The curious incident of the Latin liquids.

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Long-distance dissimilation of liquids in a Latin suffix. Data:

- Alternates between [a] and [a]
- Function of suffix: denominative, adjective-forming.

Elsewhere form: [a], e.g. in
- natalis 'naval-nom.sg.mf'
- hiemalis 'of winter'
- augustalis 'of Augustus'

Suffix preceded by [l] → [a]
- lunaris 'lunar'
- popularis 'popular'
- militaris 'military'

Suffix preceded by [r] → [a]-lis
- regalis 'royal'
- florals 'floral'
- pluralis 'plural, manifold'

This is as far as the handbooks tend to get (see Meiser 1998: 127, Leumann 1977). Cser (2010) points out a systematic exception:

Non-coronal between liquid and suffix → [a]-lis
- legalis 'legal' (not *legaris)
- fulalis 'festival of Vulcovic-nom-pl.n.' (not *Vulcanaria)
- fulminalis 'projectile' (not *fulminaria)

ABC Analysis:

Constraint schema:
- ~IDEN-CC-x
  The logical complement of IDEN-CC-x, i.e. "Assess a violation for every pair of segments in the correspondence relation that differ with respect to x"

Effect: enforces the OCP on the CC-correspondence tier.

Definition:
- ~IDEN-CC-ART
  Enforces the CC-OCP on place features.

Liquids dissimilation as conditional blocking à la Hansson 2007:

Segmentation: IDEN-CC ART
- IDEN-CC ART
- COR L-QL
- COR C-C

Least expensive repair strategy — change the liquid in the suffix(1).

Two OCP contours:
- Perfect — OCP observed by both place and [LATERAL];
  \[ \text{seg} \quad \text{LAT} \quad \text{COR} \quad \text{DOR} \quad \text{ART} \]
- Next-best — OCP observed by [LATERAL] only;
  \[ \text{seg} \quad \text{LAT} \quad \text{COR} \quad \text{DOR} \quad \text{ART} \]

Liquids dissimilation as a preference hierarchy over OCP contours (McCarthy 2010):

Segmentation: IDEN-CC ART
- IDEN-CC ART
- IDEN-CC LQ
- COR C-C

Why this matters:

These data appear at first sight to instantiate the pattern of conditional blocking predicted by Hansson 2007, and ruled out by McCarthy 2010. The solution involving a top-ranked constraint in favor of consonant place dissimilation is so counter-intuitive that it only became apparent under automated analysis using PyOT (see Roberts 2012, ch. 1, and compare Karttunen 1998). OT grammars are so prone to produce counter-intuitive behaviors that automated analysis is necessary.

References:

1. The dissimilation is restricted to this particular suffix (see also note 3). There are no general re-occurrences of dissimilation within the language as a whole (Cser 2010), but there are other suffixes with different patterns of dissimilation, most notably -al/-ar, which is a reflex of the Meso/Greek -al/Ar (with apocope), but has been generalized as a noun-forming suffix. In -al/-ar, the liquid dissimilation is blocked by non-corinals. In the Classical language, this dissimilation is likely not phonologically productive, but a lexical residue of an formerly productive pattern (see Roberts 2012: R2.3.3).

2. Cser (2010: 39) discusses a number of apparent counter-examples, but concludes that most are phonologically unrobust: some are hapaxes, others come from manuscripts we have independent evidence to consider prone to transmission errors. The only serious difficulty is Latin 'fable'.

3. Given that the domain of liquid dissimilation is this particular suffix, the model must be one of phonologically conditioned allomorphy. Accordingly, I have represented the UR of -alis/aris as [r]/e/ where it should be taken to represent a morpheme that can be parsed equally faithfully with either of the two attested surface forms. Liquid dissimilation is therefore a TETU effect, with the ABC constraints selecting between allomorphs rather than between allomorphs (cf. Macarav 1996, Wob, to appear).

4. This is the neutral singular inflectional ending.

Notes:

0. L 2 W 1 W 0 L 2 W 1 W 0 L 2 W 1 W

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