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3:000-4:30, 145 Straub

"Why phonotactic knowledge is not just statistical inference

In this talk, I will seek to establish first principles for the theory of phonotactics--the theory of speakers' knowledge of "possible" and "impossible" (or "likely" and "unlikely") sound sequences; in particular, I will suggest that core facts of phonotactic theory are difficult to reconcile with an increasingly predominant view of phonotactic knowledge and learning as a type of statistical inference over the lexicon. This argument will be made with three steps. First, it is shown that there numerous cases where statistically robust patterns in the lexicon go unlearned (i.e., are ignored) by native speakers. The obvious alternative is simply that these are the result of historical accident and not part of speakers' synchronic knowledge. Second, an analysis of three wordlikeness judgement experiments finds that current state-of-the-art computational models of phonotactic learning are less able to predict speakers' judgements than is a trivial baseline.

Finally, phonotactic "gaps" are in many cases expected given the existence of neutralizing phonological alternations and the sparse nature of the lexicon.