Building New Political Actors

A Model for the Emergence of New Political Actors

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Modelling Social Interaction in Information Systems Paper Presentation

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The Tribute Model

- How can new political actors emerge from an aggregation of smaller political actors?
- Simple local rules to generate higher levels of organization from elementary actors
- "Pay or else" combined with mechanisms to increase and decrease commitments
- Criteria
  - Effective control over subordinates
  - Collective action
  - Recognition by others as an actor
The Tribute Model

- Circle topology, 10 actors
- Wealth (300 - 500)
- 1000 years, 3 active actors/year, 20 wealth/harvest
- Tribute: 250 or total wealth
- War: each side loses 25% of the other side's wealth

- Vulnerability: \((A-T)/A\)
- Fight if and only if it would cause less than the paying would.
Commitments

- 0-100%
- Commitment of i to j increases when:
  - a) i pays tribute to j (subservience),
  - b) i receives tribute from j (protection), or
  - c) i fights on the same side as j (friendship).
- Similarly, commitment decreases whenever:
  - d) i fights on the opposite side as j (hostility).
Results

**FIGURE 1.**
Wealth of Each Actor Over 1000 Years (Population 1).
Results

**Table 2. Commitments Forming Pattern of Two Clusters**  
(from Population 2, Year 50).

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Note: Actors 1 and 10 are adjacent.