CONSTRAINTS ON PHONOLOGICAL INTERACTIONS

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I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

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Abstract

Optimality Theory (OT) is committed to a view of phonology where significant generalizations are placed in the character of output structures. Markedness constraints state these surface preferences, and grammars are free to choose from a variety of paths (repair strategies) that enforce the output structures. OT faces systematic difficulties with cases where a given markedness constraint is observed to cause fewer repairs than predicted by the theory. This dissertation examines several cases of this type, termed 'too-many-solutions' problems. I argue that the difficulty faced by OT is due to the significant phonological generalizations being most insightfully stated not as output preferences, but preferences for input-output mappings. I argue for a new type of OT markedness constraint to handle such 'procedural' generalizations. Unlike traditional markedness constraints, these new constraints penalize dispreferred processes rather than output forms. The typology of interactions between prosodic and segmental properties provides the empirical evidence for the proposals. The asymmetry between, on the one hand, those phonological categories to which stress can be sensitive, and on the other, those properties which it can condition has posed an intractable too-many-solutions problem for standard OT. At the root of the difficulties, I argue, is the fact that the important generalization in the domain of prosody-segmental interactions is in the processes, not the outputs. The formal proposals are first developed with reference to this empirical domain. I propose a theory of procedural markedness constraints which refer to the direction of interaction between the relevant categories. These constraints penalize the candidates that involve typologically unobserved repair strategies in such a way that those candidates cannot be optimal. In the final part of the dissertation I apply the new theory of constraints to another problematic too-many-solutions case, the typology of vowel syncope and epenthesis. Here, too, the procedural markedness constraints become necessary to account for systematic gaps in the conditioning environments of the two processes.

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