Evaluation of Networks

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Introduction

The philanthropic and nonprofit communities have been paying increasing attention to the potential of networks for engaging people and leveraging the power of connected groups. Often, the ultimate goal is to develop more effective nonprofit partnerships or effect large-scale change.

While the term network can be used to convey different concepts, much recent focus has been on social networks, defined as: "a group of individuals or organizations that are connected through meaningful relationships, in which there are many participants, that have space for self organization and leverage new technologies for visualization, connection, and collective action." Indeed, social media technologies and tools such as Facebook, Twitter, and blogging have become *de rigueur* for many nonprofits striving to build a network of supporters. Advocates are developing followers on Twitter, and political campaigns

are seeking to emulate the success of grassroots e-organizing models, such as Barack Obama's presidential campaign and the online mobilization efforts of groups like MoveOn.org.

While the rapid expansion of virtual networks fostered by social media tools like Twitter, Facebook, and the like often take center stage in this arena, networks are developed in many other ways as well. Nonprofit organizations, for example, are experimenting with collaborations and alliances that involve less hierarchy and more interconnection, as well as organizational practices and relationships that allow for greater nimbleness.[2] Funders are also experimenting with network approaches that involve "decentralizing control over grant decisions at the local level, matchmaking between donors and grantees, and organizing local networks of people and organizations with a 'network mindset'".[3]

The rapid development and adoption of new social media tools and technologies to create virtual networks have contributed to higher expectations for the transformative power of networks overall. The Monitor Institute asserts that, "The most important shift goes beyond the technologies themselves. The real transformation is in the way that people are using the tools and fundamentally changing how they think, form groups, and do their work."[4] They look to Clay Shirky, author of *Here Comes Everybody: The Power of Organizing without Organizations* to make the case that social transformation through networks is a *fait accompli*. "As a result," the Monitor Institute concludes, "the important questions aren't about whether these tools will spread, or reshape society, but rather how they will do so."

As the interest in various types of networks has been catapulting forward, so has the interest in metrics and evaluation for monitoring them and evaluating whether they are successfully achieving their goals.

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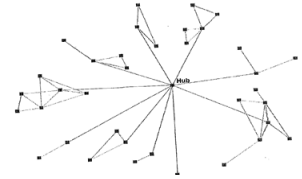
Monitoring and Evaluating Network Success

Social science, mathematics, and allied fields have long used sophisticated socio-metric statistical techniques for analyzing networks—mapping links between individuals, parts of an organization or organizations.[5] Now these disciplines have reached what Shirky calls the "Golden Age of network theory," combining socio-metric analytics with computer science and software engineering to create new ways to visualize, analyze, and enhance networks.[6] Despite these new tools and approaches, evaluation methods for monitoring and analyzing certain aspects of network effectiveness remain nascent. To date, network metrics have focused on the following aspects.
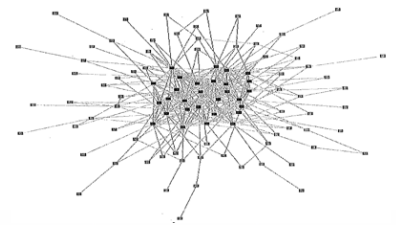
1) **Patterns of connectivity**—e.g., linkages, nodes, hubs, reach, density, and core/periphery structures. This area of analysis is guided by two driving principles that cut across all networks: the need to know the network by "taking regular x-rays" and knit the network through "network weaving".[7] Metrics help examine and document the "individual elements that can foster or hinder communication and collaboration."[8] In this area, metrics can also help create a visual map of how networks are arranged. It can be assumed that certain structures (patterns of nodes and links) are better suited to some network functions than others. Measurement might address the degree to which the network exhibits structural characteristics that support network function. As the Monitor Institute recommends, "regularly taking the pulse of a network is critical to its ability to adapt to achieve the results it seeks".

Hub and Spoke Network

Core and Periphery Network

2) **Description of virtual communities**—e.g., traffic patterns, such as where network members come from or how much time visitors spend at online network hubs; semantics (that is, use of key words or phrases, or echoing of certain key words); sentiment monitoring; and segmentation (e.g., new versus returning visitors to an online network hub). These types of metrics can be regularly monitored by tools such as Google analytics to determine the tactical success of online community building. These measures may be useful for those involved in strategic communication campaigns, advocacy efforts, political mobilizing, and donor and constituent engagement. These metrics can also help determine the extent of a networks' reach, and within some defined parameters, whether traffic patterns or semantics are consistent with desired goals. These metrics provide snapshots, though methodological limitations make it difficult to answer deeper questions about virtual community members, such as reasons for participation, or how personal beliefs and motivations may have changed in relationship to network participation.

3) Overall network health. There is a growing body of literature that describes the characteristics of healthy and vital networks. Elements that are most often watched include value, participation, form, leadership, connection, capacity, learning, and adaptation along with qualities related to the way in which a network fulfills its purpose. As Sarah Early asks: "What's it take to make a network work, if a network could work well?"[9] This focus for evaluation delves into the structure and characteristics of networks and their dynamics. It also looks at the extent to which they provide high quality and sustainable interactions, and foster the building and maintaining of relationships. The specific relevant elements for measurement would be affected by the kind of network that is being studied. Measurement may include many different approaches including mapping of network connectivity, description of network participation via web analytics, and tracking key network elements via common data collection methods (e.g., surveys or interviews with network members). These types of metrics may be particularly applicable to evaluation of civic engagement efforts, networked nonprofits, and network approaches to grantmaking. In some cases, network metrics or outcome measures may be best understood in context; it may also be important to track external factors that are likely to influence a network's health and vitality.

Beyond these areas of measurement, fundamental strategic and field-building evaluation questions are also relevant:

- Is the network strategy effective for achieving social change?

- Is the network strategy contributing to progress toward goals?

- In essence, when do network strategies make better sense than what can be achieved through other social change strategies?

These questions, while challenging to answer, are an important focus of funders and others involved in network field building.

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What You Need to Know About Evaluation of Networks

Three key questions that are relevant to measurement of networks are:

- What is "the network"? Who or what groups make up the network?

- What are the purposes (end goals) of the network?

- What metrics and evaluative techniques fit best?

What is the Network?

"Is the network strategy effective for achieving social change? Is the network strategy contributing to progress towards goals? In essence, when do network strategies make better sense than what can be achieved through other social change strategies?"

Networks can be organized at different levels: small groups of individuals, organizations, large online communities, and so on. A starting point for measurement is to describe the network members and the organizing principle.

- Is the network a predetermined group of individuals or organizations?

- Is it an organic array of affiliated people or groups?

- Is it individuals, groups, or organizations with specific shared characteristics or interests, or perhaps another unit of organization?

Describing who makes up your network will help determine the kind of evaluation that is most relevant. For instance, the public health field has used network analysis to describe the spread of obesity among family and friendship networks.[10] Alternatively, collaborative groups of organizations in a defined field of service have been evaluated to determine their adaptation to changing environments. Understanding the network's organizing principle will help determine the measurement elements of interest. In the public health case, it is the type of linkage among affiliated individuals. In the organizations' case, it is the trust and integrated practices among organizations.

Network Purposes

Networks can serve a variety of functions. Clarifying the purpose of a network is paramount for gauging progress toward its goals. The Barr Foundation articulated many of the common purposes of networks and noted that one size does not fit all.

The articulation of a network's purpose is critical for meaningful measurement. Additionally, clarity of purpose is important to be able to apply evaluation findings to the intentional development of desirable network properties and understand how a network strategy is contributing to the progress toward desired results.

Common Network Purposes

Innovation ········> Generation of novelty (new knowledge, products)

Diffusion ···········> Rapid spread of ideas, products

Combination ·····> Assembling of new capacities

Alignment········> Formation of new brand or identity

Mobilization ······> Reaching and activating many people

Exchange···········> Sharing of information widely

Assessment ·······> Provision of diverse feedback/evaluation

Advocacy ···········> Influencing existing decision-making structures

Delivery ············> Bringing resources and assistance to increase capacity

Monitoring and Evaluation Techniques: What is the Best-fit Approach?

Monitoring and evaluation takes resources. The resources required may be substantial, but the investment has potential to deliver a strong return. This is especially true if network monitoring and analysis is used to foster healthy network development or further understanding about how social network strategies connect to desired social change goals. June Holley suggests three areas of network evaluation to consider:

- Network maps and metrics for gauging and improving connectivity

- Assessment of factors related to ensuring and supporting healthy network development

- Outcome measurement, i.e. evaluation of progress on specific performance or social change goals

Implications for Philanthropy and the Nonprofit Community: Two Possible Action Steps

1. Describe the network you are interested in monitoring.

   - What is the form of this network?

   - Why does this network exist and what is its purported value?

2. Identify a salient learning question about this network.

   - This can be a robust question such as: What is the value of investing in the development of a network?

   - Or, it can be a concrete, specific question, such as: How can we develop greater diversity in our network? To what extent is this network knitted together? How close are its linkages? How diverse are its participants?

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