



CoCo Seminar Series Spring 2016

Computational Models for Measuring Cultural Transmission

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Wednesday March 16nd, 2016 8:30-9:30am
Engineering Building H-9
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Determining the historical patterns of inheritance is a central part of evolutionary explanations. Fortunately, anthropologists have a variety of tools for measuring inheritance that are derived from culture historical methods designed for tracking homologous similarity through time. The explanation for why methods such as frequency seriation produce the patterns they do, however, has only been recently developed and more work is required to develop algorithms for systematically generating results as well to link the details of data distributions to specific mechanisms of inheritance. Network models provide one means assessing the role of solving seriation solutions transmission parameters and interaction structure. Here, I present the development of a new method for creating seriations and discuss the results of a simulation based research on network models to explore how innovation rate, population size and configuration influence the "diffusability" of information. Used in an archaeological case, the analysis and results point to necessary conditions under which prehistoric transmission must have occurred among prehistoric potters of the Lower Mississippi river valley.

Dr. Carl Lipo is Professor in the Department of Anthropology and Director of the Environmental Studies Program at Binghamton University. His research interests include cultural change of human populations and cultural evolution.

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