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Examining SNS Adoption through Motivational Lens

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ABSTRACT

The impact of social networking has become a focal point for Information Systems researchers; however, its potential benefits and impact have not been fully explored. Membership in social networks has been increasing steadily within the last decade but at the same time some members have abandon their accounts or use them minimally. To understand the differences in usage among members the adoption process needs to be evaluated. Existing adoption models evaluated technology adoption from a utilitarian perspective and are deemed inadequate to evaluate social networking systems (SNS). This is because SNS are classified as social information systems whose adoption, based on the literature, should be evaluated from a motivational perspective. The purpose of this research, therefore, is to propose a social information system research model that will explain the adoption process of social networking and similar technologies.

Keywords

Social Information System, Intrinsic Motivation, Extrinsic Motivation, Amotivation, Social Networking Services

INTRODUCTION

The analyses of human social networks have a long history in both the sociological and anthropological literature (Hill and Dunbar, 2002). Few studies have attempted to investigate complete social networks in humans primarily due to the difficulty in estimating and defining an individual's "network" from the range of interactions that exist within everyday life (Hill and Dunbar, 2002). This problem has been further complicated by the advent of Social Networking Systems (SNS) which have been integrated almost seamlessly into the activities of many. According to Wu (2009) SNS involves computer-mediated communication which allows participants to remain connected regardless of their geographic or temporal boundaries. SNS research is beginning to accumulate; however, most communication and social psychology studies are concerned with how SNS settings can be used to build and maintain social capital (Wu, 2009). The position taken in this paper departs from such a focus and seeks rather to provide a better understanding of the adoption issues surrounding social information systems as reflected in SNS. This is important particularly because of the inconsistency in observed adoption patterns; Hu and Kettinger (2008) drew attention to the fact that while many people are spending an increasing amount of their time on SNS others use them minimally or discontinue use after a brief interval. In addition very few studies have sought to explicate this conundrum. Further, although research exists on Information Systems (IS) continuance and post adoption, their supporting models are inadequate to explain the SNS phenomena as its usage tends to be more voluntary, more socially bound, and more evolutionary in use attributes and levels of involvement (Hu and Kettinger, 2008).

The dominant adoption model in information systems is the Technology Acceptance Model (TAM) (Lee, Kozar and Larsen, 2003). However, despite the successful reputation of the TAM, researchers have asserted that its task-related nature underplays the effect of possible intrinsic factors (Wu, 2009). Schwarz, Gallego, Sorial, and Aborg (2009) corroborated this view by their contention that adoption research has traditionally relied upon a relatively narrow set of users' perceptions of the technology to explain decisions and noted that adoption research has been examined from a "proxy view;" that is, making a determination of and explaining adoption intention on the basis of individuals' perceptions of the technology. Similarly, it has been noted by Theotokis and Doukidis (2009) that technology adoption models have rarely focused on a combination of the aspects of motivation (intrinsic, extrinsic and amotivation) in explaining behavior and that SNS are social information systems, which unlike utilitarian or hedonic information systems should be examined through motivation lenses. In this paper therefore we examine SNS adoption from a motivational perspective.

According to Al-Natour and Benbasat (2006) traditional models of IS adoption have dominated the view of information technology (IT) artifacts as productivity tools where the focus is on predicting users' adoption intentions and behaviors using a set of utilitarian-based beliefs (e.g., perceived usefulness) that address the performance benefits from using these artifacts. Recently there has been a shift in the paradigm from this narrow focus to a broader view that incorporates a communication mediator or intelligent decision-making partner perspective (Al-Natour and Benbasat, 2006) and consequently, to significant changes to the criteria used to evaluate the adoption of these IT artifacts.

Van der Heijden (2004) categorized information systems as being either hedonic or utilitarian. Hedonic systems aim to provide self-fulfilling value to the user; utilitarian systems provide instrumental value. Building on this classification, Theotokis and Doukidis (2009) proposed a third category to represent social information systems. They defined social information systems as IS that both enable users to perform socially-related activities and provide social value to them and claimed that these characteristics distinguish them from other types of IS. In this regard, motivations related to the individuals' social life and activities are usually influential factors of adoption and use. This is in contrast to utilitarian or hedonic motivations that have been found to affect user adoption of other types of IS (Venkatesh, 2000; Venkatesh, Morris, Davis, and Davis, 2003 and Theotokis and Doukidis 2009). Theotokis and Doukidis further intimate that users of social information systems, unlike those of other types of IS, expect mainly to gratify social-emotional rather than informational or utilitarian needs and they are connected in a person-to-person manner which is more direct and interpersonal.

SIGNIFICANCE

Explaining user acceptance and continued use of IS has been a prominent area of IS research for the past three decades (Venkatesh, Davis, and Morris 2007). The rapid diffusion of SNS has attracted the interest of scholars from a variety of disciplines to the study user adoption in this domain; however IS and technology acceptance literature regarding SNS diffusion is still limited, (Theotokis and Doukidis, 2009). In this study we attempt to rectify this situation and to heed the call for evaluating SNS adoption models from a motivation perspective. Specifically, we undertake an examination of the combined effects of the three forms of motivation and their role in explaining usage and incorporate the element of voluntary technology adoption.

MOTIVATION

In order to explain behavior, it is important to understand the motives behind the behavior. Motives are reasons people initiate and perform voluntary behavior. They can affect a person's perception, cognition, emotion and actions (Reiss, 2004). Amabile et al. (1994) argued that the investigation of individual differences in motivational orientation is potentially important for both personality and social psychology. One of the important points illustrated by Amabile et al. (1994) is that individuals' temporary motivational orientation toward activities can differ depending on the social contexts in which they have engaged in those activities. McCullagh (2005) defines motivation as the intensity and direction of effort. Intensity is the quality of effort while direction speaks to what an individual is drawn to. Similarly, Ryan and Deci (2000b) argued that most studies of motivation view the phenomenon from a unary perspective (that is, one that varies from little to great motivation to act.) and cautioned that viewing motivation as a unary phenomenon ignores different levels of motivation as well as differences in the orientation of motivation.

Ryan and Deci (2000b) presented a taxonomy of human motivation in their formulation of the self determination theory. They asserted that there are three different types of motivation (intrinsic, extrinsic and amotivation) and they are organized in the taxonomy to reflect their differing degrees of autonomy or self-determination. The Self-determination theory makes a relatively clear statement concerning the relationship between perception of competence and motivation. Situations that provide failure feedback are more likely to generate feeling of incompetence and undermine one's intrinsic motivation for the given activity (Koka and Hein, 2002).

According to Carton (1996), social-cognitive theorists distinguish between intrinsic and extrinsic motivation; intrinsic motivation is associated with relatively high valued constructs such as competence, personal causation and self-determination, while the extrinsic motivation describes the performance of an activity to obtain an external consequence. He further claimed that of the two forms of motivation, intrinsic motivation is considered to be superior. Intrinsic motivation is considered a pervasive and important activity because from birth onwards humans in their healthiest state are active, inquisitive, curious displaying a readiness to explore without the need of extraneous incentives to do so (Ryan and Deci, 2000b). According to them, this natural motivational tendency is critical because it is through acting on ones inherent interest that one grows in knowledge and skills; hence, intrinsic motivation residing within a person or derived from an activity itself will positively affect behavior, performance and wellbeing (Ryan and Deci, 2000b). Amabile et al. (1994) advised that Lepper and Greene's (1978) initial assessment proposed that as individuals' extrinsic motivation increases their intrinsic motivation will decrease. In fact intrinsic motivation has been defined by researchers as the absence of extrinsic motivation (Amabile et al., 1994). However, there are a few theorists (e.g., Deci & Ryan, 1985 and Lepper, Corpus and Iyenger, 2005) who have suggested that, under given circumstances, intrinsic and extrinsic motivation need not work in opposition.

AMOTIVATION

Beyond intrinsic and extrinsic motivation is the concept of amotivation (Ryan and Deci, 2000b). According to Ryan and Deci (2000a) whenever a person attempts to foster certain behaviors in others it may result in amotivation or unwillingness, to passive compliance, to active personal commitment. Deci and Ryan (1985) stated that in order to fully understand human behavior amotivation must be considered; amotivation causes an individual's behavior to lack intentionality and a sense of causation. This results when the individual does not value an activity, does not feel competent to perform it, or does not believe it will yield the desired outcome (Ryan and Deci, 2000b). Consequently Ryan and Deci (2000c) argued that environments that also block satisfaction of the needs for competence and relatedness tend to promote amotivation, and that the controlled and amotivational orientations, relative to the autonomous orientation, may have negative effects on performance and well-being.

Because amotivated people cannot see the link between their behavior and its outcomes, they constantly doubt the value and worth of the action. Thus, it is unlikely that they will continue to act, or take up any new environmental behavior. Vallerand and Bissonnette (1992) explained that amotivated persons are non-motivated, seeing neither intrinsic nor extrinsic rewards and as a result participation in the activity eventually ceases. Both (Thibert and Karsenti, 1998) and (Vallerand and Bissonnette, 1992) compared amotivation to a concept known as learned helplessness since the individuals experience similar feelings of incompetence and expectancies of uncontrollability.

In their study, Vallerand and Bissonnette (1992) extended past research on intrinsic and, extrinsic motivation and amotivation as predictors of future behavior using a prospective design and noted that amotivation was found to be an important predictor of behavior but was negatively correlated with persistence. This negative association was also identified by Deci and Ryan (2000c). The authors concluded that the distinction between amotivation and motivation appeared in numerous motivational theories under different names; however, there is evidence that amotivation is associated with a wide range of highly negative outcomes (Deci and Ryan, 2000c). The negative outcome associated with amotivated SNS usage was illustrated by Boyd (2007) in a study of users of MySpace. .

INTRINSIC MOTIVATION

Since 1971 more than 150 experiments have been conducted to investigate how rewards affect people's intrinsic motivation (Cameron et al. 2005). According to Deci et al. (1999) the concept of intrinsic motivation was first spotlighted by Deci (1971) who examined the potential effects of external rewards on intrinsically motivated task and illustrated that those tangible rewards such as money could undermine college students' intrinsic motivation for an interesting task. In their meta-analysis Deci, et al. (1999) discussed the controversy that Deci's (1971) finding initially sparked.. Since then, however, many behavioral and cognitive theorists have supported the call to investigate the phenomena and assess the possible undermining effects (Deci et al., 1999). Deci et al. (1999) classified the explanations in three categories: motivational theories, attribution theories and behavioral or cognitive behavioral theories. As a result of the hypothesis and conclusions from Deci (1971), Deci and Ryan (1980, 1985) formally proposed the Cognitive Evaluation Theory (CET).

Ryan and Deci (2000b) explained that CET helped to identify the factors in social contexts that produce variability in intrinsic motivation. According to Deci, et al. (1999) CET postulates that underlining intrinsic motivation are the psychological needs for autonomy and competence. Therefore assessing the effect of reward depends on how it affects perceived self determination and perceived competence. CET characterizes social contexts as autonomy supportive (informational), controlling, or amotivating (Deci et al., 2000). CET denotes that the needs for competence and autonomy are undermined when people are offered rewards for doing intrinsically motivated behavior (Wiechman, 2005). Individuals' perceived locus of causality (PLOC) greatly impacts their degree of felt autonomy and competence. CET asserts that rewards affect intrinsic motivation by bringing about changes in people's perceived competence and PLOC; hence when rewarded, individuals do not feel fully in control of their actions but rather sense a shift of their PLOC from internal to external, (Wiechman, 2005). Weinberg and Gould (2003) illustrated the controlling aspect of rewards by presenting an example using the basket ball player Magic Johnson, who indicated that recruitment offers of rewards by college basket teams turned him off because he felt as if he was being bought.

According to Cameron et al., (2005) although CET typically focuses on negative effects of rewards there are events where CET points to positive impact of rewards. CET also posits that interpersonal events and structures (e.g., rewards, communications, feedback) that result in feelings of competence during an action can enhance intrinsic motivation for that action because they allow satisfaction of the basic psychological need for competence (Deci and Ryan , 2000a). In addition, optimal challenges, effectance promoting feedback, and freedom from demeaning evaluations are all predicted to facilitate intrinsic motivation.

With all the conflict surrounding the effect of rewards on intrinsic motivation, Deci et al. (1999) provide a structure for understanding the phenomena. According to the authors, in making predictions about the effect of tangible rewards on intrinsic interest, rewards are assessed against a criterion of whether it is expected while a person is doing a task and if so on what behaviors the rewards are made dependent. For rewards that are expected while a person is doing a particular task the following topology of reward contingencies were provided by Ryan, Mims and Koestner (1983):

- *Task- noncontingent reward:* These rewards are offered for reasons other than engaging in the task activity for example simply participating in a study. This class of reward is not considered to have an effect on intrinsic motivation since these rewards do not require, doing the task, completing the task or doing well at the task.
- *Performance-contingent reward:* these rewards are given specifically for performing an activity well, matching some standard of excellence or surpassing some criterion. This type of reward results in strong control so there is a strong tendency for these rewards to undermine intrinsic motivation
- *Completion- contingent reward:* This is a form of task contingent reward that is dependent on the completion of the task. Persons have to complete the activity so there is a level of control however the receipt of the reward requires some level of competence which is thought to offset the controlling effect.
- *Engagement- Contingent Reward:* Task contingent activity that requires engagement in the activity but do not require completing it. With this type of reward people do not work on a task to get the reward so the effect is likely to be controlling. It should be noted that this type of task carries little or no affirmation of competence and therefore engagement contingent rewards are predicted to undermine intrinsic interest.

EXTRINSIC MOTIVATION

Bateman and Crant (2003) argued that extrinsically motivated behavior was just as important as behavior driven by intrinsic interest. Unlike theorists such as Carton (1996), Bandura and Schunk (1981) and Reiss (2004) who all represented extrinsic motivation from a unary perspective, Ryan and Deci (2000b) outlined in the Self Determination Theory that extrinsic motivation existed across a spectrum (see figure 1). The following were identified along the continuum for extrinsic motivation:

- *External regulation-* behavior is performed to satisfy an external demand or obtain an externally imposed reward contingency. Individuals typically experience externally regulated behavior as controlled or alienated, and their actions have an external perceived locus of causality
- *Introjection:* describes a type of internal regulation that is still quite controlling because people perform such actions with the feeling of pressure in order to avoid guilt or anxiety or to attain ego-enhancements or pride. For example a person performs an act in order to enhance or maintain self-esteem and feeling of worth.
- *Identification* is considered a more autonomous, or self-determined, form of extrinsic motivation. In this instance the person has identified with the personal importance of a behavior and has thus accepted its regulation as his or her own. For example a boy who memorizes spelling lists because he sees it as relevant to writing, which he values as a life goal, has identified with the value of this learning activity
- *Integrated regulation* is considered the most autonomous form of extrinsic motivation. It occurs when identified regulations have been fully assimilated to the self. This occurs through self-examination and bringing new regulations in line with one's other values and needs. The more a person internalizes the reasons for an action and assimilates them to the self, the more one's extrinsically motivated actions become self-determined. Integrated forms of motivation share many qualities with intrinsic motivation, being both autonomous and unconflicted. However, they are still extrinsic because behavior motivated by integrated regulation is done for its presumed instrumental value with respect to some outcome that is separate from the behavior, even though it is valued by the self.

Extrinsically motivated behavior are actions that results in the attainment of externally registered reward which includes pay, material possession, prestige and positive evaluation from others (Bateman and Crant, 2003, Amabile, 1985). The current research will focus on the positive evaluation from others which falls under the extrinsic motivation category of introjection. Peers are sources of much social learning (Bandura, 1989). One of the most consistent determinants of an individual's behavior is the influence of other people (Wen, Tang and Chang, 2009) and according to Lopez and Manson (1997) social influences play an important role in the prediction of IT usage. Pederson (2001) noted that subjective norms are determined by external and interpersonal influence and capture the individual's perceptions of the influence of significant others such as

family, peers, authority figures, and media. Khalifa and Shennd (2006) highlighted that subjective norms have been identified as a major predictor for perceived usefulness and suggested that the direct effect of subjective norms on perceived usefulness is realized through the internalization process, whereby people incorporate the important referents' opinions into their own belief structure, especially when usage is voluntary.

CONTINUANCE INTENTION

One of the critical success factors for SNS highlighted by researchers is retaining existing customer based and participation (Wu, 2009; Nov and Ye, 2008; Schwarz et al., 2009). Hu and Kettinger (2008) argued that although the number of persons accessing and becoming members of SNS had been increasing, some participants merely established a temporary presence. Theotokis and Doukidis (2009) stated that the innovation diffusion research could be broken down into two categories: adoption-diffusion (AD) paradigm and use-diffusion (UD) processes. They explained that AD is the process by which an innovation reaches a critical mass of adopters, the diffusion is accelerated, and innovation is considered successful; UD processes examined the evolving nature of use (rate and variety), sustained continuous use (or disadoption), and technology outcome considerations. They further explained that in the case of social information systems the use-diffusion approach could better model the varying levels of user adoption and usage of technology. In 2008, two-thirds of the world's Internet population visited a social network or blogging site and the sector now accounts for almost 10 per cent of all internet time (Nielsen, 2009). These statistics suggest that a measure of UD process in social networking is more meaningful than AD assessments.

RESEARCH MODEL

The research model (figure 1) depicts the relationships between the constructs previously discussed in the review of the literature. The dependent construct in the model is *continuance intention* and it is predicted by the core constructs *intrinsic* and *extrinsic motivation* and *amotivation*. It is proposed that *intention to adopt* has a positive relationship with both *intrinsic* and *extrinsic motivation* but a negative relationship with *amotivation*. *Perceived self determination* and *perceived competence* are both considered predictors of *intrinsic motivation* and return *engagement- contingent reward* is considered a predictor of *perceived self determination* and *perceived competence*. It is recommended that the proposed model be tested and validated to determine its validity in explaining SNS adoption as well as technologies of a similar nature. The following hypotheses are posited:

- H₁: Engagement-contingent rewards will have a negative impact on SNS's user's perceived competence in social networking activities
- H₂: Engagement-contingent rewards will have a negative impact on SNS's user's perceived self determination in social networking activities
- H₃: Self Determination will have a positive effect on intrinsic motivation in SNS
- H₄: Perceived competence will have a positive effect on intrinsic motivation in SNS
- H₅: subjective norms will have a positive impact on extrinsic motivation to use SNS
- H₆: Intrinsic motivation will have a positive effect on continuance intention to use SNS
- H₇: Extrinsic motivation will a positive impact on continuance intention to use SNS
- H₈: Amotivation will have a negative impact on continuance intention to use SNS

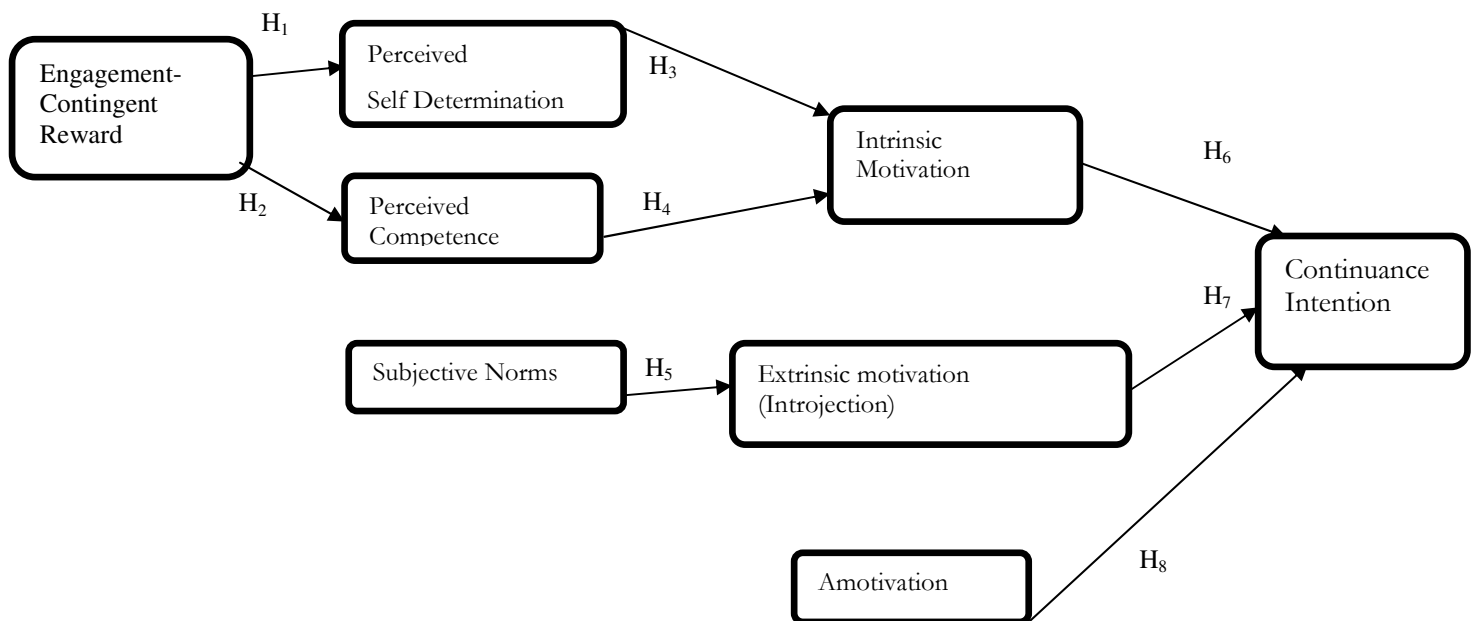


Figure 1. Social Information System Research Model

CONCLUSION

Bearing in mind the classification presented by Theotakis and Doukidis (2009) social networking is considered to be component of a social information system and, as such, its adoption should be evaluated from a motivational perspective. In this regard, self-determination theory provides a framework for evaluating the three forms of identified motivation (intrinsic, extrinsic and amotivation) and their impact in explaining behavior. The literature also provides evidence that contextual factors may influence motivation. Hence, the perspective of the research model we have proposed in this domain deviates from the traditional technology adoption evaluation models in favour of a motivation-centric model which seeks to explicate adoption from a behaviorist perspective. We will offer this model to the research community for refinement and we will validate it ourselves in SNS related research.

One immediate application domain is in the youth-dominated customer base for SNS. Bonneau and Preibusch (2009) reported that the popularity of SNS among the younger generation is high with studies finding more than 80% of American university students being active SNS users who commonly spend in excess of 30 minutes each day on social networks. The prevalence of social networking in youth culture has been compared to that of an addiction (Bonneau and Preibusch, 2009). Young people particularly are quick to use the new technology in ways which increasingly blur the boundaries between their online and offline activities. Based on these indications, we will use the model to conduct research on tweens (ages 9 to 12), teenagers (13 to 19) and young adults (20 to 29) using a stratified sampling technique.

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