Home
Search
Browse Collections
My Account
About
Digital Commons Network™

Home > HFA > LINGUIST > LINGUIST_FACULTY_PUBS > 40

Linguistics Department Faculty Publication Series

Harmonic serialism and parallelism

John J. McCarthy, *University of Massachusetts, Amherst*

Follow

Publication Date
January 2000

Abstract
The most familiar architecture for Optimality Theory is a fully parallel one, meaning that "all possible ultimate outputs are contemplated at once" (Prince and Smolensky 1993: 79). But Prince and Smolensky also briefly entertain a serial architecture for OT, called Harmonic Serialism. The idea is that Gen Eval iterates, sending the output of Eval back into Gen as a new input. This loop continues until the derivation converges (i.e., until Eval returns the same form as the input to Gen). There are clear resemblances between this approach and theories based on notions like derivational economy (e.g., Chomsky 1995). There is also a connection with serial rule-based phonology. In the implementation of Harmonic Serialism that Prince and Smolensky consider, each iteration of Gen is limited to making a single change in the input. The resulting derivation is quite similar to what rule-based phonology produces, if each rule is limited to the form A B/C__D, where A is a single segment.

Apart from chapter 2 of Prince and Smolensky (1993), Harmonic Serialism has not figured very prominently in the literature, though with significant additional enhancements it has been used as a vehicle for incorporating rules into OT by Black (1993) and Blevins (1997).

In this talk, I will look closely at Harmonic Serialism (without the enhancements). I will distinguish it from parallel OT and from other serial constraint-based theories such as Harmonic Phonology or "Stratal" OT. My goal is to develop a range of predictions made by Harmonic Serialism, under varying implementational assumptions, for phenomena that have been regarded as typical effects of serial derivation, such as phonological opacity. A key finding is that Harmonic Serialism doesn't improve much on classic parallel OT in analyzing opacity, and in certain other respects does significantly worse.

Download

Included in

Morphology Commons, Near Eastern Languages and Societies Commons, Phonetics and Phonology Commons

mmons, Phonetics and Phonology Commons

SHARE

This page is sponsored by the University Libraries.