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Aligning principal and agent's incentives: A principal–agent perspective of social networking sites

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ABSTRACT

The viability of networked communities depends on the creation and disclosure of user-generated content and the frequency of user visitation (Facebook 10-K Annual Report, 2012). However, little is known about how to align the interests of user and social networking sites. In this study, we draw upon the principal-agent perspective to extend Pavlou et al.'s uncertainty mitigation model of online exchange relationships (2007) and propose an empirically tested model for aligning the incentives of the principal (user) and the agent (service provider). As suggested by Pavlou et al., we incorporated a multi-dimensional measure of trust: trust of provider and trust of members. The proposed model is empirically tested with survey data from 305 adults aged 20-55. The results support our model, delineating how real individuals with bounded rationality actually make decision about information disclosure under uncertainty in the social networking site context. There is show little to no relationship between online privacy concerns and information disclosure on online social network sites. Perceived benefits provide the linkage between the incentives of principal (user) and agent (provider) while usage intensity demonstrated the most significant impact on information disclosure. We argue that the phenomenon may be explained through Communication Privacy Management Theory. The present study enhances our understanding of agency theory and human judgment theory in the context of social media. Practical implications for understanding and facilitating online social exchange relationships are also discussed.

1. Introduction

Although the ubiquity of social networking site (SNSs) such as Facebook is impressive, little is known about how to sustain the SNS business. SNSs provide virtual platforms for self-expression, connectivity and impression management among young people. The sustainability of networked communities depends on the creation and disclosure of user-generated content (Erickson & Kellogg, 2000; Mynatt et al., 1998) and the frequency of user visitation (Facebook 10-K Annual Report, 2012). The data-rich environments such as social networking sites such as Facebook, shared photos, status updates, and links keep users' interest and stimulate page views. In addition, demographic data disclosed by users allow Facebook to enable marketers to more effectively segment and reach their target customers (Hoy & Milne, 2010), which, in turn, allow Facebook to "monetize" users' page views (Facebook 10-K Annual Report, 2012). Increased usage of Facebook would increase page views. The growth in user engagement, as measured by frequency of user visitation, and the number of active users have allowed Facebook to double its quarterly revenue from $655 million in December 2010 to $1,355 million in December 2012 (Facebook 10-K Annual Report, 2012).

Despite the popularity of social networking sites, the uncertainty of the online environment makes some users reluctant to engage in online disclosure. The literature has viewed uncertainty as a background mediator with little conceptualization and measurement (Pavlou, Liang, et al., 2007). Furthermore, little is known about how to align the incentives of the principal (user) and the agent (service provider) so as to make social networking sites' business more sustainable.

To better understand how to align user and provider interests and the nature of uncertainty and what mitigates its potentially detrimental role in member disclosure in social networking sites, we expand the principal–agent perspective (Akerlof 1970; Rothschild and Stiglitz, 1976; Spence, 1973) which extends the original agency theory to markets of imperfect information by linking the incentives of the principal (user) and the agent (service provider).

Agency theory addresses situations in which one party (i.e., the principal) seeks to establish an exchange relationship with another party (i.e., the agent) to perform some organizational tasks on the principal's behalf. Principals and agents pursue cooperative relationships, although they have different goals and attitudes toward risk. Agency theory outlines factors that enable principal and agent

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to align incentives and establish efficient exchange relationships (Eisenhardt, 1989).

Adverse selection is an aspect of the agency problem that refers to information asymmetry between principal and agent (Akerlof, 1970). Problems that occur before establishing the contractual arrangement leave much of the exchange relationship unexplained (Granovetter, 1985) and opened to uncertainty (Williamson, 1985). In establishing agency relationships, one must weigh the costs associated with acquiring pre-contractual information against the losses associated with foregoing screening.

Agency theory is most relevant in situations in which contracting problems are difficult. These include situations in which there is (a) substantial goal conflict between principals and agents, such that agent opportunism is likely (Eisenhardt, 1989).

Pavlou et al. (2007) argue that, to mitigate uncertainty in online B2C e-commerce exchange relationships, trust, website informativeness, product diagnosticity, and social presence all significantly facilitate online exchange relationships by overcoming the agency problems of hidden information and hidden action through the logic of signals and incentives. They recommend (1) studying how different trust dimensions (i.e., competence, integrity, benevolence) (Gefen, Karahanna, et al. 2003) may influence sources of perceived uncertainty; (2) determine the theory's viability and usefulness to online exchange relationships and other buyer–seller contexts since the principal–agent perspective is generally a contentious theory in the literature (Eisenhardt 1989; Perrow et al., 1986); (3) identifying and integrating additional factors from other disciplines to inform and further extend the principal–agent perspective.

In this paper, we integrate Communication Privacy Management theory from communication to extend the principal–agent perspective (from economics) to the social networking context. In addition, we incorporate two types of trust–trust of provider and trust of members in our model, where trust of provider encompasses competence, integrity, and benevolence dimensions. In addition, we attempted to join the incentives of the principal (user) and the agent (provider). Only when their interests are aligned can (1) users benefit from managing their social relations and enjoying the entertainment value and (2) the social networking sites grow their revenue. Our proposed framework demonstrate user behavior and business model can be integrated for social media research (Liang & Turban, 2011).

2. Research methodology

2.1. Measurement development

Measurement items were adapted from the literature wherever possible. New items were developed based on the definition provided by the literature. A pretest of the questionnaire was performed using three experts in the IS area to assess its logical consistencies, ease of understanding, sequence of items, and contextual relevance.

The comments collected from these experts led to several minor modifications of the wording. Furthermore, an online pilot study was conducted involving three Ph.D. students and 30 master students who have been members of Facebook. Comments and suggestions on the item contents were solicited.

The dependent variable in this study is information self-disclosure. Information self-disclosure was assessed with items adapted from Krasnova & Veltri 2010. Disclosure behavior is the dependent variable in this study, and is measured by the volume of identification and contact information a user posts on his or her Facebook profile. These items measured whether the respondent has a comprehensive profile, finds time to update the profile, and whether it would be easy to understand the person from the profile. Respondents provided strongly disagree/strongly agree responses on a 7-point Likert scale.

Privacy attitudes represent an independent measure in this study. Privacy attitudes are measured by a summed scale that asks respondents to "indicate [their] level of concern about the following potential privacy risks that arise when [they] share [their] personal information on Facebook." The response categories were very concerned, somewhat concerned, and not concerned. The potential risk items identity theft, information leakage, hackers, blackmail, and cyber stalking, are rooted in a general review of literature on privacy threats (Grimmelmann, 2009; Hinduja & Patchin, 2008; Palfrey, Boyd, et al., 2010) and recommendations introduced in the European Network and Information Security Agency report Security Issues and Recommendations for Online Social Networks (Hogben, 2007). The responses were summed to create a measure of respondent attitudes about privacy risks resulting from sharing information on Facebook.

Trust of provider was assessed with items adapted to reflect an individual's beliefs in other members' non-opportunistic behavior, promise keeping, behavior consistency, and truthfulness. We measured three dimensions of trusting beliefs: benevolence, integrity and competence as suggested by McKnight, Choudhury, et al. (2002).

Following Chiu et al. (2006) and Krasnova and Veltri (2010), our operationalization of *Trust of SNS Members* reflects individual beliefs in other users' non-opportunistic behavior, benevolence, and trustworthiness.

Our items for self-disclosure reflect the amount of information a user provides in the process of participation on SNS.

Usage was operationalized using Facebook Intensity (Ellison, Steinfield, et al., 2007).

2.2. Survey administration

The research model was tested with data from members of Facebook. Participants were recruited widely from the National Cheng Kung University community through email solicitations. We restricted the sample to students, employees, and alumni that used Facebook, inviting them to follow a link to complete a survey about privacy issues on Facebook. The survey contained 30 questions about demographics, privacy attitudes, trust of Facebook, and Facebook sharing behaviors. Response rate from e-mail invitation was approximately 10%. Considering that the likely response rate for "hand-delivered" questionnaires has been found to range between 30% and 50% (Saunders et al., 2011), hard copies of the survey were also hand-delivered to additional respondents to increase the overall response rate. Data collection lasted for approximately four weeks during November and December of 2012. Thirty randomly selected respondents were offered an incentive in the form of cash amounting to US$20. The first page of the questionnaire explained the purpose of this study and ensured the confidentiality. By the time this survey was concluded, 330 questionnaires were collected. The exclusion of 25 invalid questionnaires resulted in a total of 305 complete and valid ones for data analysis.

Table 1
Comparison of demographics of sample and population.

Age group	As % of population	As % of sample
18–24	30	27
25–34	39	43
35 and above	31	30
Total	100	100
Male	51	46
Female	49	54