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
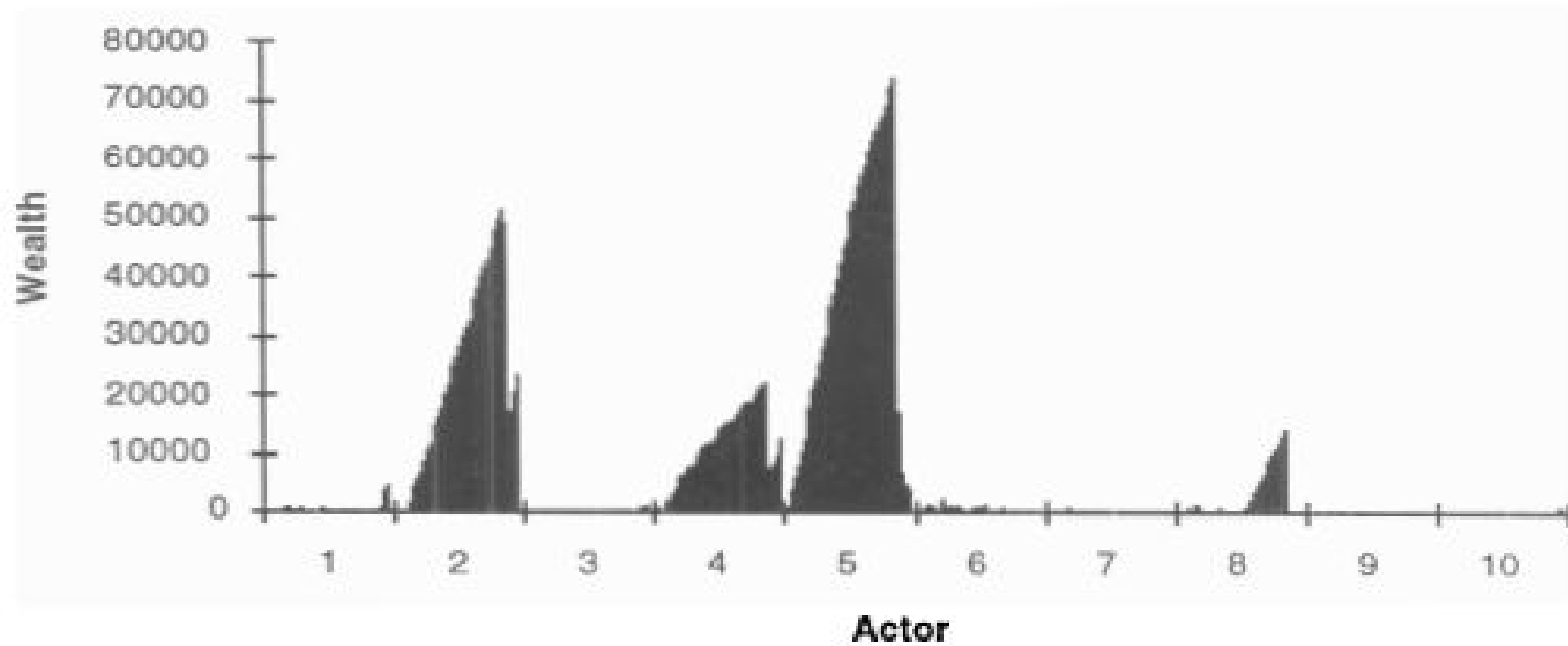
The Tribute Model

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

Commitments

- 0-100%
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- 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).

i, j	1	2	3	4	5	6	7	8	9	10
1	100	100	70	0	0	0	0	100	100	100
2	100	100	100	0	0	0	0	100	100	100
3	70	100	100	0	0	0	0	100	90	70
4	0	0	0	100	100	60	100	0	0	0
5	0	0	0	100	100	100	100	0	0	0
6	0	0	0	60	100	100	100	0	0	0
7	0	0	0	100	100	100	100	0	0	0
8	100	100	100	0	0	0	0	100	100	100
9	100	100	90	0	0	0	0	100	100	100
10	100	100	70	0	0	0	0	100	100	100

Note: Actors 1 and 10 are adjacent.