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ABSTRACT

Since their inception, social networking sites (SNSs) have experienced exponential growth. While substantial research has been dedicated to users' initial adoption of SNSs, the fall of MySpace reminds us that the long-term success of SNSs depends on users' post adoption staying power. Inspired by this, this work-in-progress investigates users' "stickiness" with a specific SNS. Based on Li et al. (2006)'s Commitment-Trust Model of Website Stickiness (CTM), this paper focuses on the relationships between SNSs and users. To refine CTM in the new context, we further borrow the Uses and Gratifications Theory from the Communication field to propose an integrated model.

Keywords

Gratifications, trust, commitment, alternative quality, investment size, communication quality, opportunistic behavior, stickiness.

INTRODUCTION

The past decade witnessed the rapid development of social networking sites (SNSs). While people are impressed with the success of Facebook and Twitter, the dramatic decline of MySpace illustrates the cutthroat competition within the market. MySpace, the social media pioneer, had more than 100 million users before 2008; this figure, however, fell sharply down to 54.4 million at the end of November 2010 (New York Times 2011). As a result, its business value plummeted from 580 million (the price at which News Corp. purchased the site) to less than 200 million (the price at which News Corp. planned to sell the site) (Pulley 2011).

The fall of MySpace emphasizes Bhattacherjee's (2001 p351-352) argument that "long-term viability of an IS and its eventual success depend on its continued use rather than first-time use." For SNSs, their user-generated-content nature dictates that the survival and eventual success of a social networking website depend heavily on continued user participation. Thus, one of the major challenges for SNS developers is how to retain their members (Jin et al. 2010). While substantial research efforts have been dedicated to the initial adoption of SNSs (see the summary in Hew's work (2011)), to our best knowledge, only a handful of research has investigated the post-adoption of SNSs. Therefore, this paper attempts to propose a research model that investigates factors influencing users' stickiness with a specific SNS. Our model has its roots in the relationship marketing perspective, which differentiates it from prior work that drew on Bhattacherjee (2001)'s Expectation-Confirmation Model of IS Continuance (ECM).. The reasons that the relationship perspective is chosen over ECM are provided in the later section.

EXPECTATION-CONFIRMATION THEORY AND SNS CONTINUANCE STUDIES

The exponential growth of SNSs has captured IS scholars' attentions. Prior SNS studies, however, primarily focused on use motivation and usage effects. Only a handful of the works investigate post-adoption of SNSs. In this section, we provide a brief review of these works.

A common theme under prior SNS continuance studies is that they draw on on Bhattacherjee (2001)'s ECM. Hu and Kettinger (2008) proposed a theoretical model where ECM worked in conjunction with social exchange theory, social capital theory, and flow theory to predict usage continuance for social networking services. Jin et al. (2009) found that people will

continue to use a SNS when they feel satisfied with their prior usage, and when they perceive that the information in the network is useful. Shi et al. (2010) found that disconfirmation of maintaining offline contacts, entertainment, and information seeking have significant impacts on user satisfaction, which subsequently determines users' continuance intention to use Facebook. ECM was also employed to compare the gender difference in SNS continuance. Shi et al. (2009) confmed that users' continuance intention to use SNS is strongly determined by satisfaction; moreover, the effect of disconfirmation of maintaining offline contacts on satisfaction is more salient for women and the effect of disconfirmation of entertainment is stronger for men. Kim (2010)'s study developed an integrated model that incorporates subjective norm into the ECM that provides an in-depth understanding of users' SNS continuance behavior.

At the core of ECM and "ECM++" (which combines ECM with other theory constructs) research is that user satisfaction with prior IS use primarily determines users' IS continuance. According to the 2010 American Customer Satisfaction Index, despite its phenomenal success, Facebook scored low in terms of user satisfaction (Gaudin 2010). The leading SNS had a satisfaction rating of 64 of 100, only one point higher than the dying MySpace. Facebook users are plagued with such issues as advertising, overwhelming search results, privacy concerns, and too many special features. However, given Facebook's solid growth in user members every year, this anectodotal story begs a series of questions: Why do people turn to and stick with a SNS even when they feel dissatisfied with the site? Why do some SNSs bloom (like Facebook) in spite of unsatisfied users, while others (like MySpace) don't? Does satisfaction really matter? Is satisfaction sufficient to predict user SNS stickness (or use continuance)? Are there any other factors or theories missing?

Marketing researchers have long recognized that satisfaction does not always predict customer loyalty. Oliver (1999) contended that the relationship between satisfaction and customer loyalty is asymmetric: loyal consumers are most typicaliy satisfied, satisfaction does not universally translate into loyalty. Jones and Sasser (1995) argued that in a market where competition is intense and customers have multiple choices, the simple linear relationship between satisfaction and customer loyalty does not necessarily hold. In internet settings, Li et al. (2006) indicated that Internet users may exhibit satisfaction towards multiple websites but stick to only one site. Considering this, they further called to take the relationship perspective over the conventional transaction-based satisfaction paradigm to invesitigate user-website interaction, which serves as the departure point for our research model.

In sum, it might be somewhat simplistic for ECM to assume that satisfaction tells the whole story of user stickiness or continuance. In the context of SNSs, ECM fails to address following two important issues. First, as noted earlier from the case of Facebook and MySpace, why do some users stick with a SNSs (like Facebook) regardless of low satisfaction? What are the mechanisms behind the scenes? Second, how can we account for the impacts of alternatives? ECM does not consider the intervention of alternatives or implicitly assumes that the quality of alternatives are poor. In an interpersonal romance, a tempting alternative may threaten an existing relationship. In a similar way, in the competitive SNS market, the gratifications derived by using one SNS can be equally served by another due to low technology barriers that makes it easy to imitate. In actuality, considering the homogeneity of websites, users may show satisfaction to multiple websites but only stick to one site due to time or effort constrains.

As such, a new theoretical model is needed to deal with the previously stated issues. Echoing Li et al.'s (2006) suggestion that the relationship perspective better fits user-website interaction, the present paper extends their relationship model to the context of SNSs. This original model is further refined by the inclusion of Uses and Gratification theory, responding to Barki and Benbasats (2007, p.212)'s concern that "very little research effort [is] going into investigating what actually makes a system useful." The next section presents the theoretical foundations of our research model.

THEORETICAL BACKGROUND

As described earlier, this paper is one of the earliest to examine users' continuance of SNS usage. Different from our counterparts, we initially approach the research question from the relationship perspective. The proposed model is premised on Li et al. (2006)'s Commitment-Trust Model of Website Stickiness (CTM). Realizing its inability to capture the idea of "what makes IT useful," we refine it by adding the auxiliary Uses and Gratification Theory from the Communication field.

Commitment-Trust Model of Website Stickiness

CTM was modified from the classic Commitment-Trust Theory that is widely used in the relationship marketing literature. Standing in stark contrast to the transaction view, which narrowly focuses on performance outcomes, relationship marketing gives attention to the ongoing process of relationship exchange (Morgan and Hunt 1994). Morgan and Hunt defined relationship marketing as "all marketing activities directed toward establishing, developing, and maintaining successful relationship exchanges (1994, p.22)." They further summarized four categories of relationship exchange for a focal firm: (1) *internal partnerships* including relationship exchange with internal business units, employees, and functional departments,

(2) *buyer partnerships* involving relationship exchange with its customers, (3) *lateral partnerships* related to relationship exchange with competitors, nonprofit organizations, government, and (4) *supplier partnerships* including relationship exchange with suppliers. Li et al. (2006) developed CTM from the relationship exchange literature and applied it to e-commerce settings, which captures the *buyer partnership* between an e-commerce website (the focal firm) and its users (the customers). Compared with e-commerce environment, we believe the relationship view particularly fits SNSs as they span three categories of relationship exchange. First, SNSs rely on the patronage of Internet users, which falls in the category of *buyer partnerships* as e-commerce websites do. Second, its user-generated content nature determines that a SNS's contents are mainly contributed by its users. Given its similarity to the role of goods or service suppliers in offline environments, the relationship exchange between a SNS and its user can also be viewed as a form of *supplier partnerships*. Third, the success of SNSs depends on the continuous delivery of user contributions. In the meantime, due to the encouragement of the real name system, certain SNSs such as Facebook and LinkedIn keep users' background information at hand. Such relationship exchange is similar in spirit to the role of employees in *internal partnerships* whose performance is closely associated with firm outputs. Having demonstrated the appropriateness of the relationship perspective in the SNS context, we describe the process of CTM by which users stick with a website in the next paragraph. Figure 1 demonstrates key constructs and their interrelationships in CTM.

CTM (Li et al. 2006) reveals that users stick with a website because they have *trust* and *commitment* to it. *Commitment* is an addictive function of *quality of alternatives* that serve the same purpose as the focal website, *investment size* such as time, effort, and money put toward accommodating use, and *satisfaction*, a positive affect that arises when the website fulfills users' needs. On the other hand, users evaluate the *communication quality* with the website, and potential *opportunistic behavior* by the website. These two factors work in conjunction with *satisfaction* result in *trust*.
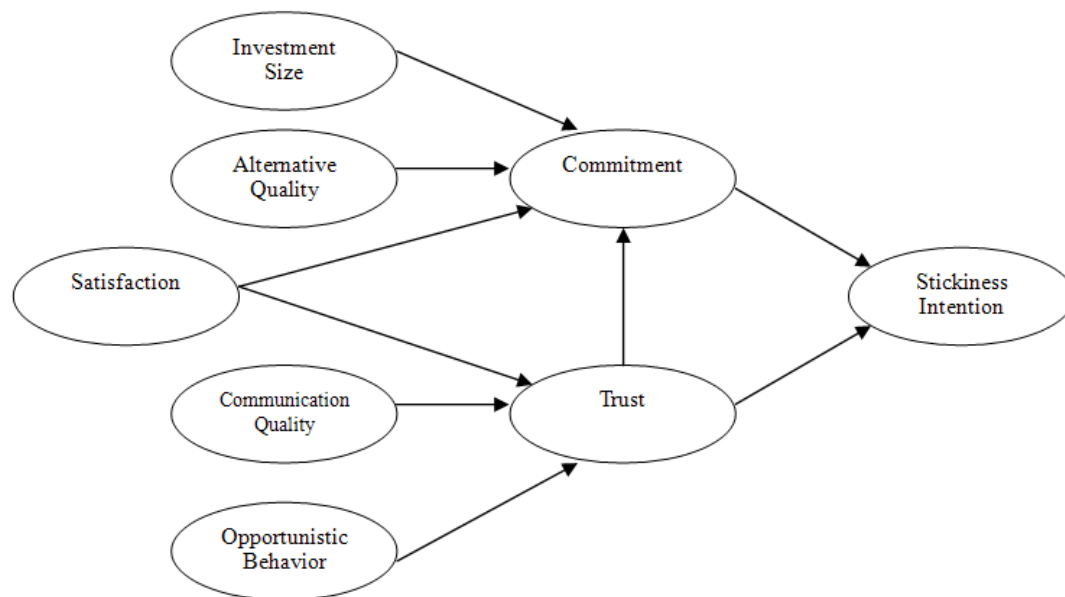

Figure 1. Commitment-Trust Model of Website Stickiness

Trust is difficult to build on the Internet. This is so because, first, risks permeate on the Internet. Gefen et al. (2008) summarized three types of risks: (1) functionalities offered by a website may require too much time, effort, and money; (2) information revealed for e-transactions might be abused by online vendors; and (3) products purchased online may not meet their expectations. CTM uses *opportunistic behavior* to capture users' beliefs about whether the website keeps promises, behaves consistent with norms and responsibilities, or takes advantage of its customers. Higher perceived opportunistic behavior enhances trust.

Second, trust only occurs in a social context; without people, trust is not relevant (Gefen and Straub 2003). The Internet, however, is low in social presence due to a reduced sense of human interaction as opposed to socially-rich media like face-to-face communication and telephone. Therefore, various mechanisms have been suggested to boost online trust, for example, the use of email links (Gefen and Straub 2003), posting website representatives' in photographs or video clips, and online-

chat boxes (Wang and Emurian 2005). CTM proposes that an optimized use of these interface design features increases the communication quality between a website and its users. Thus, though a website is still low in social presence, improved communication quality enhances user-website interaction, offsetting the uncertainties and unavailable social cues on the vendor side. CTM postulates *communication quality* as another antecedent of trust.

The original Commitment-Trust Theory does not entail satisfaction. It argues that relationship benefits play a critical role in relationship marketing because partners are highly favored and selected due to their superior performance over other competitors. A firm will commit itself to such partners in establishing and managing mutual relationships (Morgan and Hunt 1994). CTM uses *satisfaction* as the proxy of perceived relationship benefits and postulates it as the antecedent for both trust and commitment.

According to CTM, commitment appears as another mediator for user stickiness. Besides satisfaction, *alternative quality* and *investment size* are theorized as other antecedents of commitment. Support for these associations also comes from The Investment Model that deals with romantic interpersonal relationships (Rusbult et al. 1998). The theory posits that people persist in a relationship as they assume that the quality of alternative relationships is poor, and that the alternative relationships are not able to gratify their social psychological needs like intimacy, companionship, and so forth. During the course of relationship development, one person invests monetary and non-monetary resources on his/her partner. Investment size is positively associated with commitment as it would increase the costs of ending a relationship. Building upon prior human-computer interaction research findings that people also treat websites as a social entity full of personalities, Li et al. (2006) integrated The Investment Model into CTM to further refine the Commitment-Trust Theory.

A close review of CTM and its reference theories reveals a major issue. To adapt the Commitment-Trust Theory to the online context, CTM uses satisfaction as the proxy to reflect the benefits received during relationship exchange. In so doing, it asks this question: Is satisfaction indicative of website performance in general? In distinguishing satisfaction from attitude, Bhattacherjee (2001) suggested that satisfaction is an evaluation of attitudinal emotion; as a result, "…one may have a pleasant experience with a product or service, but still feel dissatisfied if it is below expectation (p.354)." Therefore, it may well be that a person feels dissatisfied with a SNS which fails to reach his/her expectation, but this does not invalidate the fact that the website in question delivers the best experience when compared with others. That person will still stick with the best of a set of mediocre offerings by showing commitment and trust.

In summary, while CTM deviates from the Commitment-Trust Theory with the inclusion of satisfaction, the present paper changes it back to adapt CTM to the SNS context. We, however, do not simply restore the relationship benefits construct instead. In their work, Benbasat and Barki (2007) critizied "TAM++" research because many researcher treated the construct of perceived usefulness as a black box, failing to address what makes IT useful. They further called for future researchers to pry open the box. In the same spirit, we refine CTM with the Uses and Gratifications Theory in the belief that with the identified gratifications specific to SNSs, our integrated research model explains user stickiness better.

Uses and Gratifications Theory

Uses and Gratification Theory (U&G) is one the well-established theories in the Communication field. Its history can be traced back to the early 1930s and 1940s when media scholars took a social-psychological approach to investigate people's motives, selection, and usage patterns among mass media such as radio, newspapers, quiz programs, daytime radio serials, and so on (Ruggiero 2000). U&G assumes that media differ in their ability to satisfy individual needs, and that audience members actively seek out mass media and media content to fulfill their needs. At the core of this theory is the active role of individuals and goal-directed media use (Leung 2009). Along the course of U&G development and application, various use gratifications have been identified, including information seeking, task management, individual learning, entertainment, relaxation, pass time. Previous studies of U&G on computer-mediated communication tools include electronic bulletin boards (James et al. 1995), short message services (Leung 2007), Internet use (Papacharissi and Rubin 2000), ICQ (Leung 2001), Facebook (Sheldon 2008), and so forth. In recent years, IS scholars also embraced this theory and extended it to individual information technology adoptions such as virtual communities (Grace-Farfaglia et al. 2006, Sangwan 2005), e-commerce (Luo 2002), e-learning (Guo et al. 2010), and so on.

The precepts of gratifications, equivalent to relationship benefits in Commitment-Trust Theory and satisfaction in CTM, reflects the superior benefits, values, and performance delivered by media that hold individuals to the use of the target. However, U&G takes a step further to show how media benefits individuals through identifying specific gratifications. For example, in studying why people use ICQ, "TAM++" research may show that perceived usefulness is predictive of ICQ usage, while research drawing on Commitment-Trust Theory may find that perceived relationship benefits is the key. In contrast, Leung (2001)'s work clearly suggests that the gratifications of escaping from reality, showing care to friends,

entertaining for fun, and meeting new friends determine ICQ usage, which is of greater importance to practitioners. Having demonstrated the virtues of U&G, we present our research model in Figure 2.
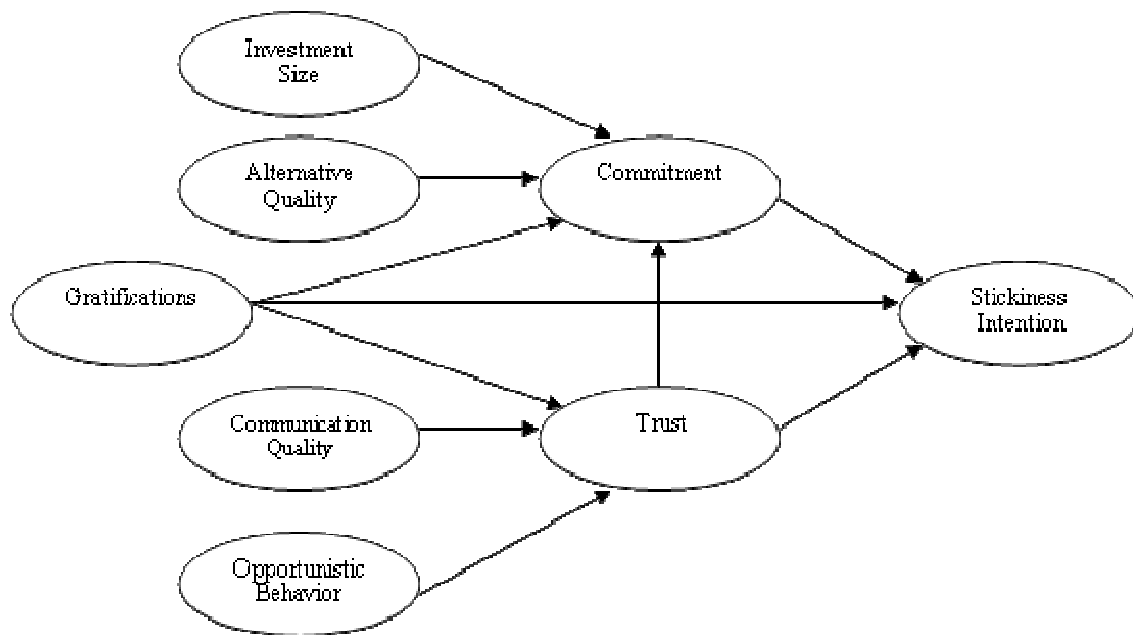

Figure 2. Integrated Model of SNS Stickiness

The next question is: What are the individual gratifications obtained from using SNSs? To obtain the unique gratification dimensions associated with SNSs, we examined prior U&G literature regarding CMC applications. To get a comprehensive list of potential gratifications, we looked not only at SNSs, but also at technologies akin to SNSs, such as online/virtual communities, blogs, instant messaging clients, and so forth. To accomplish this we searched two academic databases–*Business Source Complete* and *ScienceDirect* using appropriate keywords. "Uses and gratifications & social network," "Uses and gratifications & facebook," "Uses and gratifications & virtual community," "Uses and gratifications & online community/communities," "Uses and gratifications & message board(s)," "Uses and gratifications & blog," and "Uses and gratifications & instant message/messaging." We further examined four top CMC journals–*Telematics and Informatics*, *Journal of Computer-Mediated Communicaiton*, *CyberPsychology and Behavior*, and *Journal of Broadcasting & Electronic* with the same keywords. The cut-off date is March 1st, 2011. The retrieved results are summarized in Appendix A. Having carefully reviewed these articles, we compiled a list of 24 gratification dimensions that are suggested to be associated with SNSs. Given the large number of gratification dimensions, a pilot study is needed (1) to eliminate dimensions that are less predictive of SNS stickiness, (2) to eliminate extra measuring items within each dimension that have low loadings, and (3) to refine wording. Our paper perceives gratifications as a second-order construct indicated by identified dimensions. Thus, a parsimonious group of gratification dimensions fits our purposes better, which further justifies the necessity of a pilot study.

CONCLUSIONS AND FUTURE RESEARCH PLAN

This paper investigates users' "stickiness" with a specific SNS, and begins the process of developing a model to represent the relationships involved. Based on Li et al. (2006)'s Commitment-Trust Model of Website Stickiness (CTM), we further draw on the Uses and Gratifications Theory from the Communication field to propose an integrated model. In the next stage of this research, we will conduct the pilot study to distill specific gratification dimensions associated with SNSs usage. This will be followed by a structural equation modeling analysis using PLS to test the research model

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APPENDIX A

Study	Research Context	Identified Gratifications	Primary Dependent Variables
Ancu and Cozma (2009)	MySpace	Social utility, Information and guidance, Entertainment	Political efficiency, Campaign involvement, Campaign interest
Foster et al. (2010)	Facebook	Community membership Information value, Participation concerns, Friendship connections, participation confidence	A second-order construct, labeled as "overall motivation" was developed based on the identified gratifications as first-order factor
Park et al. (2009)	Facebook	Socializing, Entertainment, Self-status seeking, Information seeking	Civic participation, Political participation
Haridakis and Gary Hanson (2009)	YouTube	Convenient entertainment, Interpersonal connection, Convenient Information Seeking, Escape, Co-viewing, Social interaction	Viewing, Sharing
Cheung and Lee (2009)	Virtual community	Purposive value, Self-Discovery, Entertainment value, Social Enhancement, Maintaining Interpersonal Interconnectivity	Intention to continue using, Intention to recommend
Leung (2001)	ICQ	Affection, Entertainment, Relaxation, Fashion, Inclusion, Sociability, Escape	Frequency of ICQ use, Time spent on each ICQ session
Leung (2009)	User-generated content	Recognition needs, Cognitive needs, Social needs, Entertainment needs	Level of user-generated content, Psychological empowerment, Self-efficacy, Perceived competence, Desire for control

Literature Review of Uses and Gratifications Studies on CMC Applications

Study	Research Context	Identified Gratifications	Primary Dependent Variables
Raacke and Bonds-Raacke (2008)	MySpace, Facebook	Keep in touch with old friends, Keep in touch with current friends, Post/look at pictures, Make new friends, Locate old friends, Learn about events, Post social functions, Feel connected, Share Information, Academic purposes, Dating purposes	Hours per day on your account, Hours per day on others account, Number of times per day logging into your account, Days per week logging into account, Changing appearance of account, Updating account, Number of friends linked to account
Grace-Farfaglia et al. (2006)	Online community	Social companionship, Economic gain, Self-improvement, Entertainment, Escape, Fame & Aesthetics	Gratifications appear as dependent variables
Yang (2000)	Homosexual online community	Social interaction and information, Entertainment and relaxation, Personal revelation, Reference, Escapism and privacy, Pass time, Novelty-seeking	Respondents' demographics, Internet usage frequency and time
Chung and Kim (2008)	Blogging among cancer patients	Prevention and Care, Problem-Solving, Emotion Management, Information-Sharing	Gratifications appear as dependent variables
Cheung et al. (2011)	Facebook	Purposive value, Self-Discovery, Entertainment value, Social Enhancement, Maintaining Interpersonal Interconnectivity	We-Intention
Dholakia (2004)	Virtual community	Purposive value, Self-Discovery, Entertainment value, Social Enhancement, Maintaining Interpersonal Interconnectivity	Participation behavior
Kim et al. (2011)	Social networking sites	Seeking friends, Seeking convenience, Seeking social support, Seeking information, Seeking entertainment	Amount of use, Number of friends, Attitude toward the SNS

Literature Review of Uses and Gratifications Studies on CMC Applications (Continued)

Study	Research Context	Identified Gratifications	Primary Dependent Variables
Hollenbaugh (2010)	Blog	Helping/Informing, Social Connection, Pass Time, Exhibitionism, Archiving/Organizing, Professionalism, Get Feedback	Self-disclosure
Sheldon (2008)	Facebook	Relationship Maintenance, Passing Time, Virtual Community, Entertainment, Coolness, Companionship	Unwillingness to communicate
Trammell et al. (2006)	Blog	Self-expression, Entertainment, Social interaction, Passing time, Information, Professional advancement	Male vs. Female
Papacharissi (2002)	Personal Home Pages	Passing time, Entertainment, Information, Self-expression, Professional advancement, Communication with friends	Creativity, Personal information, Expressiveness
Courtois et al. (2009)	User-generated content	Identity signaling, Surveillance, Social Relations, Escapism, Entertainment	Media seeding behavior, Narrative seeding behavior, Metadata seeding behavior
Muhtaseb and Frey (2008)	Internet	Interpersonal utility, Pass time, Information seeking, Convenience, Entertainment	Issues related to Arab Americans, Issues related to all Americans
Bumgarner (2007)	Facebook	Social utility, Directory, Voyeurism, Herd instincts, Collection and connection, Personal expression, Initiating relationships	Friend functions, Personal information, Practical information, Regulatory function, Groups, Events, Misc. features

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