Perceptual and Articulatory Factors in Place Assimilation:
An Optimality Theoretic Approach

by

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### VITA

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### PUBLICATIONS AND PRESENTATIONS


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ABSTRACT OF THE DISSERTATION

Perceptual and Articulatory Factors in Place Assimilation:
An Optimality Theoretic Approach

by

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This dissertation investigates place assimilation in consonant clusters, focusing on the following two related issues: (i) to determine the articulatory and perceptual mechanisms involved in place assimilation; and (ii) to provide an explicit formal analysis for place assimilation, with special attention to crosslinguistic patterns. In the first project, we have mainly investigated the mechanisms which govern casual speech place assimilation, by exploring Korean and English $pk$ clusters in experimental research. Results indicate that gestural reduction plays the decisive role in the perceptual loss of the target in place assimilation; and that the reduction process is speaker-controlled.

In the second project, we first performed a brief survey of place assimilation. The results show that crosslinguistic patterns of place assimilation suggest implicational statements; e.g. if stops are targets of place assimilation, so are nasals. To provide an explicit formal analysis for these implicational statements, we have invoked Optimality Theory (Prince and Smolensky 1993; McCarthy and Prince 1993) in which the phonology is composed of ranked violable constraints. We further assume that place assimilation is a compromise between articulatory and perceptual demands governing speech production in general (Kohler (1990) and Mohanan (1993), both of whom are originally based on Lindblom (1988, 1990)). Based on an in-depth discussion of perceptual and articulatory factors, we have proposed two conflicting groups of (perceptually and articulatorily motivated) constraints which
conspire to produce the range of attested production outputs. In addition, we have proposed universal rankings for perceptually motivated constraints. We claim that different interactions of these independently motivated constraints result in the crosslinguistic patterns of place assimilation; and that the universal ranking of perceptually based constraints captures the implicational statements of place assimilation typology. We finally demonstrate how the proposed theory can deal with attested patterns of place assimilation by providing the analyses for those attested in Malayalam, English and Korean.