Deletion or Epenthesis?
Repercussions for a Theory of Phonological Universals

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Consider the data in (1), two lexical morphemes combined with two verbal suffixes from Axininca Campa.

(1)   [kimapiro]   'truly hear'   [kimi]   'will hear'

        [ohopiro]   'truly tie thatch'   [ohoti]   'will tie thatch'

Should the linguist posit that processes of /a/ epenthesis and /t/ epenthesis are active in this language, or should they instead favor an /a/ deletion, /t/ deletion analysis? There is not, it seems, any formal method for determining this question, and yet it turns out to be crucial to historical accounts of the emergence of such patterns. One such proposed diachronic trajectory is illustrated by the hypothetical word forms in (2).

(2)   /kit/ + /pamit/ → [kitpamit] > [kipamit] ↵ /ki/ + /pamit/

               /kit/ + /oru/   → [kitoru]   > [kitoru] ↵ /ki/+t+/oru/

The ↵ symbol indicates the contribution of the listener/learner who interprets what they have heard (surface forms) in a manner that is distinct from what the speaker intended (underlying forms). What began as historic, and natural, deletion, becomes re-analyzed. This account does not specify, however, what triggers re-analysis. Why should deletion become epenthesis?

It turns out that the answer to this question is not trivial. And this is true of several other implicit hypotheses in both the diachronic and synchronic domains. Through the course of developing a self-consistent model of the emergence of epenthesis systems it will become clear that several properties of sound change, lexicons and learners must be specified. Among the proposals in this work are the following:

(3)   Diachronic consonant deletion must occur both in clusters and word-finally

(4)   But only a subset of all consonant types can undergo deletion.

(5)   Learners pick underlying forms that are isomorphic with the default 'uninflected' member of the paradigm.

This research program has already achieved success if any one of these proposals does not obviously follow from surface examination of (2). Additionally, the full set of proposals, and thus, the fully specified model embodies an explicit theory about phonological typology: which types of grammars can result from particular historical scenarios. In turn, this is a prediction about phonological universals, substantively, which segments can occur as epenthetic, and in what environments. Computationally, the model demonstrates whether such universals, if they arise, are inherent to the language module or emergent from the interaction of the mechanisms of language processing.