Learning-Driven Linguistic Evolution

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Linguistic knowledge is transmitted to individuals in a population via interaction with other speakers of the language. Population-level changes to linguistic knowledge therefore depend on how information from other speakers is integrated into an individual's language system. But, not all linguistic knowledge is created equal: some knowledge is malleable throughout an individual's life while other knowledge is thought to be malleable only during the initial period of language learning. In this second case, the nature of individual-level learning and the data available to individuals during this learning period will primarily drive the subsequent change to this knowledge within the population.

I will discuss a model of learning-driven linguistic evolution, and use it to account for a well-known case of historical language change. The key insight of the model is that individuals must not use all the data available to them during learning. Instead, they use only data perceived as maximally informative. Perhaps surprisingly, this data restriction does not hinder a probabilistic learner, but in fact enables a population comprised of such individuals to change at the historically observed rate.

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Link to article:
http://www.socsci.uci.edu/~lpearl/papers/PearlWeinberg2007_InputFiltering.pdf

Pearl, L. and Weinberg, A. 2007. Input Filtering in Syntactic Acquisition: Answers from Language Change Modeling, *Language Learning and Development, 3(1)*, 43-72.
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