

# Social Network Analysis for Leadership Learning Circles

## Final Report on Project Results

June 2007

### SUMMARY

In July of 2006, the [Leadership Learning Community](#) (LLC) awarded a Community Seed Fund grant to explore the use of social network analysis (SNA) and assess its value to those who run, study, and fund leadership development programs.

Our experience using SNA in three communities led to three strikingly different results. The table below summarizes the results in each community along with important distinguishing traits of each community:

Community	Primary result of SNA	Traits of community
Schuylkill Learning Community	<b>Collective leadership:</b> Community members improved their “big picture” awareness of who is working with whom how they can accomplish more together.	Funder-initiated community with formal membership, paid external facilitator and mandatory attendance at meetings.
North Carolina Community Solutions Network	<b>Professional perspective:</b> Community members learned to see their work outside the community in a new way. Community facilitator improved “big picture” awareness.	Self-organized community with paid internal facilitator, predominantly rural constituency
Bay Area LLC Learning Circle	<b>Introduction to new topic:</b> Community members expressed interest in learning more about SNA technology, methods, and applications.	Self-organized community with no formal facilitator, next door to Silicon Valley

The rest of this report documents the results of our *Social Network Analysis for Leadership Learning Circles* project. The report includes a very brief introduction to social network analysis, an overview of the project’s design and process, the results of three case studies using SNA, and a summary of key lessons learned and guidelines for future efforts.

### PROJECT TEAM

Our project team is a unique partnership catalyzed at Creating Space VII:

- Odin Zackman is a core member of the Bay Area LLC Learning Circle and the facilitator of LLC's Sustainable Network Learning Circle.
- Meredith Emmett is network coordinator for the [North Carolina Community Solutions Network](#) (NCCSN) and a consultant to nonprofits, including leadership development programs.
- Bruce Hoppe is president of [Connective Associates](#) and a consultant who helps LLC and other organizations use SNA for community and leadership development as well as program evaluation.
- Dianne Russell, a later addition to the team, is executive director of the [Institute for Conservation Leadership](#) and a facilitator of the Schuylkill Learning Community.

## INTRODUCTION TO SOCIAL NETWORK ANALYSIS (SNA)

Social Network Analysis (SNA) – sometimes called Organizational Network Analysis (ONA) – is a set of tools and processes for better understanding the relationships in a network. In social networks, the members or nodes of the network are people and/or organizations and the links are the relationships between these people and organizations. Using surveys and computer-aided analysis, SNA practitioners can produce maps or pictures that display the patterns of connections between the nodes of the network. These maps reveal characteristics of the network that help guide participants as they evaluate their network and plan ways to improve their collective ability to identify and achieve shared goals.

SNA has exploded in popularity over the last few years to become not just a powerful leadership and community development tool but also one of today's hottest business consulting fads. As more and more leadership and community network initiatives consider using SNA, we hope with our research to help make it as easy as possible to recognize productive applications of SNA as well as situations where SNA will not be helpful. This work builds on this [bibliography of SNA for leadership development](#) compiled by Claire Reinelt (LLC Director of Research and Evaluation) and one of the authors.

## PROJECT OVERVIEW

We designed our project to increase our own knowledge of SNA and its application to leadership networks and test the following two hypotheses;

- Visual network maps help the members of a community **evaluate** their own network—to see who is really working with and learning from whom, who is in the core of network, who is on the periphery, and who are the key boundary-spanners.
- Visual maps of community networks help leaders plan better **interventions** to improve connections within the network, and help individual participants to expand their circles of learning and resource sharing.

In addition to testing the above hypotheses, we invited participants to reflect on their own self-organizing capacity, leadership, and boundary-crossing connections. We believe that this dialogue cultivates a stronger sense of **community** and **sustainability** within the existing networks and invites a deeper inquiry of what it means to be involved in such a forum—one that relies more on collective action than on individual skills.

To test our hypotheses, we surveyed members of the network and then created network maps for three different learning communities. For each of the three case study networks, the basic process was the same:

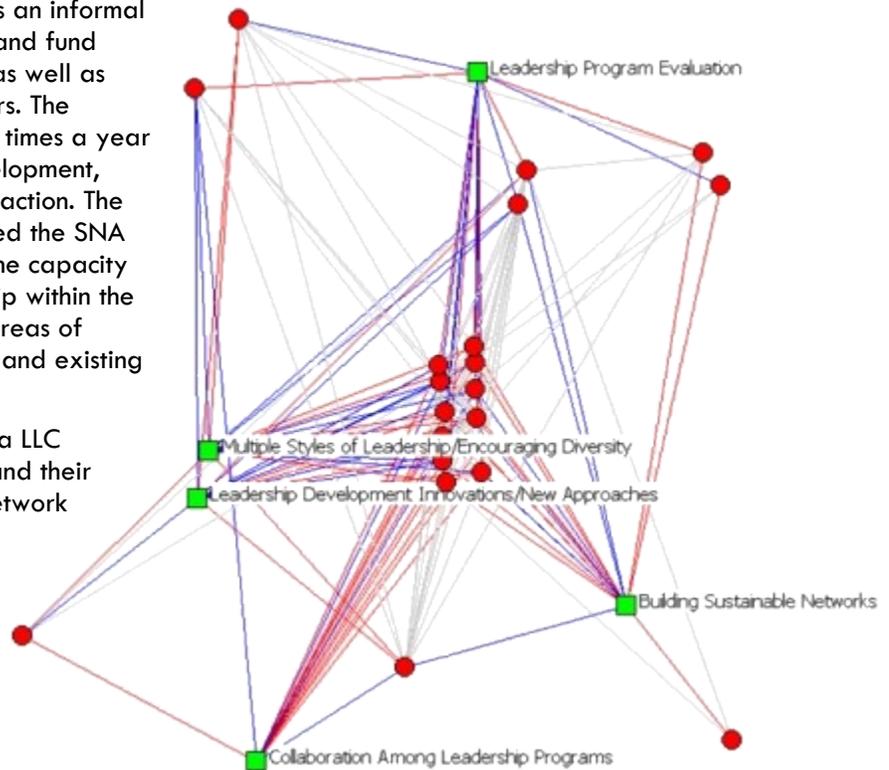
1. Frame the project (including identifying goals, the group to study, and relationships to study)
2. Design and administer an online network survey
3. Analyze survey results, and
4. Present survey results in a half-day workshop with community members.

The data were collected using an online survey developed and distributed through [SurveyMonkey](#). In all three cases, the basic structure of the survey was the same but with key adaptations based on differences between the networks and what we wanted to know about them. The data collected from the surveys were manipulated using both [UCINET](#) and [NetDraw](#) to produce the maps. These network maps were then presented in a workshop format to participants in each of the networks.

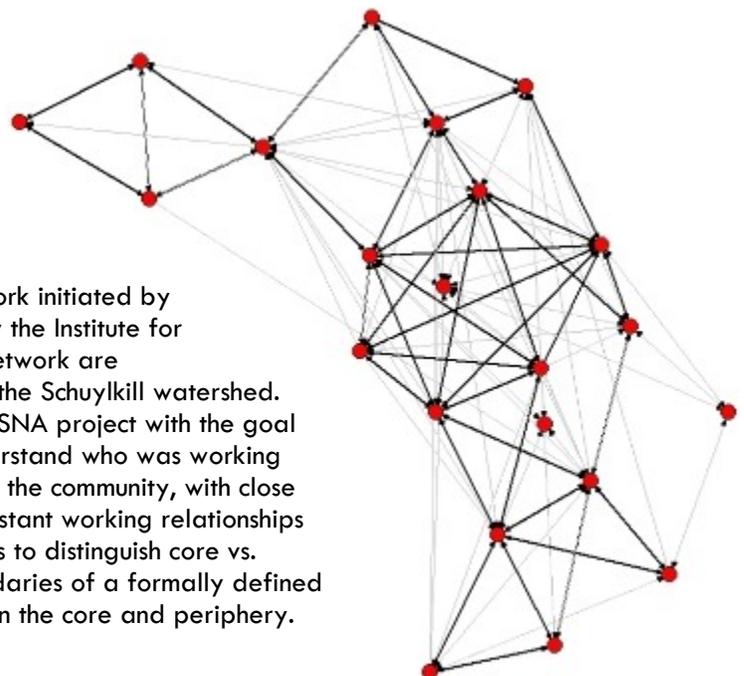
## THE THREE CASE STUDIES

- The **Bay Area LLC Learning Circle** is an informal network of people who coordinate and fund leadership development programs as well as consultants and community facilitators. The network meets approximately three times a year to share interests in leadership development, community development, and social action. The Bay Area LLC Learning Circle entered the SNA project with the goal of improving the capacity for collective learning and leadership within the network by surfacing its members' areas of practice, desired areas of learning, and existing collaborative learning networks.

The map at right shows the Bay Area LLC Learning Circle members as circles and their areas of practice as squares. The network map is drawn so that members with common areas of practice are close to each other, and so that areas of practice with common audiences are close to each other. This kind of map is particularly helpful to reveal emergent affinity groups.



- The **NC Community Solutions Network** connects and harnesses the talent and resources of community leaders active in local initiatives, the staff of nonprofits and government agencies, funders, policy makers, and coaches and consultants who work with local communities and community-based organizations. Anyone who embraces the purpose and principles of the Network and manifests this purpose and principles within their own activities is invited to participate in the network. The network meets periodically, distributes an email newsletter, and mobilizes members through special projects and initiatives. The NC Community Solutions Network entered the SNA project with the goal of better understanding how to integrate the alumni of a special leadership development program called the Community Builders Learning Project into NCCSN's larger network.



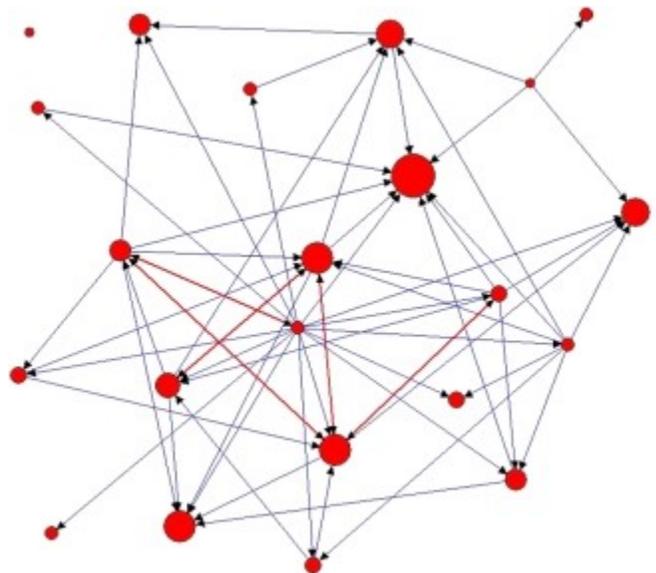
- The **Schuylkill Learning Community** is a network initiated by the William Penn Foundation and facilitated by the Institute for Conservation Leadership. All members of the network are representatives of projects that are working in the Schuylkill watershed. The Schuylkill Learning Community entered the SNA project with the goal of helping members of the network better understand who was working with whom. The map at right shows members of the community, with close working relationships as dark links and more distant working relationships as light links. This kind of map particularly helps to distinguish core vs. peripheral activities as they relate to the boundaries of a formally defined group, including bridging opportunities between the core and periphery.

## CASE STUDY OUTCOMES

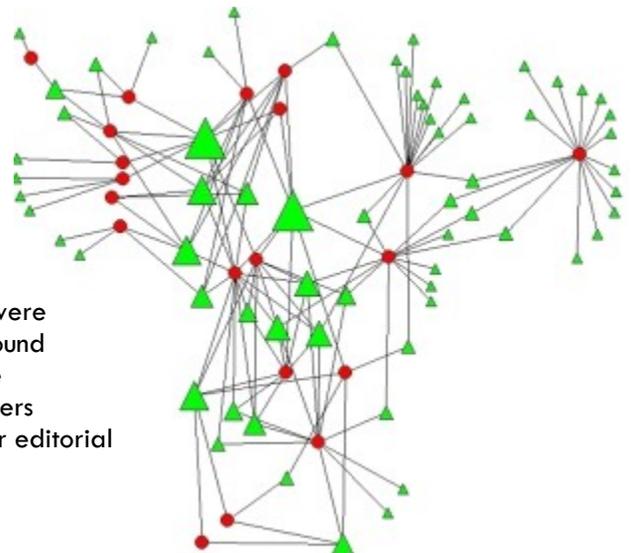
Although each of the above three case studies started with similar goals and followed a similar general plan, very different outcomes emerged from each group discussion:

- The **Bay Area LLC Learning Circle** discussion focused on SNA methodology and how participants might use these methods in their work outside LLC. The original goal of providing insight into the group itself was not achieved.
- The **NC Community Solutions Network** discussion, in comparison to the Bay Area discussion, was a broader and less technical overview of community networking. Participants were interested in applying broad SNA concepts in ways that did not require any technology and much less interested in SNA methodology per se. The network maps of this group were interesting to the network facilitator though less interesting to the group itself.
- **The Schuylkill Learning Community** discussion was intensely focused on seeing itself through network maps. Compared to the above two case studies, this group was much more interested in using the maps to understand its collective identity and much less interested in general SNA methodology or applications.

One map that generated much discussion within the group showed who wanted more access to whom. The anonymized map is drawn at right, with more sought-after nodes drawn larger and reciprocal links drawn in bold red.



After completing its SNA workshop, the Schuylkill Learning Community requested a follow-up survey with additional questions and more detailed response options. The most significant change in the follow-up survey was an assessment of which community members collaborate with which municipal agencies. (County, town, and other municipal departments are especially critical to achieving the group's goals). The resulting map is shown below right, with municipalities drawn as triangles whose size grows with the number of collaborators. This map is a great example of communal dialogue triumphing over naive analyst bias. The creator of the map (one of the authors) assumed that municipalities with more connections were more interesting. In fact, the community members found points of interest throughout this map, including one surprisingly peripheral municipality. SNA practitioners should expect and welcome such corrections to their editorial craft.



The following table summarizes the different outcomes of each case study:

**TABLE 1: Comparison of Case Study Goals and Outcomes**

	<b>Schuylkill Learning Community</b>	<b>Bay Area LLC Learning Circle</b>	<b>NC Community Solutions Network</b>
<b>Primary goals for mapping network</b>	<p><b>1. (Most Successful):</b> Stimulate collective leadership within the community. Give network members a picture of who works with whom on what projects.</p> <p><b>2.</b> Expose network members to new way of looking at their work.</p> <p><b>3. (Least Successful):</b> Stimulate ideas for applying network methods to other projects.</p>	<p><b>1. (Most Successful):</b> Expose network members to new way of looking at their work.</p> <p><b>2.</b> Discuss other applications of SNA.</p> <p><b>3. (Least Successful):</b> Catalyze collective dialogue on “who are we and what are we doing” to improve sustainability of network.</p>	<p><b>1. (Most Successful):</b> Track the integration of the participants in the Community Builders Learning Project (CBLP)</p> <p><b>2.</b> Expose network members to new way of looking at their work.</p> <p><b>3. (Least Successful):</b> Stimulate ideas for applying network methods to other projects.</p>
<b>Primary next steps for group</b>	Participants voiced strong demand to repeat the network survey, which was done.	No specific collective action was called for. A couple attendees have brought SNA methods into other projects.	No specific collective action was outlined.

More details on the distinctions of these three networks can be found in *Table 2: Network Characteristics*. Some of the distinctions between the three SNA projects can be found in *Table 3: Project Design*.

## LESSONS LEARNED

### Lessons about Designing a SNA Project

**It takes persistent follow-up to reach the goal of at least 75% participation** required for a successful SNA survey – and participation is essential to understanding the network. Of our three case studies, the only one to reach the goal was the Schuylkill Learning Community. One of the facilitators of this network took responsibility for following up personally with each member of the network to ensure response.

**Use terms that have clear and shared meaning for network members.** In both the Bay Area and NCCSN surveys we used the term “collaborate” as one of the measures of how people connect with one another. This term was interpreted at many different levels of intensity creating a picture of relationships with multiple meanings.

### Lessons about Using SNA to Evaluate a Network

**Small networks with clear boundaries are easier to grasp than large informal networks.** Members of the 20-member Schuylkill Learning Community network were better able to understand their own network as the pictures were less complex. The close to 80 nodes on the NCCSN map were difficult for workshop participants to grasp – and many participants in the workshop did not personally know others on the map.

**Network maps can help a group of people to better understand the potential values of the relationships in the network – the “who we are” and “how we work together”.** As a funder-initiated group, the Schuylkill Learning Community was born under a weight of obligatory networking required by the terms of its grant. The network map presentation succeeded not only in giving members a much stronger sense of how their work related to each other, but also in giving members a much stronger sense of what they could accomplish together. Several members acknowledged their former resistance to “forced networking” and expressed deep appreciation to Dianne Russell of the Institute for Conservation for all she had done to give the members a real sense of ownership of their community and a clear awareness of its power to improve their work. This network requested a repeat survey in order to map itself even more carefully, and it has also expressed strong interest in repeating the network mapping a year or two down the road in order to evaluate how well it is doing in using the potential of the network.

**Visualizing one network points to possibilities for other networks.** The Bay Area LLC Learning Community project produced more discussion about how circle members might apply SNA elsewhere than it produced insight into the learning circle itself. Several of them left with strong interest in applying SNA to their own network work, although without exception participants felt the half-day was no more than an introduction to how they might begin such a task. Participants were particularly excited to apply SNA to evaluating and improving alumni networks from leadership development programs. Participants in the NCCSN workshop saw possibilities for application in community building initiatives, especially in small towns.

### Lessons about Using SNA to Plan Better Interventions in a Network

**SNA is a valuable tool for planning better interventions, especially when it is coupled with deliberate facilitation of the network and its next steps.** Ms. Russell had exquisite timing in bringing network mapping to the Schuylkill Learning Community. She had already worked over a year to let community members sort through their initial resentments (at forced meetings) and to facilitate the growth of their collective voice. With network mapping, she gave community members pictures and words to express very specifically what she knew they already had in their collective fingertips. Members literally described it as a “breakthrough” experience. This is a powerful use of network mapping that can help funders and other conveners to bring grantees and other community members into full engagement, making the most of everyone’s invested time and other resources.

**TABLE 2: Network Characteristics**

	<b>Schuylkill Learning Community</b>	<b>Bay Area LLC Learning Circle</b>	<b>NC Community Solutions Network</b>
<b>Who initiated the network (i.e. is it self-organized, funder-initiated, or other)?</b>	Initiated by the William Penn Foundation, which hired the Institute for Conservation Leadership to facilitate the community.	Self-organized with no single point-person.	Initiated by individuals who all did community coaching and wanted to learn from one another.
<b>How long has the network been organized?</b>	18 months	A couple of years	Five years
<b>Does the network have an official coordinator? If so, what is the role and voice of that person?</b>	Dianne Russell, Executive Director of ICL MJ Kaplan, independent consultant hired by ICL Both Dianne and MJ are outside facilitators, not members of the community	No	Meredith Emmett serves as a part-time paid network coordinator responsible for organizational administration and coordinating network communication and activity.
<b>Is membership in the network explicit?</b>	Yes. There are 20 projects funded by WPF and one representative of each project is appointed as a member of the network	Not really. There is an email list. There are no dues and people come and go as they wish.	Not really, though there is a new emphasis asking participants to pay an annual connection fee to support some of the costs of coordinating the network.
<b>Does the network have a specific end-goal or is learning, community development, and/or network the focus?</b>	The network shares an interest in Schuylkill River watershed, its appropriate use and conservation.	No specific end goal beyond emerging shared interests in leadership development, community development, and social action	The end goal is a broad one of helping communities build their own capacity to develop collaborative relationships to solve community problems as they arise.
<b>How distinct are the interest areas or projects within the network?</b>	There are 20 distinct projects. These are much more distinct than “interest areas” but they are not entirely cut & dry	Not distinct. We named five interest areas in the SNA survey in an attempt to measure who is interested in what.	There is one distinct interest area shared by several participants (the Community Builders Learning Project). Other areas are less distinct.
<b>Describe the typical network participant?</b>	Experienced director of Philadelphia-area non-profit or other NGO focused on water quality, fish, conservation	Experienced community facilitator for social change	A nonprofit or government staff person with interests in community building or a consultant who coaches or consults with communities.
<b>How big is the network?</b>	There are 20 members formally in the network—one from each project. The informal network is larger.	There are about 150 people in the entire email list	There are about 125 people on the email list.
<b>How frequently does the network meet face-to-face?</b>	Three times a year, for two days at a time. Attendance is mandatory.	Roughly three times a year, based on relatively spontaneous member presentations	About two times year, based on member interest and availability.
<b>How do people in the network typically communicate with one another?</b>	Varies. Some work on projects together. Others communicate informally on occasion. Some only connect at network meetings.	Informally. This network is close to LLC headquarters, which is a de facto sponsor and facilitator.	There is an irregular email newsletter. Typically, members call on Meredith to connect them to others in the network.

<b>What are the assumptions about who is responsible for connections in the network?</b>	Individual members own responsibility for connections; however, the WPF is not too far removed and it takes responsibility for evaluating whether its sponsorship of this network is worth the investment or not.	Individual members own responsibility for connections.	The network coordinator as well as individuals.
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**TABLE 3: Project Design**

	<b>Schuylkill Learning Community</b>	<b>Bay Area LLC Learning Circle</b>	<b>NC Community Solutions Network</b>
<b>How did you choose who to include in the survey or map?</b>	Project sponsor decided to focus on formal network members	We included as many people in survey as we could. 100 people were listed in survey, which was sent to 150 people. We received only 23 responses.	Active members in the Community Solutions Network including governing council members, faculty and other CBLP associates, and those that have attended more than one Action and Learning Exchange. 95 people were listed in the survey and received the survey.
<b>Survey response rate</b>	100%	20%	47%
<b>How did you promote participation in the survey?</b>	Multiple email announcements, two introductory conference calls, and one-on-one follow-up with anyone people who had any problems responding to survey. Paper surveys were used when necessary.	Small number of gentle email reminders. We made an effort not to annoy people with spam.	Announcement in email newsletter, followed by email with the link to the survey. Non-respondents received at least three reminders.
<b>What were the primary interests of network participants who participated in the SNA workshop?</b> <ul style="list-style-type: none"> <li>• <b>Learning more about SNA?</b></li> <li>• <b>Improving the network?</b></li> <li>• <b>Applying SNA to other projects?</b></li> </ul>	Participants were very interested in seeing their own network. The main interest was in repeating the survey on themselves so they could see their own network even more clearly. There was also preliminary interest in including metro authorities and other external agencies in the survey to give it an outward-looking vision. There was relatively little interest in learning more about SNA.	Much more about learning about SNA than doing anything specific with Bay Area LLC Learning Circle. Alumni networks were application of special interest.	Workshop participants expressed the most interest in learning more about the application of SNA to other projects, particularly rural communities.