

An Evolutionary Perspective on Retroflex Phonotactics

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This paper examines two diametrically opposed phonotactic constraints on retroflexion:

- (a) No word-initial retroflexes (e.g., Dravidian, Indo-Aryan, Australian)
- (b) No word-final retroflexes (e.g., Tibeto-Burman)

These contradictory patterns can be explained if phonotactic constraints on retroflexion are a direct result of the evolution of retroflexion in a language. Languages that prohibit word-initial retroflexes are those that developed retroflexion from consonants in post-liquid and/or post-vocalic contexts (e.g., /rt/ > /ɽ/; /ut/ > /uɽ/). Since these historical antecedents were always non-initial they never produced retroflexion in word-initial positions. Languages that prohibit word-final retroflexes are those that developed retroflexion from consonants in pre-liquid environments (e.g., /Cr/ > /ɽ/). Since these historical antecedents were always word- or syllable-initial they never produced retroflexion in final positions. In each case, the phonotactic pattern is a natural consequence of the diachronic development of retroflexion in the language.

This account departs from previous studies, which argued for a purely perceptual basis to retroflex phonotactics (Hamilton, 1996; Steriade, 2001; Hamann, 2003). Given that perceptual cues to retroflexion are strongest in VC transitions, and weakest in CV transitions, these studies have argued that retroflexion is avoided word-initially because it lacks the requisite VC cues in that environment. While this might explain the pattern in (a) it cannot explain the pattern in (b), in which retroflexion is restricted to initial position, where it is least expected, and prohibited from non-initial positions, precisely where it is most expected on perceptual grounds.

- Hamann, S. (2003). *The phonetics and phonology of retroflexes*. Utrecht: Landelijke Onderzoekschool Taalwetenschap.
- Hamilton, P. (1996). *Phonetic constraints and markedness in the phonotactics of Australian aboriginal languages*. Doctoral dissertation, University of Toronto.
- Steriade, D. (2001). Directional asymmetries in place assimilation: A perceptual account. In E. Hume, & K. Johnson (Eds.), *The role of speech perception in phonology* (pp. 219-250). New York: Academic Press.