Feature Geometry in Harmonic Serialism: Abstract

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Harmonic Serialism (HS) is a recursive derivational variant of the Optimality Theory (OT) model of phonology which has emerged in recent years (McCarthy 2016). This paper examines the question of how Feature Geometry interacts with the theoretical assumptions of HS Specifically, this paper looks to synthesize the findings and assumptions of Feature Geometry, HS, and Moraic Theory in order to explain non-assimilatory sound changes. The paper draws on work regarding feature geometry (McCarthy 1988; Blevins 1994; Padgett 2002; Hall 2007), Harmonic Serialism and Optimality Theory (McCarthy 2008, 2016, 2018; Prince & Smolensky 2004), and Moraic Theory (Hayes 1989; Zec 1995). The analysis was built around providing HS with a principled mechanism for explaining non-assimilatory sound changes in the context of a geometric feature hierarchy. Little work seems to have been done regarding the interaction of HS and Feature Geometry, a gap which this paper seeks to start bridging.

This paper analyzes a coda lenition process in Chilean Spanish, with data drawn from Piñeros (2001) and Bros (2018), shown below in (1) and (2). In Chilean Spanish, stops lenite to glides when in coda position. In a similar process, coda /s/ also lenites, though instead of gliding it undergoes aspiration word-medially and deletion word-finally. This present study argues that both of these lenition processes result from the same underlying constraint, *OBSTRUENTMORA, which bans obstruent segments from bearing a mora. In an attempt to avoid violating this constraint, this paper proposes, coda obstruents in Chilean Spanish undergo various forms of lenition. It has been attested that some languages have minimum sonority requirements for segments to licitly bear morae (Zec 1995). This paper argues that the Chilean Spanish lenition attempts to resolve the constraint violation by either increasing the sonority of the segment, as with the stops, or vacuously satisfying sonority requirements by place-deleting to a glottal segment. Word-final [h] deletion is argued to be a separate process.

(1) Stop Gliding (Piñeros 2001)

a)	/adkirir/	→	[aj.kirir]	“to acquire”
b)	/etniko/	→	[ej.niko]	“ethnic”
c)	/kaptura/	→	[kaw.tura]	“capture”
d)	/dogma/	→	[dow.ma]	“dogma”

(2) Coda /s/ aspiration (Broś 2018)

a)	/esto/	→	[eh.to]	“this”
b)	/bes/	→	[be_]	“time”

The key question here is the number of features which can be changed in a single step. Using data from Chilean Spanish, this paper will argue that changes must be made to a single feature node, while allowing modifications to the specific PLACE features in each step. That is, in a single step either a feature node can be deleted, consequently detaching all its dominated features to detach from the segment, or any number of the features dominated by a node may be changed. This proposal is termed the Nodal Faithfulness model.

References

Broś, K. (2018). Contiguity in prosodic words: Evidence from Spanish. *Poznan Studies in Contemporary Linguistics, 54*(1), 37-82. doi:10.1515/psicl-2018-0002

Blevins, J. (1994). A place for lateral in the feature geometry. *Journal of Linguistics*, *30*(2), 301–348. https://doi.org/130.63.180.147

Hall, T. A. (2007). Segmental features. In P. de Lacy (Ed.), *Cambridge Handbook of Phonology* (pp. 312–334). Cambridge University Press

Hayes, B. (1989). Compensatory lengthening in moraic phonology. *Linguistic Inquiry*, *20*, 253–306.

McCarthy, J. J. (1988). Feature geometry and dependency: A review. *Phonetica*, *43*, 84–108.

McCarthy, J. J. (2008). The gradual path to cluster simplification. *Phonology*, *25*, 271–319.

McCarthy, J. J. (2016). The theory and practice of Harmonic Serialism. In J. McCarthy & J. Pater (Eds.), *Harmonic Grammar and Harmonic Serialism*. London: Equinox Press

McCarthy, J. J. (2016). The theory and practice of Harmonic Serialism. In J. McCarthy & J. Pater (Eds.), *Harmonic Grammar and Harmonic Serialism*. London: Equinox Press.

McCarthy, J. J. (2018). How to delete. *Selected Works of John McCarthy*. Retrieved from https://works.bepress.com/john_j_mccarthy

Padgett, J. (2002). Feature classes in phonology. *Language*, *78*(1), 81–110. https://doi.org/130.63.180.147

Piñeros, C. (2001). Segment-to-syllable alignment and vocalization in Chilean Spanish. *Lingua, 111*(3), 163–188. doi:10.1016/s0024-3841(00)00029-2

Prince, A., & Smolensky, P. (2004). *Optimality Theory: Constraint interaction in generative grammar*. Malden, Mass., and Oxford, UK: Blackwell.

Zec, D. (1995). Sonority constraints on syllable structure. *Phonology, 12*(1), 85–129.