Networks in Information: An Interactive Engagement of Theoretical and Analytical Approaches

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Abstract

Networks, whether they are interpersonal, organizational, or mediated by technology are the essence of cultural and social worlds. The *Networks in Information* session will engage attendees in discussions on the potential uses of a social network approach, including various theoretical and methodological applications. In addition, participants have the opportunity to *experience* the role of information and network structures on group problem-solving. This entails highlighting how the ways in which individuals are connected in groups may affect their ability to collectively complete tasks or devise solutions to problems. Recognizing that the information community is interdisciplinary and that the application of a social network approach cuts across disciplines, the session is open to anyone curious about the use of a social network approach in information research and how it applies to specific contexts (cultural, organizational, social and technological). No prior knowledge of the social network approach is required.

1   Introduction

The purpose of the *Networks in Information* session is to increase awareness and generate conversation among a diverse information audience about the potential uses of a social network (SN) [1] approach in information research. Recognizing that the information community tends to be interdisciplinary, and that the application of a SN approach cuts across disciplines, this session is open to anyone curious about the use of an SN approach in information research and how it applies to specific contexts (cultural, organizational, social and technological).

2   Session Overview

Networks, whether they are interpersonal, organizational, or mediated by technology are the essence of cultural and social worlds. As such, this session offers the interdisciplinary information community the opportunity to engage in discussions and experience the application of a SN approach in information research from cultural participatory perspectives, which include:

- The impact of technological advancements on a networked society and culture, including the move from groups to networks and the rise of networked individualism.
- Patterns of collaboration in research organizations and archival examination of 20 years of computer science proceedings that result in a typology of co-authorship networks.
- The role of mobile technology in mediating the networks of youths during a critical transition in life; as well as the role of social media in the construction of personal networks.

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[1] For our purposes, the SN approach, theories and methods may be applicable to various types of networks, as opposed to those perceived to consist of only human relations (Wasserman & Faust, 1994).

- The role of information and network structure on collaborative problem-solving as a potential microcosm of group (social, cultural or organizational) representation.

The session begins with a panel discussion that includes conversations on how social network concepts and methods can be used to address questions in information studies, as it applies to different social, organizational and technological contexts. Each panel member will contextualize this broader message in the presentation of a specific example, and attendees will be able to partake in discussions on the presentations, concepts, methods and uses of a network approach.

As an extension of the discussions, attendees will also have the unique opportunity to experience the role of information and network structures on group problem-solving by participating in an interactive activity. This activity will enable participants to quickly and easily grasp that the ways in which individuals are connected in groups (including who they interact, communicate and share information with) produces different network (group) structures that promote varying effects. Such effects entail a group's ability to collectively complete tasks or devise solutions to problems (Bavelas, 1950; Lazer & Friedman, 2007; McCubbins, Paturi, & Weller, 2009; Mason & Watts, 2012).

During the interactive activity, groups of ten participants will be divided into two subgroups and arranged into different group structures. Each subgroup will complete identical word-problem tasks according to the directions provided. The groups will be monitored, results will be collected, and attendees will be engaged in a discussion of the tasks, which includes the results of the groups' performance and how they compare to results from recent studies. While the specific designs for the network (group) structures used in the activity are derived from the research literature, the word-problem task used in the activity is original.

3   Agenda

Panel Discussion: Conceptualizing Social Networks in Information
(40 minutes).

5 Minutes	Ava Lew: Welcome and outline of the interaction session; and introduction of the panelists.
5 Minutes	Barry Wellman: Defining SNs, and the relationship between technological advances and conceptualizations of social networks over time.
5 Minutes	Rhonda McEwen: The integration of social network analysis in information research for a longitudinal study on the role of mobile phones in the relationships of youths in transition.
5 Minutes	Zack Hayat: The use of SNA in information research to study co-authorship over 20 years of proceedings of a computer science conference in the case of CASCON (Centre for Advanced Studies Conference). This is based on work done in collaboration with Dr. Kelly Lyons.
5 Minutes	Jenna Jacobson: Deconstructing the branding of personal networks through the use of social media.
15 Minutes	Discussions with audience

Interactive Activity: Effects of Information Flow and Network Structure on Group Task Completion
(50 minutes).

10 Minutes   Ava Lew: Describe game and rules for completing the task; organize attendees into groups and distribute game.

10 Minutes   Groups complete game and results are collected.

25 Minutes   Presentation of results and engagement of attendees in discussions.

5 Minutes   Wrap-up and thank you.

Total length of time: 90 minutes

4   Relevance to the Conference/Significance to the Field

In keeping with the iConference 2014 theme entitled, "Breaking Down Walls: Culture, Context, Computing", this interaction and engagement session will help to increase awareness among members of the diverse information community regarding the potential uses and integration of a SN approach in information research. This will be accomplished through the demonstration of specific examples related to various social, organizational, or technologically-mediated areas of life. Further, while SN concepts and methods have been used in information research (Chatman, 1991, 1992; Haythornthwaite 1996, 2002; Haythornthwaite & Wellman, 1998; Park, 2003; Lu 2007; Yang, Adamic, & Ackerman, 2008), and though some information researchers are familiar with this area, there are a number of members within the information community who have not been exposed to the SN perspective or understand how this approach is applicable to information studies. In light of this, there is value in providing attendees with a new perspective that they may not have previously considered; and an understanding of how a SN approach may apply to information research that is concerned with people, organizations or other entities embedded in networks, which are often mediated by technology in many of today's cultures and societies. Significantly, attendees will leave the session armed with a new approach in their conceptual toolbox that they can integrate into their own research.

5   References

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