



NIMBioS

National Institute for Mathematical
and Biological Synthesis

“The rise of complex human societies as a major evolutionary transition”

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Tuesday, November 16, 2010

3:30 p.m.*, Room 403, Blount Hall, 1534 White Ave.

Multilevel selection is a powerful theoretical framework for addressing these questions. Turchin uses this framework to investigate a major transition in human social evolution, from small-scale egalitarian groups to large-scale hierarchical societies such as states and empires. A key mathematical result in multilevel selection, the Price equation, specifies the conditions concerning the structure of cultural variation and selective pressures that promote evolution of larger-scale societies. Specifically, large states should arise in regions where culturally very different people are in contact, and where interpolity competition - warfare - is particularly intense. Turchin explores the implications of this theoretical result with a spatially explicit agent-based model and tests model predictions with historical data.

**Join us for refreshments in the NIMBioS Lobby on the 4th floor at 3 p.m.*