Organizational Change and Social Network Analysis: Lessons from the Field

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A number of forces both within and outside of an organization's boundary can impede a change effort. However, we consistently find that a lack of attention paid to an organization's informal structure results in unnecessary resistance to change. Social network analysis (SNA) provides a rich and systematic ability to assess informal structure by mapping and analyzing relationships among people, teams or even departments within an organization. Such a mapping can be used to facilitate change in a number of different ways. First, it can identify structurally key individuals that are in a position to further or to hinder a change (for a theoretical discussion of this point, see the piece by Brass in this symposium). Second, such a mapping can identify structural factors such as long path distances, disconnected regions, and the like that can impede change efforts (for a theoretical discussion of this point see the piece by Krackhardt in this symposium). Third, presenting the network to the organization members themselves can facilitate discussion and have a powerful transformational effect (an example will be presented in this paper). And fourth, multiple mappings over time serve to document structural change and identify areas that need more attention (see for example, the paper by Stevenson *et al* in this symposium). The purpose of this paper is to show how these four principal benefits can be realized in consulting settings.

First, we studied a highly skilled virtual group within a global consulting company that was charged with providing thought leadership and specialized support to the organization's consultants in the area of knowledge management. By integrating highly specialized skill sets of this group, the firm felt it could provide a holistic knowledge management solution that would differentiate it from competitors focusing on solely technical or organizational solutions. However, the partner leading this virtual group felt intuitively that the team was not leveraging its abilities in as effective a fashion as possible.

A social network analysis dramatically confirmed his intuition. As shown in the top half of Exhibit 1, when we looked at the information sharing network for this group, what we found was not one group at all but two distinct sub-groups that were largely disconnected from each other. The basis for the groupings turned out to be their skill specialties: the group on the left focused on organizational aspects of

knowledge management and the group on the right skilled in the technical aspects such as information warehousing. Over time, members of these two sub-groups had gravitated to each other based on their common interests. The problem was that each sub-group had grown to a point of not knowing what people in the other sub-group could do in a consulting engagement or how to think about involving them in their projects. Thus despite having the same performance metrics and goals, these groups were not integrating largely because they did not know how to employ each others' skills and knowledge.

Further, one immediately notes the central role of "E" in this network. This was a person with both a technical and organizational background that had understanding of the work of each sub group. While possibly serving a critical role in integrating these two sub-groups, interviews conducted after the network analysis demonstrated that he was actually playing this position for personal benefit. Rather than helping to coordinate two people with relevant expertise when new projects arose, he often took the work for himself even when other people were better suited to do the work. As a result, his personal metrics were fantastic, and he was actually next in line to lead this group, but his tactics were highly destructive.

In addition to confirming the manager's diagnosis, the social network analysis provided several intervention opportunities. A lengthy facilitated session with this group allowed them to assess and discuss the relative isolation of the two specialties as well as more pointed concerns about certain members' expertise not being tapped while other members appeared to be bottlenecks in sharing information. As a result of the discussion around this social network various changes were made to the group's operations including arranging internal projects, new staffing practices, new communication forums and revised incentive schemes all with an eye to integrating this group of specialists. As a result, over the course of the next several months, the group began to sell more work that integrated technical and organizational skills. Further, as seen in the bottom of Exhibit 1, a network analysis conducted nine months later revealed a well-integrated group that was leveraging its knowledge much more effectively.

What is important to note about the above interventions is that they focused on both structural features of the information sharing network and on promoting characteristics of relationships that facilitate effective information exchange. For example, the interventions helped to develop an awareness of each member's expertise as well as ensure that each team member was accessible to other team members.

In a combined qualitative and quantitative study we found four characteristics of relationships to be important for knowledge creation in networks: 1) knowing what others know; 2) having access to other people's thinking; 3) having people be willing to actively engage in problem solving; and 4) having a safe relationship to promote learning and creativity.

Of course these are relational dimensions that can be mapped and highly informative in diagnosing problems underlying information seeking. One can analyze the above four relations separately to determine where a given group might be experiencing problems. For example, if it is discovered that the knowledge network is sparse, it might make sense to consider a skill profiling system or action learning sets — technical and social interventions designed to help a network know what it knows. In contrast, if the access network is sparse, then it might make sense to consider peer feedback or technical means of connecting distributed workers (e.g., video conferencing, etc.) to make sure that people within the network have access to each other in a timely fashion.

Alternatively it can also be informative to assess these networks cumulatively. For example, Exhibit 2 provides a network diagram of 38 members of a consulting practice. In this network diagram a link is drawn between two people only if all four relational characteristics are present. Note the small subgroup at the bottom right. A group such as this that has splintered off from the main network can represent untapped knowledge and occasionally political problems that must be addressed. However, their relative isolation can also allow the group to be creative outside of the requirements of day-to-day work and the pressure that often exists to conform to current ways of doing things.

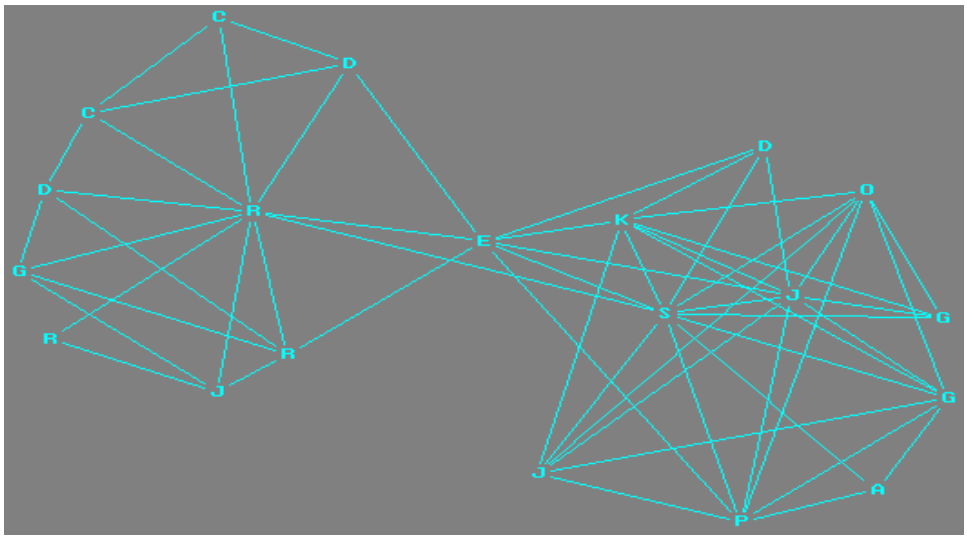
This was the case here. Roughly one year prior to this analysis, "L" had been asked to develop a new service line in a technical network application. He hired several uniquely skilled people and spent a good bit of time pursuing development of the service offering and sales opportunities. As a result, this group had become isolated from the main group over time. While not necessarily bad given its charter, this did become a problem when L was hired away by a competitor. While new relationships were formed, these people in the sub-group were very disconnected from the main network and took a good bit of time to get reconnected to the main work of the practice. Of course this loss of efficiency could have partially been avoided if people other than L had established relationships with the larger practice.

These cases illustrate all four benefits of using social network analysis as part of a change effort.

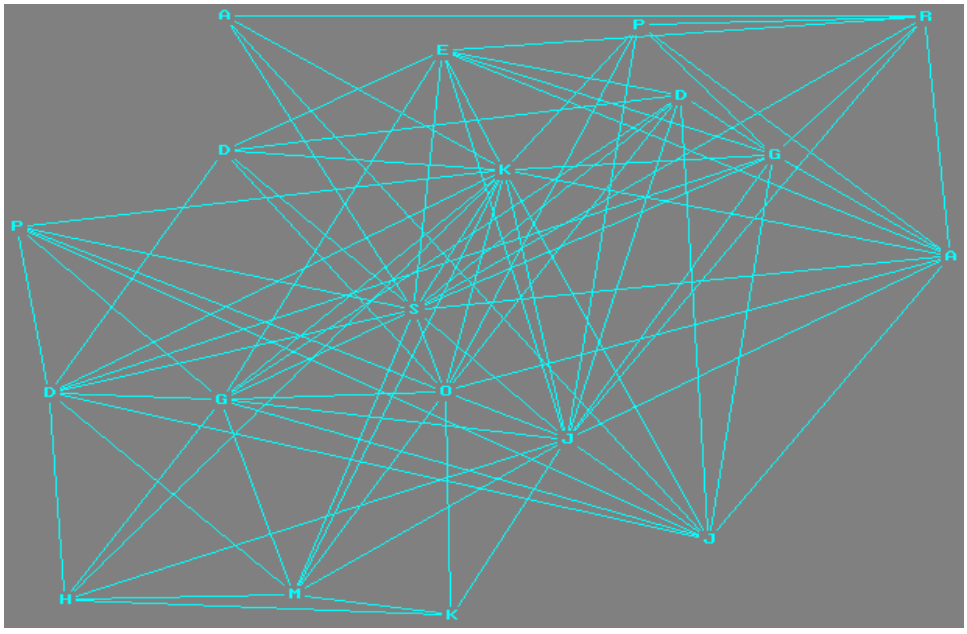
Exhibit 1

Information Seeking Network of Internal Consulting Group[1]

Pre-Intervention



Post-Intervention (Nine Months Later)



[1] Names were disguised in this example at the request of the organization.

Exhibit 2

Know × Access × Engage × Safety Network