

Exploring Strategic Network Organizations Properties

Part 1: steps 1-2

1. Choose a network organization (NO) to simulate. An example is a terrorist network with a few leaders and many foot soldiers (Gutfraind, 2009). Another example is a research topic with a few faculty and several students working on it. A third example is a swarm of birds evading a predator. Whereas peripheral birds can be captured, central ones will not be. Pick or build a set of NO where you have access to all network details. Simulate dynamics in this NO by simulating types and strengths of interactions on NO links. You can create a timed pattern of interactions. For example, every day, leader issues a task or the strongest bird becomes the leader.
2. Measure a few network properties; e.g., leadership, bonding, diversity, centralization.

Part 2: Step 3

3. We are interested in developing metrics that quantify interesting properties of NO from step 1. See our short suggestion list.
 - i. Leadership: How effective is the NO leadership?
 - ii. Cohesion: How much collaboration is practiced in the NO? i.e., mutual goals and shared plans
 - iii. Stability: How enduring/resilient is the NO with respect to member loss or gain? I.e, stable coalition issues.
 - iv. Plasticity: How responsive is the NO to changes in the environment?
 - v. Social capital: How much social capital is present in the NO? and what impact does it have?

References

A. Gutfraind, 2009. Understanding Terrorist Organizations with a Dynamic Model, in *Studies in Conflict & Terrorism*, 32:45–59, Routledge Pub.