Social Network Analysis and Evaluation
What Is Social Network Analysis (SNA)?

- “Social network analysis is the mapping and measuring of relationships and flows between people, groups, organizations, computers, or other information- and knowledge-processing entities.” (Valdis Krebs, 2002)

- Maps the relationships among people in order to identify knowledge flows.

- Provides contrast to the organizational chart.
What Does SNA Tell Us?

Relationships are uncovered through questions we ask

Network structure is analyzed based on key indicators

- Direction of information flow
- People who are overly central
- People who are loosely connected and who may be under-utilized
- Divisive subgroups
- Network level of overall connection

- Information or knowledge
- Task flow
- Trust or energy

(Rob Cross and Network Roundtable, LLC)
Formal Versus Informal Networks

(Cross, Parker, & Borgatti, 2002)
Why Use It?

- Identify individuals playing central roles
- Bring in isolated teams or individuals
- Detect information bottlenecks
- Identify opportunities for improving the flow of knowledge
- Accelerate the flow of knowledge and information across functional and organizational boundaries
- Improve the effectiveness of formal communication channels
- Target opportunities through which increased knowledge flow will have the most impact
- Raise awareness of existing informal networks
Recognizing What Each Does Best

<table>
<thead>
<tr>
<th>“Formal” Characteristics</th>
<th>“Informal” Characteristics</th>
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<tbody>
<tr>
<td>Rational</td>
<td>Emotional</td>
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<tr>
<td>Hierarchical</td>
<td>Collaborative</td>
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<tr>
<td>Disciplined</td>
<td>Spontaneous</td>
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<tr>
<td>Clear</td>
<td>Ambiguous</td>
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<tr>
<td>Aligning</td>
<td>Motivating</td>
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<tr>
<td>Predictable</td>
<td>Innovative</td>
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<tr>
<td>Scalable</td>
<td>Responsive</td>
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<tr>
<td>Efficient</td>
<td>Adaptive</td>
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</tbody>
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There Are Limitations

Lack of anonymity is a significant ethical issue

Data generated through self report:
  • Accuracy of informant recall
  • Potential ambiguity of partnership concepts
  • Overstatement of connections

While describing network links, SNA does not explain why link patterns exist

Missing data
Lincoln County Conservation Stakeholders Network Study

Area: 250,000 ha

Population: 46,000

Goals

Test utility of social network analysis for coastal conservation

Identify and engage stakeholders

Allow stakeholders to think of how they might enhance their networks
Survey Questions

• Who are key individuals with whom you have collaborated on sustainable natural resource projects or issues during the past two years.
• Who are most critical to the success of policy initiatives?
• Who do you look to for new or innovative ideas?

47 respondents named 399 others. 446 total in network, >1100 ties.
Who are the key individuals with whom you have collaborated on sustainable natural resource projects or issues during the past two years?
Who are the key individuals with whom you have collaborated on sustainable natural resource projects or issues during the past two years?
Pre-Intervention

Pre-Intervention

Post-Intervention (Nine Months Later)

Friedman et al. (2007) Evaluation and Program Planning 30, 294-306
Application: Post-hoc Analysis

Wisconsin-based Cooperative Conservation Initiative

Intention: use CSP as catalyst for coordination

Two-year discussion/interaction, then disband

Post-mortem: interviews with key actors
  • several positive outcomes
  • several functional challenges
  • increased connections for participants
  • connections did not expand into organizations
Application: Capacity Assessment

Watershed management – water quality restoration & protection

Intention: assess “policy” network to enhance capacity

Approach: interviews and survey – conservation professionals

Questions
  • who connecting with water quality stakeholders
  • what services providing
  • what service receiving

Preliminary Findings: key nodes overloaded; others absent
Questions/Comments