} [\text{SL pyramid}] \text{ oid} \\ [\text{SL pyramid}] \text{ oid} \end{array} \right]$ | pyrámìd-òid | |

Prediction:

The same set of well-formed stress contours is available to

- (a) monomorphemic items,
 (b) items derived by affixation to a bound root,
 and (c) items derived by stem-level affixation to a free stem.

§6 *Corroboration 1: same set of stress-contours in one-cycle and two-cycle forms*

This is a particular case of Chung's Generalization (after Chung 1983: 63): see Bermúdez-Otero (2012: 31, 2018) for references.

- Cyclic preservation of the stress of *imagine* creates a pretonic $\acute{\sigma}\acute{\sigma}\acute{\sigma}$ contour in *imàgin-àtion*; cf. the default dactyl in *àbracadàbra*. The pretonic $\acute{\sigma}\acute{\sigma}\acute{\sigma}$ pattern also occurs exceptionally in monomorphemic items like *Epàminóndas* and in root-based forms like *apòthe-ósis* (Bermúdez-Otero & McMahon 2006: 400).
- Cyclic preservation of the stress of *condense* creates a two-sided clash in *còndèns-àtion*; cf. *còm[p]n[s]àte ~ còm[p]n[s]-sàtion*. The same two-sided clash is found in monomorphemic items like *chìmpànzée* and in root-based forms like *òstènt-àtion*; cf. non-clashing *Pènn[s]lvània* (Kiparsky 2007: 26-27, Bermúdez-Otero 2012: 35).
- The foot-head on the final syllable of verbs like *tormént* is cyclically preserved as post-tonic secondary stress in zero-derived deverbal nouns like *tórmènt*. Post-tonic secondary stress is also possible as a marked option in monomorphemic and root-based items like *àbscèss* and *wisènt*; cf. unmarked *pàr[ə]nt* and *cýpr[ə]s* (Bermúdez-Otero 2012: 74).
- In some varieties of English, cyclic preservation of the primary stress of proparoxytonic verbs like *regulate* gives rise to long retraction in suffixed forms with *-ory*, which otherwise show weak retraction: e.g. *inflámmat-òry ~ satisfáct-ory*, but *régulat-òry*. The same $\acute{\sigma}\acute{\sigma}\acute{\sigma}$ (...) pattern, with a dactyl before a syllable bearing secondary stress, occurs in root-based forms like *véterin-àry* and in monomorphemic items like *cátamaràn* and *Mánitowòc* (Sanz Álvarez 2017).

§7 *Corroboration 2: same set of stress-contours in monomorphemic and suffixed forms*

Examples above, plus...

- The ... $\acute{\sigma}\acute{\sigma}\acute{\sigma}$ and ... $\acute{\sigma}\acute{\sigma}$ contours derived by weak retraction in suffixed forms like *pyrámìd-òid*, *hómin-òid*, *cylíndr-òid*, and *allánt-òid* are also found in monomorphemic items like *álbatròss* and *Àgamémnòn*.
- More spectacularly, when the antepenult is light, *-able_{SL}* suffixation creates anteproparoxytones with three unstressed post-tonic syllables when the antepenult is light: e.g. *indómít-able*, *remédĩ-able*. We therefore predict that (...) $\acute{\sigma}\acute{\sigma}\acute{\sigma}$ will be a possible stress contour even in monomorphemic items. Cast-iron examples are rare, but they do exist: the best is probably *pàrticiple*, where there is no plausible synchronic morphological segmentation (cf. *àlleg-ory* and *pàrsimon-y*), and where vowel quality makes it clear that the penultimate syllable is unstressed (see Wells 2008; cf. *Áristòtle* and *cáterpillar*).

METRICAL PRE-SPECIFICATION AND DUAL-LEVEL BEHAVIOUR: THE CASE OF *-IZE*

-ize as a strong retractor

§8 Datum: *récogn-ize* (bound base)

→ *-ize* is a strong retractor

i.e. causes stress to fall on the antepenult regardless of penult weight

§9 Pre-specification analysis:

/-aɪz/ is specified as immediately preceded by an unstressed syllable:

$$\begin{array}{c} \sigma_w \widehat{\sigma} \\ | \\ \text{-IZE} \leftrightarrow \text{aiz} \end{array}$$

-ize as a dual-level affix

- §10
- Stem-level stress-affecting uses: e.g. *Jápan-ize* cf. *Japán*
 - Word-level stress-neutral uses: e.g. *cónsonant-ize* cf. *cónsonant*

Raffelsiefen's challenge: idiosyncratic ineffability

§11 Raffelsiefen (2004), henceforth 'R':

-ize fails to attach to end-stressed bases including monosyllables e.g. **corrúpt-ize* (R111),
e.g. **Búsh-ize* (R99),
unless the base already happens to have an allomorph with early stress
e.g. *Japán* ~ *Jápan-ése*, and so *Jápan-ize* (R115)

§12 Does this require cophologies?

Explanation through pre-specification

§13 The theory of dual-level behaviour (Kiparsky 2005, Bermúdez-Otero 2018)

- Default behaviour: attach high (i.e. to a free inflectional stem) in word-level mode
- Attach low in stem-level mode only when there is independent evidence of the availability of the right base (i.e. a root or derivational stem).

§14 The case of *-ize*:

- Base: *corrúpt* (free) word-level stress-neutral use yields **corrúpt-ize*
→ violates the suffix's metrical pre-specification
→ ineffability
- Base: *Japán* (free) → word-level stress-neutral **Japán-ize*
Japan- (bound) → stem-level *Jápan-ize* OK

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