# Proposition 9
Social Network Analysis

In a Word Power no longer resides exclusively (if at all) in states, institutions, or large corporations. It is located in the networks that structure society. Social network analysis seeks to understand networks and their participants and has two main focuses: the actors and the relationships between them in a specific social context.
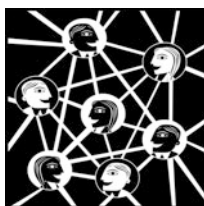
Rationale

The information revolution has given birth to new economies structured around flows of data, information, and knowledge. In parallel, social networks[1] have grown stronger as forms of organization of human activity.[2] Social networks are nodes of individuals, groups, organizations, and related systems that tie in one or more types of interdependencies: these include shared values, visions, and ideas; social contacts; kinship; conflict; financial exchanges; trade; joint membership in

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[1]The term was coined by John Barnes in 1954.

[2]Information and communications technology explains much but not all. The other agents that have catalyzed social networks include globalization; the diversification of policy making to include more nongovernmental actors, e.g., civil and nongovernment organizations, under the banner of good governance; growing recognition of the importance of social capital; and practical applications in knowledge management and organizational learning.

organizations; and group participation in events, among numerous other aspects of human relationships.[3] Indeed, it sometimes appears as though networked organizations outcompete all other forms of organization—[4]certainly, they outpace vertical, rigid, command-and-control bureaucracies. When they succeed, social networks influence larger social processes by accessing human, social, natural, physical, and financial capital, as well as the information and knowledge content of these. (In development work, they can impact policies, strategies, programs, and projects—including their design, implementation, and results—and the partnerships that often underpin these.) To date, however, we are still far from being able to construe their public and organizational power in ways that can harness their potential. Understanding when, why, and how they function best is important. Here, social network analysis can help.

Definition

The defining feature of social network analysis is its focus on the structure of relationships, ranging from casual acquaintance to close bonds.[5] Social network analysis assumes that relationships are important. It maps and measures formal and informal relationships to understand what facilitates or impedes the knowledge flows that bind interacting units, viz., who knows whom, and who shares what information and knowledge with whom by what communication media (e.g., data and information, voice, or video communications).[6] (Because these relationships

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[3]"Social networks" is an umbrella term that covers many forms and functions, with each node having distinct relative worth. (Sometimes, nodes are used to represent events, ideas, or objects.) Communities of practice are an important form. Others include policy and advocacy networks that work on problem identification and agenda setting, policy formulation, policy implementation, and policy monitoring and evaluation; private–public policy networks; knowledge networks; etc. (Increasingly, social networks are social communities of the web, connected via electronic mail, websites and web logs, and networking applications such as Twitter, FaceBook, Lotus Quickr, or LinkedIn.) Functions differ too, with nodes behaving as filters, amplifiers, investors and providers, convenors, community builders, and/or facilitators.

[4]In such instances, their strengths arise among others from (i) a unifying purpose and clear coordination structure; (ii) multiple, interactive communications (spanning both horizontal and vertical dimensions) that encourage simultaneous action, (iii) dynamism and creativity (owing to multiple, interactive communications between members), (iv) consensus (born of like-minded actors who rally around shared interests or a common issue), (v) strength in numbers, (vi) the quality and packaging of evidence, (vii) sustainability, and (viii) representativeness.

[5]This is in contrast with other areas of the social sciences where the focus is often on the attributes of agents rather than on the relations between them.

[6]In contrast, an organization chart shows formal relationships only—who works where, and who reports to whom. Ten years ago, Mintzberg and van der Heyden (1999) therefore suggested the use of "organigraphs" to map an organization's functions and the ways people organize themselves in it.

are not usually readily discernible, social network analysis is somewhat akin to an "organizational X-ray".) Social network analysis is a method with increasing application in the social sciences and has been applied in areas as diverse as psychology, health, business organization, and electronic communications. More recently, interest has grown in analysis of leadership networks to sustain and strengthen their relationships within and across groups, organizations, and related systems.

Benefits

We use people to find content, but we also use content to find people. If they are understood better relationships and knowledge flows can be measured, monitored, and evaluated, perhaps (for instance) to enhance organizational performance. The results of a social network analysis might be used to:

- Identify the individuals, teams, and units who play central roles.
- Discern information breakdowns,[7] bottlenecks,[8] structural holes, as well as isolated individuals, teams, and units.
- Make out opportunities to accelerate knowledge flows across functional and organizational boundaries.
- Strengthen the efficiency and effectiveness of existing, formal communication channels.
- Raise awareness of and reflection on the importance of informal networks and ways to enhance their organizational performance.
- Leverage peer support.
- Improve innovation and learning.
- Refine strategies.

Development work, for one, is more often than not about social relationships. Hence, the social network representation of a development assistance project or program would enable attention to be quickly focused (to whatever level of complexity is required) on who is influencing whom (both directly and indirectly).

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[7]Breakdowns in information occur most often at one or more of five common boundaries: (i) functional (i.e., breakdowns between individuals, teams, or units; (ii) geographic, i.e., breakdowns between geographically separated locations); (iii) hierarchical (i.e., breakdowns between personnel of different levels), (iv) tenure (i.e., breakdowns between long-time personnel and new personnel); and (v) organizational (i.e., breakdowns among leadership networks).

[8]Bottlenecks are central nodes that provide the only connection between different parts of a network.

(Outcome mapping is another method that attempts to shifts the focus from changes in state, viz., reduced poverty, to changes in behaviors, relationships, actions, and activities.) Since a social network perspective is, inherently, a multi-actor perspective, social network analysis can also offset the limitations of logic models (results frameworks).

Process

Typically, social network analysis relies on questionnaires and interviews to gather information about the relationships within a defined group. The responses gathered are then mapped. (Social network analysis software exists for the purpose.)[9] This data gathering and analysis process provides baseline information against which one can then prioritize and plan interventions to improve knowledge flows, which may entail recasting social connections.

Notwithstanding the more complex processes followed by some, which can entail sifting through surfeits of information with increasingly powerful social network analysis software, social network analysis encourages at heart participative and interpretative approaches to the description and analysis of social networks, preferably with a focus on the simplest and most useful basics. Key stages of the basic process will typically require practitioners to

- Identify the network of individuals, teams, and units to be analyzed.
- Gather background information, for example, by interviewing senior managers and key staff to understand specific needs and issues.
- Define the objective and clarify the scope of the analysis, and agree on the reporting required.
- Formulate hypotheses and questions.
- Develop the survey methodology
- Design the questionnaire, keeping questions short and straight to the point. (Both open-ended and closed questions can be used.)[10]

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[9]Sociograms, or visual representations of social networks, are important to understand network data and convey the result of the analysis. Free and commercial social network analysis tools are at hand, each with different functionality. They include UCINET, Pajek, NetMiner, and Netdraw. In each case, the graphics generated are based on three types of data and information: (i) the nodes that represent the individuals, groups, or organizations being studied; (ii) the ties that represent the different relationships among the nodes (which may be insufficient, just right, or excessive); and (iii) the attributes that make up the different characteristics of the individuals, groups, or organizations being studied. Key measurements apply to the centrality of the social network analyzed; the makeup of its various subgroups (which can develop their own subcultures and negative attitudes toward other groups); and the nature of ties (viz., direction, distance, and density).

[10]Typical questions are: Who knows who and how well? How well do people know each other's knowledge and skills? Who or what gives people information about xyz? What resources do people use to find information about xyz? What resources do people use to share information about xyz?

- Survey the individuals, teams, and units in the network to identify the relationships and knowledge flows between them.
- Use a social network analysis tool to visually map out the network.
- Review the map and the problems and opportunities highlighted using interviews and/or workshops.
- Design and implement actions to bring about desired changes.
- Map the network again after a suitable period of time. (Social network analysis can also serve as an evaluation tool.)

With the rise of Facebook, Google+, LinkedIn, Twitter, etc., interest has grown in social network analysis of electronic communications. Most likely, social network analysis is set to emerge as a key technique in modern sociology.

Reference

Mintzberg H, Van der Heyden L (September–October, 1999) Organigraphs: drawing how companies really work. Harvard Business Review: 87–94