

Social Computing: An Examination of Self, Social, and Use Factors

Sandra A. Vannoy, Department of Computer Information Systems, Walker College of Business, Appalachian State University, Boone, USA

B. Dawn Medlin, Department of Computer Information Systems, Walker College of Business, Appalachian State University, Boone, USA

ABSTRACT

This article explores the influence of social, self, and use factors on the intention to perform social computing actions in online social sites. A survey was conducted using peer-to-peer file sharing as representative of a social computing action. Collected data was analyzed using the structural equation modeling method with partial least squares. These findings show that social computing consensus and social computing cooperation are important social factors that have significant influence on the formation of social norms, which in turn increases the intention of members to perform social computing actions. Interestingly, the widely tested use factors perceived usefulness and perceived ease of use have no significant effect upon a user's intention to perform social computing actions. Furthermore, while social norms have significant influence upon a user's intention to perform social computing actions, self-identity has no significant impact. These findings lead to academic and practical implications on the efficacy of social, self, and use factors in furthering understanding of social computing.

KEYWORDS

Partial Least Squares, Peer-to-Peer, Perceived Ease of Use, Perceived Usefulness, Social Computing Consensus, Social Computing, Social Computing Cooperation, Structural Equation Modeling

INTRODUCTION

Social computing is a nascent concept that has evolved due to social interactions that are increasingly being enacted within the Web 2.0 environment through such social media applications as social networking sites, blogging sites, wikis, and peer-to-peer file sharing sites. While social computing is a relatively new concept, it has been identified in the academic literature as: "...intra-group social and business actions practiced through group consensus, group cooperation, and group authority, where such actions are made possible through the mediation of information technologies, and where group interaction causes members to conform and influences others to join the group..." (Vannoy & Palvia, 2010, p. 149). Social computing has penetrated our daily lives in a short span of time. For instance, Facebook has reached more than 800 million active users since its inception in 2004, and these users interact with more than 900 million objects (e.g. pages, groups, events, and community pages) (Facebook, 2011). The Napster peer-to-peer music file sharing network grew from 30 users to 25 million users in its first 12 months of operation (Strahilevitz, 2002). Each day more than 10,000

DOI: 10.4018/IJVCNS.2017100103

new pages are created by participants in Wikipedia.com, while existing users patrol user contributed content. Social factors that can help to fulfill a person's desire to connect with others for the purpose of performing certain actions may help to explain the social computing concept. To better understand this phenomenon, we believe it has become important to examine the relative importance of both social and use factors in the performance of social computing actions.

One perspective on social computing in the literature is the Social Influence Model of Technology Adoption (SIM) (Vannoy & Palvia, 2010) that incorporates several novel constructs designed specifically in the context of social computing. The SIM suggests that social computing over time becomes embedded in regular routines, and active social computing users not only adopt but embrace the technologies that enable their actions. A social computing user's behavior become embedded in the social community and shaped by the technology (Baron, Patterson & Harris, 2006). Social computing consensus is the agreement among members in a social computing community to carry out an action. Once a strong group identity is formed, group membership encourages individual members to perform the social computing action for the betterment and longevity of the group's purpose. Social computing cooperation refers to the idea that members participate in social computing in a way that is in the best interests of the social community. The unique social aspects of social computing prompt us to incorporate a contemporary perspective in investigating this evolving phenomenon. The more cooperative members are with one another, the more social computing actions will be performed, thus resulting in better outcomes for the online society. *Social norms*, or those rules that govern behavior (Geertz, 1973), form through social interaction, and provide the motivations for actions in a society (Coleman, 1990). Schelling (1978) suggests that because social norms are unplanned social conventions that evolve over time, it is important to examine those factors that influence their formation. Social norms have been identified as particularly powerful in the social computing context, as given its nascence, there are currently no organized governance structures (Parameswaran & Whinston, 2007). In fact, Strahilevitz (2003) has suggested that robust, cooperation-encouraging social norms emerge in online social sites where anonymity is widespread, provided that the environment in which the anonymous interaction is properly structured. Social computing consensus and social computing cooperation have been utilized in the current study, as we surmise that it is largely through the consensus and cooperation of social computing actors that the social norms that facilitate action are formed.

Self-identity has been shown to play a significant role in influencing behavioral intentions and behaviors (Sparks & Shepherd, 1992), but as yet remains unexplored in the context of social computing. Hogg and Terry (2000) found that self-identity significantly affects behaviors, while Lee et al. (2006) by incorporating self-identity into TAM found that self-identity has a significant direct effect on technology acceptance in voluntary and experienced situations. Consequently, we have included self-identity in the context of our study, as a better understanding is needed with regard to the role of self-identity in participation in social computing.

The success of social computing is highly dependent upon network externality or network effect (Katz & Shapiro, 1986). Social computing as a paradigm suggests that as more people adopt the technology, the value of that technology increases, and consequently, membership will increase. Perceived ease of use and perceived usefulness have often been proven important antecedents to information technology adoption (Davis, 1989) though the magnitude of these two factors where technology is intertwined with the social context is not currently understood. To properly assess the relevance of perceived usefulness and perceived ease of use in the social computing context, this study incorporates these two widely tested constructs.

To date, little is known about what influences a person to engage in social computing. Understanding the influence of both social factors and use factors in a person's intention to engage in social computing has important research as well as practical implications. Factors that impact practical use of technology, such as ease of use and usefulness, have been widely tested in the context of traditional computing environments. However, to date, there is little understanding of these factors when technology use is embedded in social behavior. Furthermore, the role of social factors such as

15 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/article/social-computing/212728

Related Content

Supporting Social Interaction in Campus-Scale Environments by Embracing Mobile Social Networking

Zhiwen Yu, Yunji Liang, Yue Yang and Bin Guo (2013). *Social Media Mining and Social Network Analysis: Emerging Research* (pp. 182-201).

www.irma-international.org/chapter/supporting-social-interaction-campus-scale/73252

Understanding Decisions to Share Minor Public Safety Incidents on Twitter Through a Collective Action Theory Lens

Mashael Yousef Almoqbel, Marwa Khalid Alraihan and Donghee Yvette Wohn (2021). *International Journal of Social Media and Online Communities* (pp. 76-92).

www.irma-international.org/article/understanding-decisions-to-share-minor-public-safety-incidents-on-twitter-through-a-collective-action-theory-lens/280555

The Politics of Watching: Visuality and the New Media Economy

Yasmin Ibrahim (2012). *International Journal of E-Politics* (pp. 1-11).

www.irma-international.org/article/politics-watching-visuality-new-media/63031

Deception in Online Terrorist Propaganda: A Study of ISIS and Boko Haram

Innocent E. Chiluwa (2019). *Handbook of Research on Deception, Fake News, and Misinformation Online* (pp. 520-537).

www.irma-international.org/chapter/deception-in-online-terrorist-propaganda/230776

Co-Creating Brand Value through Social Commerce

Yichuan Wang and Nick Hajli (2015). *Handbook of Research on Integrating Social Media into Strategic Marketing* (pp. 17-34).

www.irma-international.org/chapter/co-creating-brand-value-through-social-commerce/130559