

Categorical phonotactics and language universals

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In phonology, universal grammatical preferences have been argued to derive from at least two sources: (i) phonetic principles and (ii) structural biases on how phonological generalizations are stated. I address both of these sources through behavioral experiments with Quechua speakers, comparing the behavioral effects of two categorical phonotactic restrictions on a variety of tasks. A bias in favor of constraints with the structural form of an Obligatory Contour Principle (OCP) restriction, $*[\alpha F][\alpha F]$, is supported by a repetition task and an identification task diagnosing the representation of two categorical phonotactic restrictions by speakers of Cochabamba Quechua: the cooccurrence restriction on roots with pairs of ejectives $*[k'ap'u]$, and the ordering restriction on roots with a plain stop followed by an ejective $*[kap'u]$. The results are consistent with a strong phonotactic restriction against cooccurring ejectives, above and beyond perception and production difficulties, while the ordering restriction seems to be represented as a weaker phonotactic restriction with speakers' behavior primarily reflecting phonetic difficulties. As both restrictions are categorical and equally supported by the statistics of the lexicon, the results support a pre-existing bias that favors constraints like $*[+cg][+cg]$, which penalize sequences of feature matrices with the same value for some feature, over constraints like $*[-cont, -son][+cg]$, which penalize sequences of unrelated feature matrices.