

## Conditional blocking of long-distance consonant dissimilation is attested.

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Hansson (2007) demonstrated that, given an OT grammar with the constraint schemas CORR-C $\leftrightarrow$ C and IDENT-CC- $x$ , factorial typology calls for grammars where certain segments are opaque to long-distance consonant assimilation (LDCA). That is, it is possible to rank CORR-C $\leftrightarrow$ C and IDENT-CC- $x$  constraints such that, for example, in a language with place harmony for sibilants, a voiced [z] will be transparent to the harmony of two affricates ( $/tʃ...z...dz/ \rightarrow [tʃ...z...dʒ]$ ) but crucially will be opaque to the harmony of a fricative with an affricate ( $/tʃ...z...s/ \rightarrow [tʃ...z...s]$ ). This is known as conditional blocking.

McCarthy (2010) argued against CORR-C $\leftrightarrow$ C constraints on grounds of economy and typological prediction: he advocated a constraint MAX-CC, penalized for every segment in an output candidate that is not included in the CC-correspondence relation, and demonstrated that ABC effects can be modeled using only MAX-CC and the IDENT-CC- $x$  constraint family, with the exception of conditional blocking. Since Hansson himself explicitly states that “[i]t remains to be seen whether any cases of LDCA exhibiting these particular kinds of blocking effects actually exist”, McCarthy claimed that the absence of examples was not by accident: conditional blocking is not found precisely because CORR-C $\leftrightarrow$ C constraints are not part of CON.

The goal of this presentation is to demonstrate that the dissimilatory analog of conditional blocking is found in the behavior of the *-āli/āri-* suffix in Latin (the suffix reflected e.g. in English *lunar, legal, popular, floral*), and that no account but one employing the mechanism of Agreement By Correspondence with conditional blocking is sufficient to model this behavior in OT.

The handbooks tend to be vague on the subject of the conditions on *-ālis/āris*, stating only, for example, that *-ālis* dissimilates to *-āris* when there is an [l] in the stem it attaches to (see Meiser 1998: 127). The true descriptive conditions on *-ālis/āris* are as follows (Cser 2010):

- (1) a. Elsewhere form: *-āli-*, (e.g. in *nau-āli-s* ‘naval’, *ann-āli-s* ‘annal’)
- b. *-āris* when nearest liquid is [l]... (*popul-āri-s* ‘popular’ *singul-āri-s* ‘individual’)
- c. ... unless a non-coronal C intervenes. (*loc-āli-s* ‘local’, *fulmin-āli-s* ‘projectile’)

The absence of this last principle from the handbooks has had an unfortunate effect on attempts to produce theoretical models of the *-ālis/āris* allomorphy. (Suzuki 1998: 103), for example, following the handbooks, outright states that non-liquids cannot block dissimilation, and constructs a theory that relies on this being true.

Given the true facts of *-ālis/āris*, we propose the following analysis to account for it:

Firstly, the underlying representation for the suffix is  $/\{a:li/a:ri\}/$ , that is, an underlier that can be parsed equally faithfully from the point of view of IO-Correspondence by [a:li] or by [a:ri]. This captures the fact that the dissimilation is restricted to this particular suffix, by parsing it as phonologically conditioned allomorphy (as in e.g. Mascaró 1996).

Secondly, as we are dealing with long-distance consonant dissimilation rather than assimilation, we need constraints whose violations are the logical complement of the IDENT-CC- $x$  schema. That is, constraints which require pairs of segments adjacent in the correspondence relation to *differ* with respect to  $x$ . We will notate this schema  $\neg$ IDENT-CC- $x$ .

Given these architectural stipulations, we can construct the following constraint ranking to model *-ālis/āris*:

- (2) IDENT-IO  $\gg$   $\neg$ IDENT-CC-[LAT]  $\gg$  CC-CORR-{\[LAT], [RHO]}  $\gg$   $\neg$ IDENT-CC-ART  $\gg$  CC-CORR-[CONS]

There are two  $\neg$ IDENT-CC-*x* constraints here, with the result that the optimal output for this ranking is one in which all consonants observe the OCP with respect to both [LATERAL] and place of articulation, as in *legālis*:

- (3)
- |             |       |   |       |    |       |   |   |
|-------------|-------|---|-------|----|-------|---|---|
|             | $l_i$ | e | $g_i$ | a: | $l_i$ | i | s |
| [LATERAL]   | +     |   |       |    | +     |   |   |
| ARTICULATOR | COR   |   | DOR   |    | COR   |   |   |

Failing that, the grammar prefers to ensure that liquids dissimilate than that place features do (because  $\neg$ IDENT-CC-[LAT] dominates  $\neg$ IDENT-CC-ART), as in *lūnāris*:

- (4)
- |             |       |    |   |    |       |   |   |
|-------------|-------|----|---|----|-------|---|---|
|             | $l_i$ | u: | n | a: | $r_i$ | i | s |
| [LATERAL]   | +     |    |   |    |       |   |   |
| ARTICULATOR | COR   |    |   |    | COR   |   |   |

The preferred repair strategy to achieve these contours is the ejection of non-liquid consonants from the correspondence relation, because CC-CORR-[CONS] is bottom-ranked.

Note that several properties of the observed generalization are emergent in this analysis: the fact that *-ālis* is the default emerges from the fact that the ranking seeks to produce a contour with respect to [LATERAL]: [l] is the only lateral consonant in the Latin segment inventory, therefore in a form without other liquids (e.g. *nauālis*), [a:lis] will be chosen so that a [LATERAL] contour is enforced. Also, the fact that non-coronals block dissimilation emerges out of the fact that /r/ and /l/ are themselves underlyingly coronal.

Given the distributional facts outlined in (1), it is difficult to see how they could be modeled in any OT-based formalism other than Agreement By Correspondence with the potential for conditional blocking. We therefore propose to call the question between Hansson (2007) and McCarthy (2010) decided.

## References

- CSER, ANDRÁS, 2010. ‘The *-alis/aris-* allomorphy revisited’. In Franz Rainer, Wolfgang U. Dressler, Dieter Kastovsky & Hans Christian Luschützky (eds.), *Variation and change in morphology: selected papers from the 13th international morphology meeting, Vienna, February 2008*, 33–51, Amsterdam/Philadelphia: John Benjamins.
- HANSSON, GUNNAR ÓLAFUR, 2007. ‘Blocking effects in agreement by correspondence’. *Linguistic Inquiry* 38:395–409.
- MASCARÓ, JOAN, 1996. ‘External allomorphy as emergence of the unmarked’. In Jacques Durand & Bernard Laks (eds.), *Current trends in phonology: models and methods*, 76–86, ESRI, University of Salford.
- MCCARTHY, JOHN J, 2010. ‘Agreement by correspondence without CORR constraints’. The Selected Works of John McCarthy.  
URL [http://works.bepress.com/john\\_j\\_mccarthy/106/](http://works.bepress.com/john_j_mccarthy/106/)
- MEISER, GERHARD, 1998. *Historische Laut- und Formenlehre der lateinischen Sprache*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- SUZUKI, KEIICHIRO, 1998. *A typological investigation of dissimilation*. Ph.D. thesis, University of Arizona, available from the Rutgers Optimality Archive as ROA-281.  
URL <http://roa.rutgers.edu/view.php?roa=281>