

- We need someone to research conceptual uses of models. What are they good for? What are they not good for?
- Implement and understand Turchin's demographic structural math model. Ways to combine with asabiya model?
- Why would we want to apply models to history? This should be more abstract, theoretical. Then we move into our models.
- Notes from Turchin Introduction
  - Theory in social science terms: qualitative
  - in order to be a mature discipline, need mathematical theory
  - Other fields which developed mathematical theories recently: synthetic theory of evolution; population ecology
  - simple approaches inspired by physics will fail; too many interweaving parts; exogenous forces
  - physicists have lots of data, and can gather data. Very untrue for historical sociologists.
  - CHAOS
  - dynamics: change over time
  - dynamic systems approach: break up larger thing into smaller pieces that interact with each other
  - imperial dynamics: territory, number of people change over time
  - all models simplify reality. Artificiality. Many models are wrong (have wrong assumptions), but still useful.
- Collective Solidarity Notes
  - “the best organized group usually wins, and that means the group with the most internal solidarity” (Collins 1992:26) page 37 from Turchin
  - Ibn Khaldun: Asabiya
  - small scale societies lead to increased asabiya because collective action is necessary for survival
  - empires lead to decreased asabiya because of luxuries, intraelite competition
  - McNeill 1963: “a long line of lords marcher who created empires by successfully exploiting a strategic position on the frontier between civilization and barbarism.”
  - Durkheim's Mechanical solidarity. Disregard organic since we're looking at agrarian empires, not industrial.

- Presentation Outline
  - What is a model?
  - Why model?
    - \* <http://jasss.soc.surrey.ac.uk/11/4/12.html>
  - Chaos, nonlinearity
  - Territory Expansion Models
  - Asabiya Model
  - Demographic Structural model
  - Combined model?