

Iterative Optimization Predicts Movement in Morphology

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The main goal of this talk is twofold. First, I will show that a faithful transfer of existing approaches to affix order based on ranked, violable alignment constraints (see, e.g., Trommer (2001; 2008)) from standard parallel optimality theory (see Prince & Smolensky (2004)) to harmonic serialism (see McCarthy (2016), Heck & Müller (2016)) automatically predicts the possibility of movement in a separate, autonomous morphological component of grammar (see Müller (2019)). For instance, such movement of exponents will invariably arise, given iterative optimization as the defining property of harmonic serialism, when the order in which two exponents must be merged with a stem parallels the ranking of two right-alignment (or left-alignment) constraints: An exponent α is merged with the stem first, an exponent β is merged next (at the periphery of the extended stem, given the Strict Cycle Condition), and α must then finally be moved around β if its alignment constraint is higher-ranked than the alignment constraint for β .

Against this background, the second goal of the talk then is to show that there is a lot of independent empirical evidence in favour of such movement in morphology. I will address four different areas that illustrate this.

First, the phenomenon of *discontinuous exponence* (see Harris (1945)), including circumfixation, can be accounted for by assuming that the “discontinuous” exponent is actually a discrete item initially, part of which gets separated by morphological movement.

Second, the phenomenon of *partially superfluous extended exponence*, where the morpho-syntactic features of two exponents in a single word stand in a proper subset relation, poses a problem for many theories of morphology because the more general (i.e., subset) exponent would seem to be globally unmotivated. Several solutions to this problem predict that the more general exponent has to be closer to the initial stem than the more specific exponent (see Caballero & Harris (2012), Stiebels (2015), and Müller (2019)). However, in some cases (e.g., with extended exponence of negation on the verb in Swahili; cf. Stump (2001)) the surface order is at variance with this requirement. Morphological movement in harmonic serialism solves this problem: The more general exponent is merged closer to the stem first, the more specific exponent is merged later, and finally the former exponent moves across the latter.

Third, the phenomenon of *non-local stem allomorphy* (i.e., stem allomorphy conditioned by features on exponents that are not next to the stem on the surface) has motivated a number of special devices in the literature (see Merchant (2015), Moskal & Smith (2016), and Božič (2019)) but can be reinterpreted in the present approach as extremely local stem allomorphy accompanied by subsequent exponent movement.

Fourth and finally, there are what looks at first sight like non-local phonological operations triggered by inflectional exponents in a number of languages. Focussing on *ruki* rule application in Sanskrit (Kiparsky (1982)), de-spirantization in Barwar Aramaic (Khan (2008)), *ni*-insertion in Quechua (Myler (2013)), vowel harmony in Kazakh (Bowman & Lokshin (2014)), and accent shift in Lithuanian (Kushnir (2018)), it is argued in Gleim et al. (2019) that these phenomena should be analyzed as strictly local phonological reflexes of morphological movement: The exponent that triggers the phonological process is local in a first phonological cycle, and becomes non-local only after alignment-driven subsequent movement in morphology.

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