The Value of Social Search:
Seeking Collective Personal Experience in Social Q&A

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ABSTRACT
In this paper, we examine the value of social question-answering (Q&A) services as a platform for social search. We present a quasi-field study where we instructed 20 study participants to use a social Q&A service, Yahoo! Answers, for a period of one week, and interviewed them about their experience with Yahoo! Answers based on the questions (N=99) they posted to the site. The results indicate that participants turned to a social search system when they needed firsthand information, diverse perspectives, and others' value judgments. Participants also preferred social search systems over web search engines in situations where they could obtain tailored information, access original and non-popular information, filter out information, and interact with real people. Various strategies that participants employed to ensure that their questions would be likely to be answered were also identified. This study contributes to the field of information science by investigating a social Q&A service using the framework of social search from the information seeker's perspective. The results have implications for developers and designers of social search systems.

Keywords
Social search, social Q&A, online Q&A, web search, information seeking, social media.

INTRODUCTION
Traditionally, web search has been discussed and studied as a solitary activity. Social interaction on the web has been studied widely, but little attention has been given to social interaction in the context of searching on the web until recently. Today, online social tools and services are increasingly providing individuals with opportunities to enhance their experience with web-based information seeking (Evans & Chi, 2010). Moreover, online social tools enable people to easily reach their peer communities to

gather information, advice, and expertise in the context of their daily lives (Mamykina, Manoim, Mittal, Hripcsak, & Hartmann, 2011). Recently, this process of finding information online through social interactions has been characterized and discussed as social search (Efron & Winget, 2010; Evans & Chi, 2010; Morris, Teevan, & Panovich, 2010).

Asking questions of other people using online services is one of a variety of forms of social search. An example of such online services is a social question-answering (Q&A) service where people ask questions and receive answers from other users on a broad range of topics. In this paper, we focus on examining a social Q&A service as a platform for social search from the perspective of an information seeker. In particular, we investigate how people conduct searches using a social Q&A service, how they distinguish social search relative to traditional web search using search engines, and what they perceive as the value of using a social Q&A service in the process of seeking information.

While previous research on social Q&A services has provided insights about general usage trends, including user distribution and behavior patterns, by analyzing large data sets (Adamic, Zhang, Bakshy, & Ackerman, 2008; Harper, Moy, & Konstan, 2009; Nam, Ackerman, & Adamic, 2009; Shah, Oh, & Oh, 2008), very little effort has been put into investigating social Q&A services as social search systems that fulfill various user goals and intentions that prompt them to seek information from other people. In contrast, several studies have attempted to understand the behavior and motivations of users who answer questions rather than those who ask them (Dearman & Truong, 2010; Nam et al., 2009; Oh, 2011, 2012).

As a result, there seem to be some gaps in the current literature on social Q&A services. First, although social Q&A services are designed for getting answers from other people during the process of information seeking, most studies have only examined answering behaviors. Second, there are more "askers" than "answerers" on social Q&A sites (Adamic et al., 2008; Gyongyi, Koutrika, Pedersen, & Garcia-Molina, 2008; Kang, Kim, Gloor, & Bock, 2011; Nam et al., 2009; Shah et al., 2008). However, askers, as information seekers, have not been much studied. These gaps led us to focus on studying the value of a social Q&A

service as a platform for social search from the information seeker's perspective.

To examine the value of social search in a social Q&A service, we are interested in determining the circumstances and the kinds of information that lead people to turn to unknown others, taking the risk of asking strangers despite the existence of a large number of other types of sources they could use online during their information seeking process. For instance, they could simply turn to a search engine to conduct web search. Or, they could turn to Facebook or Twitter, asking a question of other individuals they know. The results of this study will provide insights into the role that social search plays in the process of information seeking.

This study addresses the following four research questions.

- Research Question 1: What types of information lead people to turn to social search systems such as social Q&A services?

- Research Question 2: How do people distinguish social search from traditional web search?

- Research Question 3: What strategies do people take to assure their questions are likely to be answered when they post their questions to a social Q&A site?

- Research Question 4: For what purposes do people utilize features available within a social Q&A site?

To investigate these research questions, we conducted a quasi-field study where we instructed 20 study participants to use a social Q&A service, Yahoo! Answers (http://answers.yahoo.com/), for a period of one week. During subsequent interviews, participants described their experiences of using Yahoo! Answers based on the total of 99 questions they posted to the social Q&A site. We used content analysis to analyze the interview transcripts.

In the rest of this paper, we first provide a brief overview of related work regarding social search and social Q&A. We then describe our methods, including the venue of our quasi-field study and procedure, and report our findings concerning our four research questions. We conclude by discussing the implications of these findings for web-based information seeking in general.

LITERATURE REVIEW

Social Search
Broadly speaking, social search refers to the process of finding information online that utilizes social resources through interactions (Efron & Winget, 2010; Evans & Chi, 2010; Morris et al., 2010). Social search includes a range of activities such as asking questions of friends, experts, or unknown persons, searching socially-generated content such as tweets to find information, and using a social search engine which is designed to find the right person (Chi 2009; Efron & Winget, 2010; Evans & Chi, 2010; Horowitz & Kamvar, 2012; Morris et al., 2010; Panovich, Miller, &

Karger, 2012; Paul, Hong, & Chi, 2011). In this paper, we will focus on one type of social search: asking questions of other people to seek information in ways that involve explicit interactions with people.

Various strategies can be employed in order to ask questions of others depending on whether one identifies a specific person to ask for help one-on-one or posts a question in a public venue, how close a person (or people) to whom one turns for help is to one who asks a question, and whether interactions between an asker and answerer(s) are synchronous or asynchronous (Evans & Chi, 2010; Nichols & Kang, 2012). Those who answer one's question could come from various levels of social proximity, ranging from close friends and acquaintances, to friends of friends of friends, to the greater public, depending on what social tools one chooses to use for seeking help (Chi, 2009).

An increasing number of studies have examined how people use various online social networking services such as Facebook and Twitter to ask questions of their friends in the process of seeking information. By using a status message on these social networking sites, people broadcast a question to friends in their social networks. Interactions in these settings are asynchronous although most responses appear relatively quickly. It appears that people are turning to their social networks to find answers to questions on a variety of topics, including opinions and recommendations (Efron & Winget, 2010; Liu & Jansen, 2012; Morris et al., 2010; Zhang, 2012).

A study conducted by Horowitz and Kamvar (2012) examined how people use Aardvark, a social search engine which is designed to find the right person in one's social networks, and found that Aardvark performs very well on queries about opinions, advice, experiences, or recommendations, while traditional corpus-based search engines remain a good choice for queries that are factual or navigational.

In general, people tend to trust information from people in their social networks because they know them (Morris et al., 2010). When people evaluate information they receive from people in their social networks, closeness between one who asks a question and a friend or acquaintance who answers a question seems to have a large impact on this trust assessment. Regardless of whether a question is broadcasted or targeted, this importance of social proximity in evaluating information in the social search setting has been confirmed by a number of studies (Horowitz & Kamvar, 2012; Panovich et al., 2012; Paul et al., 2011).

There exist a number of factors that motivate people to turn to their social networks to find answers to their questions. According to Morris et al. (2010), people ask questions on social networking sites because they trust the opinions of people they know rather than the opinions of strangers. Moreover, people find it easier to ask questions in natural language and appreciate that their friends know a great deal about their background and preferences, and are thus able to

provide tailored answers (Morris et al., 2010). People also identify not only primary benefits such as trustworthy and personalized answers, but also secondary benefits, including social awareness and fun.

Social Q&A

Social question-answering (Q&A) services are community-based services that allow people to ask questions and receive answers from their fellow users (Kim, Oh, & Oh, 2007; Oh, Oh, & Shah, 2008). Social Q&A services usually provide features that support browsing and searching questions and answers in addition to question asking and answering. People can also comment on questions or answers and evaluate the quality of answers by giving ratings or casting votes. Examples of social Q&A services include Yahoo! Answers (http://answers.yahoo.com/), Answerbag (http://www.answerbag.com), and Naver Knowledge-IN (http://kin.naver.com/), a Korean social Q&A service.

These social Q&A services share several characteristics with other online Q&A services such as digital reference services and expert services. First, all involve "the use of human intermediation to answer questions in a digital environment" (Lankes, 2004, p. 301). Second, they allow users to express their information needs as questions using natural language as opposed to keyword-based queries in web search engines (Shah, Oh, & Oh, 2009). Third, people can receive highly personalized answers to their questions, something which may not be possible in traditional web search engines, as information contained in questions helps answerers put other people's information needs in context (Radford, Connaway, & Shah, 2012; Shah et al., 2008).

Despite the common characteristics mentioned above, there are a number of properties that distinguish social Q&A services from other online Q&A services. First, voluntary participation of general users is critical for success, as anyone can ask and answer questions on social Q&A sites (Shachaf, 2010). Second, throughout the entire process of question asking and answering, the products of this process—questions, answers, and comments—are publicly available (Shah et al., 2009). Third, people can collaborate by sharing and distributing information among fellow users, and thus a community can be built around such services (Shachaf, 2010; Shah et al., 2009). Fourth, this platform encourages users to participate in various support activities beyond questioning and answering, including commenting on questions and answers, rating the quality of answers, and voting on the best answers (Shah & Kitzie, 2012). Fifth, the availability of various activities allows social Q&A services to provide various social cues, including comments, and ratings using "thumbs up," "thumbs down," and stars (Blooma, Goh, & Chua, 2012). Sixth, these services involve interactions with a distributed peer community which consists of people an asker does not know and empowers users to share information with others as well as tap into their collective knowledge (Blooma et al. 2012; Shah & Kitzie, 2012).

Responsiveness and diversity of answers resulting from a large community have been identified as two main reasons that people use social Q&A services for their information seeking (Harper, Raban, Rafaeli, & Konstan, 2008; Kim, 2010). Another reason that people turn to social Q&A services to satisfy their information needs is because they can receive personalized answers to their questions (Kim, 2010; Shah et al., 2008). As the contributions of answerers play a critical role in maintaining social Q&A services, numerous studies have investigated why people voluntarily answer questions on social Q&A sites. It appears that both intrinsic and extrinsic motivation play a role in encouraging people to answer questions (Nam et al., 2009; Oh, 2011, 2012; Raban & Harper, 2008). One's decision to answer questions is also influenced by his or her first-time experience with a social Q&A service (Yang, Wei, Ackerman, & Adamic, 2010).

METHODS

We investigated how people use a social Q&A service as a platform for social search to seek information online based on data drawn from participants' experiences in the context of their daily lives. For this purpose, we decided to conduct a quasi-field study where participants were instructed to use Yahoo! Answers by posting their own questions to the site in their natural settings. The sources of data collection included the content of questions submitted by participants and answers they received, background questionnaires, interviews, and post-interview questionnaires.

Social Search System Selection

Yahoo! Answers (http://answers.yahoo.com/), launched in 2005, was selected as a social search system for our quasi-field study because it is the largest and most popular social Q&A service. For example, Yahoo! Answers had received 300 million questions as of July 2012, with two questions being asked and six answered per second on average (Yahoo! Answers Team, 2012). On Yahoo! Answers, people can ask each other questions on any topic and get answers from fellow users. A question posted by a user will be open for four days, and the person who asked the question can extend that period up to eight days. If a question receives no answer during this open period, it will be deleted from Yahoo! Answers. A question will be resolved once the best answer is determined by either the person who asked the question or someone else. Yahoo! Answers provides features that allow users to evaluate questions as well as answers. People can mark a question as interesting and give a thumbs-up/thumbs-down vote to a good answer. Users move up to a higher level as they earn points by participating in the site which gives other users information about how experienced they are. Moreover, Yahoo! Answers offers user profiles that contain information about users, such as nicknames, images, history, level, and points.

Research Design

Participants
This study's participants were undergraduate students at a research university in the Midwest who were recruited through an invitation sent via email and flyers posted around the campus. Undergraduate students were selected as the sampled population because young adults aged 18 to 29 years are not only the most active information seekers (Purcell, Brenner, & Rainie, 2012) but also the most active users of social media (Duggan & Brenner, 2013).

Procedure
In this quasi-field study, we first instructed participants to use Yahoo! Answers for one week. An in-person interview followed. Before starting to use Yahoo! Answers, participants attended an initial introductory meeting. In this meeting, participants were provided with an overview of the study, asked to complete an informed consent form, and asked to fill out an online background questionnaire. They then were asked to use Yahoo! Answers for one week. During this period, they were expected to post at least five questions to Yahoo! Answers. As we aimed to ensure that participants used Yahoo! Answers in as realistic a manner as possible, we let them post any questions that they were interested in. At the conclusion of one week, a semi-structured in-person interview was conducted. Participants were then asked to fill out an online post-interview questionnaire at the end of the interview. Monetary compensation was provided to participants for their participation.

Data Collection
The background questionnaire collected user data on demographic characteristics, general information-seeking practices, experience with online question-answering services, including Yahoo! Answers, and previous experience with social media services, including Facebook, Twitter, and YouTube. The interview, which served as the primary data collection method, consisted of two parts. In the first part, a participant was asked to talk about his/her perception of Yahoo! Answers and overall experience using Yahoo! Answers. In the second part, the participant was asked to talk about each question he/she posted to Yahoo! Answers and share his/her process of question asking in each episode. Interview questions included topics such as what one was looking for, what prior research one did before coming to Yahoo! Answers, how one formulated a question, and how one evaluated answers and those who provided answers. The post-interview questionnaire collected data on information evaluation practices on Yahoo! Answers and types of activities participants performed on Yahoo! Answers.

Data Analysis

The data analyzed in this study included 20 interviews that were based on 99 questions that 20 participants posted. While 21 students were recruited and participated in interviews, we decided to exclude one interview because the participant only answered questions in Yahoo! Answers without posting any questions. The 20 remaining participants posted five questions to Yahoo! Answers before the interviews as instructed, except for one participant who posted four questions. Interviews lasted between 22 and 57 minutes, averaging 34 minutes. All interviews were audio-recorded and then transcribed for data analysis purposes.

To identify distinct themes and topics present in the interview transcripts, we developed a code book. The data were analyzed deductively from the interview protocol, as well as inductively through iterative analyses of the interview transcripts. In the present paper, we report findings focusing on the value of social search as a means of information seeking. Results from data analysis related to other topics such as evaluation of information quality and credibility will be reported in another paper.

FINDINGS

Characteristics of Participants
Out of 20 study participants, eight (40%) were males and 12 (60%) were females. The participants consisted of three freshmen (15%), two sophomores (10%), seven juniors (35%), seven seniors (35%), and one (5%) student who did not identify. The participants ranged in age from 19 to 24, with a mean age of 21. They also represented a variety of undergraduate programs, including biology, business, computer science, economics, industrial and operations engineering, informatics, neuroscience, nursing, psychology, and Spanish. In terms of prior experience with Yahoo! Answers, the majority of participants were not current users of Yahoo! Answers. Specifically, five (25%) participants reported that they had never used Yahoo! Answers, and seven (35%) reported that they do not use Yahoo! Answers nowadays although they had tried it in the past. Of eight participants who responded that they are currently using Yahoo! Answers on a regular basis, two (10%) reported that they use it three to six days per week, and six (30%) reported that they use it one to two days per week.

Research Question 1: What types of information lead people to turn to social search systems such as social Q&A services?
When asked what information they were looking for with a question they posted to Yahoo! Answers, most participants stated that they wanted to find out *what other people thought*. This is consistent with prior research which found out that people tend to seek others' *opinions* when they use social Q&A services (Gyongyi et al., 2008; Harper et al., 2009). We then further analyzed the data about what other people think at a more granular level, identifying three types of opinions our participants pursued: *firsthand information, diverse perspectives,* and *others' value judgments*.

Firsthand Information
The most commonly described information that participants sought was firsthand information. Participants wanted to see what other people thought, based on people's own experience of doing something or using something. The following two quotes demonstrate that how highly participants valued opinions based on firsthand experiences. S01 stated that getting a question answered in Yahoo! Answers is like a person saying that "Well, here is my experience and how it actually worked out." S11 similarly explained that Yahoo! Answers is really good for opinion-based questions because users can obtain information "that's more related to people's experiences and getting opinions on things rather than actual factual knowledge." This sentiment was attested by a number of other participants' responses as well. For example, S07 wanted "someone's opinion that actually was doing social media" because she plans to pursue a social media-related career. S16, who looked for information on graduate schools, similarly noted that he expected to receive answers such as "I decided because of this" from those who have graduate degrees. He also indicated that he felt that such information based on firsthand experience has "some personal connection."

Diverse Perspectives
Most participants sought ideas or insights which were different from theirs. Some wanted to find out what other people think to compare their thoughts with them, while some wanted to learn something new by gaining different opinions. For example, S06 stated, "I already have an idea… but I just wanted to see what other people thought." Similarly, S20 said, "I have a current plan, but I was kind of seeing if people had other ideas." Both S13 and S06 mentioned the value of the diversity of the Yahoo! Answers community in gaining different perspectives. This is consistent with findings from prior research that the diversity of answers resulting from a large community is one of main reasons that people use social Q&A services for their information needs (Harper et al., 2008; Kim, 2010). On the other hand, some participants hoped to acquire new information or knowledge by obtaining different perspectives. For instance, S20 hoped to find something to "supplement" what he already knew. S14 similarly stated that she wanted something she "hadn't heard of before."

For a few participants, how many different perspectives they could get also seemed to matter. S19 indicated, "I was expecting more than one. I was expecting like lots of alternatives." S10 similarly recognized the crowdsourcing characteristic of a social Q&A service, stating that she posted a question to Yahoo! Answers to "crowdsource… because like a lot of people are probably able to answer."

Others' Value Judgments
Our participants indicated that they expected information about whether something is good or bad or what other people like or don't like rather than just a big list of options.

As S05 put it, participants preferred having answers that include information such as "This works best" or "This one isn't very good." S11 similarly indicated that "It's nice to hear someone say what they think is the best." S02 and S10 echoed this desire to see which options people liked.

Research Question 2: How do people distinguish social search from traditional web search?
Most participants decided to turn to social search either because they could not find information they wanted via web search or because they got something that was not exactly what they wanted. This is consistent with findings from prior research that some Yahoo! Answers users came to the site because they could get answers to difficult questions that could not be easily answered by traditional web search engines (Kim, 2010). The analyses of data indicate that participants preferred social search systems over web search engines because of several different reasons: they could *obtain tailored information, access original and non-popular information, filter out information,* and *interact with real people.*

Obtainment of Tailored Information
The most commonly noted reason for preferring social search using Yahoo! Answers over web search was that participants could obtain tailored information. They liked the fact that they could get their questions answered specifically and thus obtain exactly what they wanted when using Yahoo! Answers, in contrast to web search, which provides general information not specified for the particular person conducting the search. For example, S20 explained that posting a question to Yahoo! Answers was "like being able to ask the author of the article some questions, which you can't really do." This participant further elaborated that he liked an answer he got in Yahoo! Answers, "because it was specific to me and it wasn't something that I would be able to find an article just on me." S13 similarly stated, "When I search online, it won't be a perfect match." S02 also indicated that she found a tailored answer she got in Yahoo! Answers more helpful because it was explained in a "more understandable way" compared to information she could find on some websites where people use a lot of "programming jargon."

Access to Original and Non-Popular Information
Participants also favored Yahoo! Answers because they were able to obtain information that they could have not found via web search on their own. S08 indicated that he found an "authentic" answer more valuable because he felt that it was more "real" compared to something he could have gotten if he did research using search engines. A few participants emphasized that non-general questions can be well served by Yahoo! Answers. S17 implied an expectation to get her question answered by someone who knows "niche" websites. S20 also indicated that if he had been looking for something that had "tons of information out there" he could have just found it on his own.

Filtering Out of Information

A number of participants indicated that they sometimes feel overwhelmed when they are given too much information as a result of web search. For example, S06 stated, "a lot and a lot of stuff comes up, like thousands and millions of hits come up." Along those same lines, S08 said, "If you look on the web, there's just so much information." Participants appreciated social search using Yahoo! Answers because it helped them narrow what they were trying to figure out by providing information filtered by other people. S11 indicated that she felt the need for filtering because "there's so much out there." S17 expressed similar frustration with too much information, stating, "A lot of unrelated websites come up" when she tries to find information about "complex system," which is "a very broad adjective."

Interaction with Real People

As our participants were well aware of the fact that they were interacting with real people, they recognized the benefits of questions being asked in natural language and the benefits of answers coming from real people rather than machines. S13 described that she felt like talking to and getting an answer from a friend. S11 similarly stated, "It feels a little more personal, like I'm actually talking to someone."

Research Question 3: What strategies do people take to assure their questions are likely to be answered when they post their questions to a social Q&A site?

Responsiveness resulting from a large community is also one of main reasons that people use social Q&A services for their information needs. The benefit of high responsiveness, however, is potentially offset by qualitative shortcomings such as low-quality answers. Furthermore, in general, it appears that little overlap exists between those who ask questions and those who answer questions on social Q&A sites, with a majority of users asking questions and very few answering them, resulting in a highly skewed distribution of users (Adamic et al., 2008; Gyongyi et al., 2008; Kang et al., 2011; Nam et al., 2009; Shah et al., 2008).

The data analyses demonstrated that our participants were well aware of these inherent limitations of social Q&A services and that they employed a variety of strategies to receive both better and more answers to their questions. Participants had a clear goal of getting what they were looking for from those who knew the answer. The following quote clearly demonstrates that participants recognized the significance of the way of asking a question in this setting. S03 explained, "My impression was that in terms of getting good answers for your questions, you had to ask a good question. And so if your question's really vague or like a question doesn't make sense, then a lot of times it'll take a long time to get a response or like people won't give you a good answer." At least three clear strategies that participants utilized when formulating a

question emerged from the data analyses: *specifying, clarifying,* and *signaling*.

Specifying

As discussed previously, being able to obtain personalized information was one of commonly mentioned distinct characteristics of social search. Participants preferred Yahoo! Answers to the Google search engine because they could get exactly what they were looking for. Thus, to make sure that they got exactly what they were looking for from the right people who knew the answer, and to increase the likelihood that their questions got answered, participants specified what they wanted by providing background information and adding details in an attempt to filter out potentially unhelpful answers.

For example, S16 emphasized the importance of providing details, stating "lots of times like people put here that's just like, 'I have a question.' So then nobody clicks on it because it's not specific enough." S01 similarly described making sure to write a question specific enough to get "more" information that "related to" what she was looking for. Furthermore, S17 stated, "I tried to make it as specific as possible in case someone gave me a very broad answer that I don't even need." This participant also recognized the significance of having right people answer her question, indicating "I'm putting something specific enough… and I hope that somebody would hit it." In the same vein, S03 said, "I try to make my questions… easily searchable then people will respond to it better and have more contributions."

Interestingly, a few participants, however, had very different strategies. They indicated that they wanted to keep their questions general and open-ended in order to invite more answers. S14 stated, "I just didn't want to sway the question in a certain direction really." S21 also noted, "If I start asking about really, really, really specific things, I think I would be less likely to get an answer." S07 similarly explained that she felt asking a question in more general way seems to offer "more options to post whatever they want."

Clarifying

Our participants also asserted that they wanted to make their questions clear so that others would easily be able to answer their questions. For example, S03 stated, "I just tried to make it relatively easy to answer… a question that's understandable." S20 similarly explained, "I wanted to make my title on topic and obvious what I was talking about [sic]." S09 emphasized the importance of word order with regard to question clarity, stating "It will essentially be like the same question, but if you phrase it one way, it can come off sounding like a different way than you intended." Furthermore, S06 recognized the significance of word choice, indicating, "I didn't say 'informatics' because a lot of people don't know what informatics is so I said information systems."

Signaling
Several participants felt that indicating their involvement and interest was important to motivate other people to provide better answers. Aspects that participants saw as signaling involvement and interest were tone of questions and length of questions. For instance, S09 stated, "the more serious like you phrase it, the more likely you'll get a more serious answer." Likewise, S14 stated that she believed that a more "professional vibe" would motivate people to put "more effort" into their answers, while S19 indicated that she felt that a short question with fewer words shows "how not very interested you are or not how into the question you are [sic]."

Research Question 4: For what purposes do people utilize features available within a social Q&A site?
Yahoo! Answers provides several features that present cues which help its users better interact with other users and information. These features include: (1) thumbs-up/thumbs-down votes for answers; (2) the best answer with star ratings; (3) user profiles that contain information about users, such as nicknames, images, history, level, and points. People may find these various features useful in the process of evaluating information in this social Q&A setting where they interact with people they do not know and interact with online content created by these unknown people.

A small number of participants noticed these features, while a majority of participants either did not notice them or did not consider them significant even when they did notice. However, for those who noticed them, these features proved to be very useful for a number of purposes. We identified four major ways that participants utilized features available within Yahoo! Answers. In particular, participants utilized these features to *get a sense of user credibility, assess the level of user involvement, judge answer quality*, and *determine the level of effort* they should invest in cues presented by these features.

To Get a Sense of User Credibility
Several participants indicated that they used some details from user profiles, such as images and histories, or top contributor badges, to get a sense of users' credibility. For example, S14 stated, "picture makes me think that it's an old person that knows how to knit because maybe old people would know better." A few participants believed that seeing other questions a user answered in the past was helpful. S05 described that he found a user more credible after he looked at other questions an answerer answered previously, stating, "it kind of shows that it's not a random person answering."

To Assess the Level of User Involvement
A few participants perceived that those who updated their profiles, those who had more points, and those who had top contributor badges tended to be ones who were more invested in Yahoo! Answers. For example, from S01's perspective, "I can see that they have a profile picture so

maybe they're a little bit more invested in actually participating in the site." This participant also stated, "They have the top contributor so that means that they're contributing to lots of things."

To Judge Answer Quality
Among various features available, thumbs-up/thumbs-down votes and best answer signs were found to be useful for evaluating answer quality. In particular, with regard to thumbs-up/thumbs-down votes, the number of votes seemed to matter. For example, S19 stated, "I also like the voting thing… it was like three people voted for the same answer, that was really helpful." Similarly, according to S01, "seeing a thumbs up is going to… sway me to maybe think that it's a better answer or if it has several thumbs down, that's probably going to sway me, 'Well, maybe this isn't that good because all these other people are saying that they don't like it.'" S15 also recognized the usefulness of the best answer, stating, "Someone other than myself must have thought it was a good one [sic]."

To Determine the Level of Effort to Exert
Interestingly, several participants utilized features such as profile images, top contributor badges, and best answer signs to manage their attention by determining the appropriate level of effort they should exert. S19 noted, "some people use a weird username and… also with weird pictures, they kind of freak me out. So I usually don't like paying attention to them more than the other ones." S16 stated, "I'll pay more attention if there's a picture or… a top contributor," and S11 indicated, "I'm going to pay more attention to the one that was… best answer."

DISCUSSION
Social search involves relying on various kinds of social resources in the process of information seeking. This study focuses on examining one form of social search, which is seeking information by asking questions of other people using a social Q&A service. Our findings demonstrate that participants used Yahoo! Answers as a platform for social search, asking other people for help in their everyday information seeking. Although most of our participants were novice users of Yahoo! Answers, they adopted this service without much difficulty in their various information seeking tasks. In fact, participants appeared to feel comfortable interacting with people they did not know, asking questions without much hesitation. It appeared that they highly valued the interaction with real people because they could obtain information that was more personalized and tailored to their situations, which is still a difficult aspect to achieve in traditional web search.

Both asking a question on social Q&A sites such as Yahoo! Answers and asking a question on social networking sites such as Facebook and Twitter enable people to conduct social search by allowing them to reach out to distributed potential respondents to seek information, and thus enable them to obtain more subjective and personalized

information. However, they differ in that those who answer questions on a social Q&A site are strangers, while those who answer questions on a social networking site know the asker. Morris et al. (2010) discuss a number of differences between asking questions on social Q&A sites and asking them on social networking sites. Another such difference is that questions on a social Q&A site can be posted anonymously or under a pseudonym, whereas on a social networking site, the asker's true identity is known to the readers of the question. In addition, the number of potential answerers would be smaller on a social networking service than on a social Q&A service (Morris et al., 2010).

The findings of this study demonstrate how people appreciate and take advantage of these distinctive characteristics in the process of seeking information. Participants chose Yahoo! Answers to obtain information based on other people's firsthand experience, to seek ideas that were different from theirs, and to acquire information which had to do with value judgments and opinions. Furthermore, participants who preferred speed over other properties seemed to be more likely to use Yahoo! Answers because of the responsiveness and convenience that Yahoo! Answers offers. Several participants indicated that Yahoo! Answers is a good place to receive quick feedback easily from a large community.

The results also give a glimpse of how online search practices have evolved as various social media tools and services have been introduced. On the one hand, social search has its distinctive characteristics that enable people to obtain tailored information, access original and non-popular information, filter out information, and interact with real people, which traditional web search using search engines does not. It is evident that certain information needs would be better supported by social search systems and that people would prefer social search in particular information seeking situations. On the other hand, the findings indicate that social search complements traditional web search, rather than replacing it, as participants used both systems together within a single search episode. Participants tended to use web search to obtain general information about a topic of interest and sometimes use that information to figure out what they needed to ask about. They then turned to Yahoo! Answers to seek answers to their specific questions. It appears that people benefit from taking advantage of both social search and web search.

In social Q&A sites, where people interact with online content created by other users and interact with unknown people, individuals may encounter greater challenges in evaluating the quality of information. Since individuals have few cues on which to rely when assessing information in social Q&A sites, they may pay attention to features which provide social information reflecting the collective evaluation of other users, such as thumbs-up/thumbs-down votes and ratings provided by others. However, little is known about how these features available within social Q&A sites affect users' information evaluation.

The findings indicate that it is important to understand how people perceive and utilize features such as thumbs-up/thumbs-down votes, ratings, and user profiles that are commonly available in many online social tools and services. For example, participants in our study were skeptical about the top contributor badges and thumbs-up/thumbs-down voting system. With regard to the top contributor badges, several participants argued that being a top contributor does not necessarily mean that a person will provide a high quality answer because this person may answer questions to get points even when he or she does not know things. Relating to the thumbs-up/thumbs-down votes, participants mentioned that they were not sure about the intention behind votes.

Participants who reported that they did notice these features but considered them insignificant may be those who were skeptical of their usefulness. For those who did not notice these features at all, the features may not be salient enough. However, our findings demonstrate that these features can be valuable tools for those who notice and invest effort in interpreting them. Participants utilized these features to evaluate user credibility, assess the level of user involvement, judge answer quality, and determine the appropriate level of effort they should invest in cues presented by these features. Thus, in designing social search systems, providing some hints about the intent behind social information offered by others and presenting such features in a more salient way may promote the use of the features available in the social Q&A site.

CONCLUSION

In this paper, we present a quasi-field study conducted on Yahoo! Answers in order to investigate the value of social Q&A services as a social search platform in the process of seeking information online. Our findings provide insights into how people conduct searches using a social Q&A site, how they distinguish between social search and traditional web search, and what they perceive as the value of using a social Q&A site. Homogeneity of undergraduate students participating in this study, artificiality introduced by instructed question posting, and selection of one particular social Q&A site as a study venue may limit generalizability.

Despite these limitations, we believe that the present study contributes to the field of information science by investigating the value of a social Q&A service as a venue for social search from the information seeker's perspective instead of the information provider's perspective more commonly found in previous studies on social Q&A services. Moreover, our results identify how people use a social Q&A service such as Yahoo! Answers as a complement to web search. The findings of this study regarding what strategies people use to assure that their questions are likely to be answered by strangers and how they utilize features available within a social Q&A site provide practical implications for practitioners who are involved in designing and developing social search systems.

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