The Social Networks in the Information Horizons of College Students: A Pilot Study

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ABSTRACT
The information horizon is an imaginary field that users position their information sources according to their perceived importance (Sonnenwald, 1999), and social network is one of the critical concepts in information horizons. Steffes and Burgee (2008) pointed out that the stronger tie sources are more likely to be used as a preferred or primary information source. Previous research on graduate students’ information horizons revealed various interpersonal channels in research contexts (Tsai, 2010). This study aims to examine undergraduates’ social networks in their coursework related information horizons. A web survey with 18 responses and 3 brief follow-up interviews were conducted with an undergraduate class at University of Wisconsin-Madison. Preliminary results showed that undergraduate students tend to rely more on colleagues than on professors when facing coursework related issues. While stronger ties may be more frequently consulted for moral support, the tie strength may not necessarily determine the frequency of consultation on program, course, and resources. The context of the interpersonal connection may also play an important role. Overall, this study integrated two theories, information horizons and social network theory, and may contribute to the methodology of information horizon.

Keywords
Information behavior, information horizons, social networks, interpersonal channels.

INTRODUCTION
Information horizon refers to “an imaginary field that users position their information sources according to their perceived importance in various contexts (Sonnenwald, 1999).” Among the main concepts in the theoretical framework of information horizons, the social network is one of the critical elements. Previous research on graduate students’ information horizons showed that most graduate students emphasized on the importance of their advisors in research contexts, but students from different disciplines positioned their interpersonal channels on their information horizon maps differently (Tsai, 2010). However, undergraduate students and graduate students may have different social networks in their course-related activities because of the different requirements and different nature of the programs. Therefore, it would also be worthwhile to investigate the social networks in the information horizons of undergraduate students.

Steffes and Burgee (2008) conducted a survey with college students on social ties and electronic word of mouth. They pointed out that the stronger tie sources are more likely to be used as a preferred or primary information source. Thus, this study assumes that the stronger the social tie is, the more frequently the student consults that person. The purpose of this study is to examine the strong and weak ties as well as the social networks in college students’ coursework related information horizons. Three research questions can be raised: 1. Who plays the role of strong or weak tie in students’ information horizons? 2. What roles do the interpersonal channels play, such as colleagues, friends, or family members, when students are facing coursework related problems? 3. How do these interpersonal channels refer students to other resources or people, and how do students value these recommended sources?

THEORETICAL FRAMEWORKS
Two theoretical frameworks, information horizons and social network theory, are addressed as follows to form the basis of the research design:

Information Horizons
Diane Sonnenwald (1999) proposed the information horizon to describe an imaginary field that people position their information sources according to their perceived importance or preferences. In the framework of information horizons, contexts, situations, and social networks are the three main concepts. Social network refers to communication among individuals, in particular, patterns of connection and resonance interaction. Social networks help construct and are constructed by situations and contexts. This theoretical basis provides a framework of information exploration, seeking, filtering, use, and dissemination (Sonnenwald, 1999). It also provides a basis for examining information need, information seeking, and information use as a whole. Several studies on people’s information
horizons were about everyday information behavior (Kari & Savolainen, 2003; Savolainen & Kari, 2004), but there is indeed little known about the information horizons of undergraduate students, especially their social networks.

Social Network Theory
A social network typically consists of a finite net or sets of actors and the relation or relations defined on them; a social tie establishes a linkage between a pair of actors (Wasserman & Faust, 1994). Ties are the key factor in a network and can vary in strength; they can be assessed as either strong or weak (Schultz-Jones, 2009). Granovetter (1973) proposed that weak ties may be an important locale for diffusion of influence information. More information behavior research started utilizing social network theory since 1996, but application has been limited and there are still relatively few relevant studies in this area (Schultz-Jones, 2009). Most of the social network studies are quantitative, but some include ethnographic approaches. For example, Pettigrew (2000) investigated the flow of senior’s human services information with nurses at local foot clinics by conducting observations and interview based on Granovetter’s discussion of the strength of weak ties.

METHODOLOGY
Data Collection
College students at the University of Wisconsin-Madison (UW-Madison) are the population of this study. The pilot study recruited 18 voluntary participants, from an undergraduate class with students from various fields, to fill out an online questionnaire. A self-administered web survey was used because college students should have Internet access at least on campus, and this quantitative approach may form the basis of expanding the study to a larger scale. Three brief follow-up interviews were conducted with volunteers among the 18 participants. The questionnaire in this study was developed based on various sources to increase its validity. First, based on a previous information horizon empirical study on 12 graduate students (Tsai, 2010), this questionnaire indentified twenty interpersonal channels to measure the social networks. Second, the constructs of this questionnaire was based on the literature review and assumptions stated in the previous sections, including the theoretical frameworks. Finally, this study also adopted the format of some questions from other social network questionnaires (De Lange, Agneessens, & Waeghe, 2004; CPRE, 2007). The questionnaire was divided into four parts: consultation on coursework activities, people consulted for course-related issues, perception on the people consulted, and demographics.

Data Analysis
This study viewed each interpersonal channel as an actor in the social network and each link between the student and this specific interpersonal channel as a social tie. The social ties were measured by user ratings of the perception of the profoundness of the relationship. The interpersonal channels with positive scores were determined as strong ties, and those with negative or neutral scores were determined as weak ties. The social networks in coursework related information horizons were measured by the frequency of consultation with specific interpersonal channels. A variant analytical information horizon map (AIHM) by Huvila (2009) was used for analyzing data. The researcher drew the information horizon maps based on the information collected from the questionnaires. The more frequently the interpersonal channel was consulted by the student, the more central this interpersonal channel would be on the information horizon map (see Figure 1 and Figure 2).

PRELIMINARY RESULTS
Some preliminary results can be found in this pilot study: Most students ask for general advice, confirmation, or information at least once a week or once a month. Family members, roommates, and friends were considered as strong ties. Colleagues were generally stronger ties than professors. Colleagues and friends were considered more helpful than professors, and the relationships with professors were considered more formal. However, students tend to get referral information or confirm the information got from others with their professors and colleagues who are in their current classes or in the same department. In general, while stronger ties may be more frequently consulted for moral support, the tie strength may not necessarily determine the frequency of consultation on program, course, and resources (see Figure 1 and Figure 2). The context of the interpersonal connection may also play an important role.

LIMITATIONS
Two major limitations are identified as follows: first, the pilot study only included a very small sample, so the results cannot be generalized to a larger population. Second, a traditional social network analysis usually requires a bounded system. Recent studies on social networks in cyberspace have applied social network analysis to an unbounded system. This study follows the latter path and assumes that every interpersonal channel described in the questionnaire is equivalent to the students. However, students may perceive the interpersonal channels differently.

POSSIBLE CONTRIBUTION
This study may contribute in several aspects. First, this study incorporates the information horizons and the social network theory, and suggests using questionnaires, other than interviews and map-drawing, as an alternative method for information horizon research. Second, this study may also contribute to the literature on college students’ social networks in their information horizons. Finally, this study may provide the libraries and departments with suggestions for improving information services targeted to students with their coursework related activities.
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REFERENCES


