Worldwide phonological diversity

In this talk we describe one of the broadest coverage cross-linguistic databases for segmental phonological typology, encompassing over 2000 languages and two full-coverage distinctive feature sets. Focusing on phonological inventories and theoretical models of distinctive feature systems, we start with an overview of what is currently known about the sounds of the world's languages from a cross-linguistic, descriptive point-of-view.

Next, we highlight why popular visualizations of typological diversity have been cartographically naive, e.g. WALS (Dryer & Haspelmath, 2013). Poor visualizations may lead to flawed hypotheses due to geographic illusions that do not in fact exist when cartographic and linguistic biases are taken properly into account.

Lastly, we show how quantitative methods like dimensionality reduction and functional load analysis can provide insights into general structures and patterns of the phonological system, particularly when proper visualization methods are taken into account. We illustrate our analyses in two case studies, including: evaluating the frequency and functional load of sounds in language data (instead of at the level of inventories); and analyzing the evolution of particular sounds as they may pertain to biological and cultural evolution of *homo sapiens*.

Reference

Matthew S. Dryer and Martin Haspelmath, editors. 2013. WALS Online. Max Planck Institute for Evolutionary Anthropology, Leipzig.