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Proposal Review for No. 174

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Title:

Social Network Analysis to Support Knowledge Management

Short Description:

This session surveys sociology literature to consider theory and research on social networks with the goal of assessing how knowledge-based networks function. Network analysis research, including findings surrounding Granovetter’s network ties theory, provide insight into how social networks are structured and the implications for innovation, diffusion, economic outcomes, and collective action. This session offers a synthesis of network analysis theory and research which provides support for knowledge-based networks as conduits for knowledge generation and management.

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Social Networks for Knowledge Management and Learning

The increasing attention placed on knowledge management practices is producing a like interest in social network analysis (Allen, James, & Gamlen, 2007). The 2004 publication *Innovation in the knowledge economy: implications for education and learning* from the Organisation for Economic Co-operation and Development (OECD) highlights the possibilities for innovation that are created when unrestricted access and a free flow of information exists within knowledge-based networks. The overriding premise is that through open access to people, technologies, and information, new avenues for knowledge generation, innovation, and sharing are possible.

Social Network Research

Following an extensive review of network research literature, Hoang and Antoncic (2003) found three primary threads of research, including: 1) the content of the network relationships, 2) the governance of the network relationships, and 3) network structure, including patterns of relationships from direct and indirect ties within the network. The area that has attracted the most social network research attention is based on the theories of network tie strength (Marsden & Campbell, 1994). Within a recent literature review on network analysis, Jack (2005) notes that most network studies use and apply Granovetter’s network tie hypothesis which stemmed from Granovetter’s doctoral research at Harvard University.

Network Tie Theory

Granovetter suggested social networks analysis as a way to bridge micro and macro levels of sociological theory. He outlined his theory on network ties in his first journal publication in 1973 entitled "The Strength of Weak Ties" published in *The American Journal of Sociology*. He argued that while both micro issues relating to small groups and macro issues, such as diffusion, social cohesion, social mobility, and community organization, were being heavily researched, there was a lack of focus on their interaction. Therefore, Granovetter focused his attention on the strength of interpersonal ties and the resulting impact on macro level issues, including the strength of the network ties and the density of the network.

Granovetter (1973, p. 1361) defined the strength of a tie as a "combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize a tie." As such, a tie can be considered strong, weak, or absent. Given the amount of time needed to form a strong tie, the stronger the tie between individuals, the greater the overlap in their friendships. Within Granovetter's conception of networks are clusters of strong tie relationships bridged by weak tie acquaintances.

Implications of Network Ties

By making a case that all bridges are weak ties, Granovetter laid the groundwork for theory and research on social structure beyond the primary group and on relationships between groups. His personal theories and research and the numerous studies that followed have assessed the implication of strong and weak tie relationships within a network, including the following:

Diffusion and Message Transmission

Granovetter (1973) argues that new information spreads among separate clusters of people through the weak ties. Implicit in this argument is that those individuals and clusters of individuals with few weak ties will not benefit from new messages from other social clusters and diffusion will be hampered. However, research also suggests that while weak ties may facilitate the transmission of new information, the transmissions through indirect ties often become distorted and the messages are prone to misunderstanding (Hansen, 2002).

Innovation and Bridging Value

Burt (1992) suggests that given the overlap of common relationships in dense networks of strong ties, it takes weak ties with acquaintances in different social clusters to receive and share novel information. Therefore, weak tie acquaintances who move in different social networks become bridges to people and information in other networks (Granovetter, 2005). Granovetter (1973) argues that acquaintances with weak ties are able to facilitate connections to other social networks and, in turn, offer increased mobility through new connections to other social clusters. Research has offered only partial confirmation of this as findings suggests that those in

lower socioeconomic groups tend to connect primarily to friends or relatives and do not experience the same mobility benefits as those in higher socioeconomic groups which led Granovetter (1983) to refine his original theory to suggest that while all weak ties are bridges, the *value* of each bridge is not equivalent.

Collective Action and Participation

As a follow up to earlier research by Granovetter, Macy (1991) assessed the propensity of an individual within a network to work with the group and found that when a person's participation depends upon the participation of another within the network, the interdependence facilitates what is termed a *coordination of contributions*. This notion of what propels network collective action is very similar to the idea of *general reciprocity obligations* in which an assumed condition of membership to a network is participation (OECD, 2004). When the cost of member to a network is participation, the assumed reciprocal obligations fuel collective action and discourage lurkers within the network.

Guidance for Practitioners

Network analysis theory and research provides guidance for those who see knowledge-based networks as conduits for knowledge generation and management. Findings surrounding Granovetter's social network tie theories provide insight into how networks are structured and, in turn, recommended network-based knowledge management practices. As suggested by research, fostering and utilizing weak tie connections is central to innovation and message diffusion. From a knowledge generation and management perspective, this suggests the importance of developing inter-unit bridges. Organizations that span structural holes in their networks of clustered autonomous units will have a strategic advantage over those who do not.

However, research also suggests that densely clustered strong tie relationships are crucial to collective action. While weak tie relationships help to usher in new ideas, people, and resources, it takes coordination of contributions for successful collective action. From a knowledge management perspective, this suggests facilitating avenues for collective participation. As research indicates, if one person's participation depends upon the participation of another in the network, the interdependence fuels reciprocal obligations which in turn foster continued collective action. Interdependence within the network becomes the motivator for participation.

References

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Session Type: Concurrent

Interest Area: Organizations

Category of Session: Literature/Theory

Session Length: 30 minutes

Primary Keyword: Management

Secondary Keyword: Strategies

Submit to Group: Management

Theme: Social Networking and Distributed Media

URL:

Equipment and Facilities Needs:

LCD projector (connects to your laptop)

Single Presenter

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