

Discovering Communities of Practice through Social Network Analysis

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INTRODUCTION

The concept of a community of practice is emerging as an essential building block of the knowledge economy. Brown and Duguid (2001) argue that organizations should be conceptualized as consisting of autonomous communities whose interactions can foster innovation within an organization and accelerate the introduction of innovative ideas. The key to competitive advantage depends on a firm's ability to coordinate across autonomous communities of practice internally and leverage the knowledge that flows into these communities from network connections (Brown & Duguid, 2001). But how does an organization do this? A key challenge for management is understanding how to balance strategies that capture knowledge without killing it (Brown & Duguid, 2000).

BACKGROUND

Typically, top-down business processes aimed at leveraging knowledge flows end up stifling creativity by institutionalizing structures promoting rigidity. In order to understand knowledge flows, managers need to change their focus away from a process view of knowledge creation to a practice-based view. When individuals have a common practice, knowledge more readily flows horizontally across that practice, creating informal social networks to support knowledge exchange (Brown & Duguid, 2001). Therefore, the key to understanding knowledge flows within organizations is to switch the conceptualization of work away from formal processes to that of emergent social networks.

Social network perspectives focus on the pattern of relationships that develop between members of a

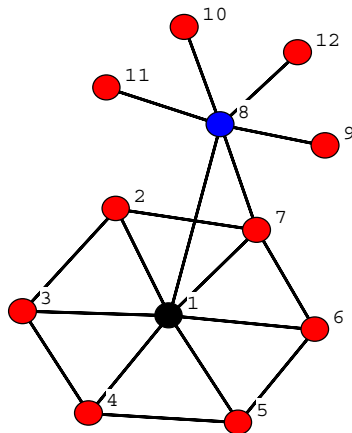
community of practice, suggesting that individuals and their actions are interdependent, rather than autonomous occurrences. In contrast to focusing on work tasks as the unit of analysis, a social network perspective of work focuses on how relational ties between individuals lead to outcomes, such as knowledge exchange and innovation. The ties that develop between community members are characterized by their content, direction, and relational strength, all of which influence the dynamics of individual interactions. The content of ties refers to the resource exchanged, such as information, money, advice, or kinship. The direction of ties indicates the giver of the resource and the receiver. The relational strength of ties pertains to the quality of the tie. For instance, the relational strength of ties indicates the amount of energy, emotional intensity, intimacy, commitment, and trust connecting the individuals.

When the resource being exchanged in the network is knowledge, prior research indicates value is derived from bridging "structural holes" or gaps (Burt, 1992). As a result, individuals who develop ties with disconnected communities of practice gain access to a broader array of ideas and opportunities than those who are restricted to a single community of practice. In addition, individuals who network with others from diverse demographic categories benefit because different people have different skills, information, and experience. Such ties bridge structural holes in the larger organization, and thereby enhance its capacity for creative action.

FUTURE TRENDS

Managers interested in understanding where the communities of practice are, and how these commu-

Figure 1. Sample of a social network graph



nities link to one another, could create a knowledge map of the organization using social network analysis. Social network analysis is a tool that can be used to depict the informal flows of knowledge both within and between communities of practice. By using social network analysis to examine the organization, managers are better able to understand what type of knowledge is being exchanged and the pattern of its exchange. This would facilitate not only the identification of barriers to knowledge exchange and areas of the organization that need better integration into the knowledge network, but would also indicate key personnel in the network through which knowledge is currently flowing.

A picture of a social network resulting from social network analysis is illustrated in Figure 1.

This knowledge map indicates two communities of practice that are bridged by individual 8. Individual 1 is central to the network, yet if this individual left the organization, it would have relatively little effect on knowledge flows. Although this would increase the distance between certain individuals, knowledge flows among all individuals remain possible as there is no fragmentation.

CONCLUSION

Social network analysis should be considered an essential tool for mapping actual knowledge flows. In contrast to focusing on business processes to formalize knowledge flows, taking a social network perspective allows management to redesign knowledge flows by adjusting network structures. Using social network analysis techniques to discover communities of practice within the organization allows managers to influence knowledge flows without killing innovation.

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KEY TERMS

Social Network: Interconnected people who directly or indirectly interact with or influence one another.

Social Network Analysis: Tools and techniques for identifying the patterns of connections among individuals in exchange relations.

Structural Hole: A gap or lack of a connection in a social network.

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