Social and Organizational Networks

An earnest attempt at an introduction and overview, by Terence Meehan
Standard Perspective

• Standard social sciences assumptions:
  – Individual behavior is a function of individual attributes
  – Individual behavior is independent of other units
Standard Perspectives

• Actors are either entirely independent (undersocialized) or slaves to internalized societal norms and values (oversocialized)
• Why are both views “rather mechanical” and wrong, according to Granovetter?
Network Perspective

• Social network theory assumptions:
  – the most important characteristic of individual units is their position in social networks
  – Individual behavior is a function of ongoing relationships among members of networks (i.e. the structure of networks)
Embeddedness

• (Economic) **action is embedded in ongoing structures of social relations**
• Actors have choice within the constraints provided by trust, reputation, relationships. What network you’re in determines what choices you get.
Strong vs. Weak Ties

- Depends on a combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services of the relationship
- Continuous or categorical?
Unlikely Triad

A

Strong Tie

C

B

Strong Tie

?
Social Network Hypothesis

• Take arbitrary individuals A and B
• $S = C, D, E, \ldots$, the set of all persons with ties to either or both A and B
• The stronger the tie between A and B, the larger the proportion of individuals in S to whom they will both be tied (by a weak or strong tie)
• Why?
Bridges

• A bridge is a line in a network that provides the only path between two points
• A local bridge is the shortest route between two points
• Strong ties are unlikely to be bridges
• Why?
Bridges

• Bridges connect different networks or different subsets of the network.
• Therefore, weak ties are critical connections between networks or parts of networks.
• Example of a rumor
• Example of forwarding a booklet
  – When white senders were asked to forward it to a target who was black
Strength of Weak Ties

• NYTimes article
• Why are weak ties important routes for information in job markets?

• Community Organization
• Why did the closely knit community in the West End have trouble mobilizing?
Social and Organizational Networks

• Actors and their actions are viewed as interdependent rather than independent
• Relational ties (linkages) between actors are channels for transfer or “flow” of resources (either material or nonmaterial)
• Network models focusing on individuals view the network structural environment as providing opportunities for or constraints on individual action
• Network models conceptualize structures (social, economic, political, and so forth) as lasting patterns of relations among actors
Network Analysis Timeline

1830’s: Comte hopes to found new field of social physics
1880’s: Durkheim argued that human societies were like biological systems, made up of interrelated components.
1932: Moreno and Jennings develop “sociometry”
Network Analysis Timeline

1940’s & 50’s: Researchers in places like MIT begin using matrix algebra and graph theory to formalize fundamental socio-psychological concepts. Studies of structure, urbanization, and “cliques” take off.

1960’s: Network studies gains popularity in anthropological fields. Studies of family structures, kinship structures, etc. arise.
Network Analysis Timeline

1970’s: Center of gravity for network studies shifts to sociology. Landmark studies include Lorrain and White’s reduced models, Granovetter’s strength of weak ties, and Kochen and de Sola Pool’s small world problem.
Network Analysis Timeline

1980’s: Social network analysis now an established field, with a professional organization, a conference, specialized software, and a journal.

1990’s: Network analysis enters new fields including physics, biology, management consulting, public health, and crime/war fighting. Milgram’s 6 degrees of separation.
Present Network Studies

• The study of formal networks has been at the center of most public management research for the last decade or so.

• Studies have uncovered what power structures can enhance network effectiveness, identified skills required for successful network management, accessed network performance, understand how network manager and contractor interactions impact performance, and how network actors deal with periods of crisis or uncertainty.
Future Directions For Network Study

• More research on informal networks
• Researching network changes over time
• Meta studies of network cases
Challenges Facing Network Researchers

• Unit of analysis
• Terminology
• Sampling of Public Sector Networks
• Generalizability
• Dynamic Network Methods
• Definition
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