How Do Social Networking Site Users Become Loyal? A Social Exchange Perspective

Completed Research Paper

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Abstract

Since its emergence as a new electronic communication media supported by Web 2.0, social media has become a popular means of communication among the public. Among different types of social media that depend on user-generated content (UGC), social networking sites (SNS) are becoming the best-known communication mode. While many researchers have examined significant factors affecting SNS users' behaviors and their impact on SNS usage, the current research extends the traditional concept of IS loyalty and examines factors impacting SNS users' creation of SNS loyalty through a lens of social exchange theory (SET) and satisfaction. A total of 291 college students participated in an empirical test. The findings indicate that SET has an effect on creation of loyalty in the context of Facebook, which is currently the most popular SNS. Implications of these findings and limitations of the research are discussed.

Keywords: Social networking sites, social exchange theory, loyalty, partial least squares (PLS)

Introduction

Since the development of a new, innovative communication medium supported by Web 2.0, social media (SM) has become a new way for individuals to communicate with each other. *Social media* is defined as "the group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan and Haenlein 2010, p. 61). Recent research categorizes SM as social networking sites (SNS, e.g., Facebook), creativity works-sharing sites (e.g., YouTube, Flickr, and Jamendo), and others, such as business networking sites, virtual worlds, and commerce communities (Mangold and Faulds 2009). Communicating parties in an SM environment share mutual interests and socio-emotional communication without verbal and non-verbal expression, sometimes at different times and locations.

While many social media have been used in online-based communication, SNSs (e.g., Facebook, MySpace) have become immensely popular communication tools for individual socialization and commercial organizations. The definition of SNSs frequently adopted by researchers is "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd and Ellison 2007, p. 211). Individual SNS users are often in a position to recognize other users whose interests are similar to their own and then create relationships with them (Ross et al. 2009). Such relationships, with either previously well-known people or just acquaintances, are unlimited. Furthermore, previous literature suggested that SNSs have a significant impact on individual users' communication behaviors and characteristics. Demographically, research indicates that users of preferred SNSs differ according to ethnic and cultural background (e.g. Vasalou et al. 2010), and a majority of SNS users are college-age individuals who lead the SNS culture (Roblyer et al. 2010). Pempek and colleagues' (2009) empirical study found that young adults are inclined to read others' news feeds and look at others' pictures rather than post their own messages or pictures.

User retention and habitual usage behaviors have become important keywords in Information Systems (IS) research (e.g. Bhattacherjee et al. 2008; Limayem et al. 2007) because initial adoption of IS does not always indicate post-adoption of that IS and initial adoption often triggers IS switching actions or motivation (Limayem et al. 2007). Despite a body of research devoted to identifying the nature of SNSs and their users by employing various social theories such as social capital theory, social influence theory, and social network theory (e.g. Cheung and Lee 2010; Kwon and Wen 2010), scholars have debated whether SNS users are persistent or temporary users (e.g. Kefi et al. 2010; Lampe et al. 2006) and whether they are loyal or habitual users (Dick and Basu 1994; Oliver 1997). However, loyalty is not yet well studied in the IS environment. The current study extends research on IS loyalty by adopting online communication media as an IS artifact in the context of SNS use.

Loyal customers are more beneficial because they generate more profit streams and save a company the costs of recruiting new customers from the marketplace (Brunner et al. 2008). Classically, the concept of loyalty is rooted in an individual's perception of attitudes or attachment toward certain brands, products or services based on positive differences between post performance of usage and prior expectation (Oliver 1980). In both electronic business environments and the offline sales market, the concept of loyalty has become crucial to the success of business (Chang et al. 2009). Research shows that various antecedents have affected the development of e-loyalty in the context of online shopping, B2B and online auctions, and so on (e.g. Davis-Sramek et al. 2009).

Despite the importance of loyalty in the maintenance of relationships, the perception of loyalty has relied heavily on reciprocal relationships between individuals and products or services. However, the current study raises antecedents of loyalty in the online communication environment (e.g. social media) where such products or services are rare or non-existent. Thus, the reciprocity of communication itself is what may drive the perception of loyalty in these environments. However, the concept of loyalty has been little studied from the communication perspective, especially as regards electronic and online communication.

Accordingly, the present study examines two issues: 1) what factors promote user loyalty to a specific SNS,

and 2) whether social exchanges via communication activities have an effect on the creation of loyalty to SNS. This study is designed to extend the concept of IS loyalty to SNS and to identify factors that affect SNS users' loyalty to SNSs by integrating IS users' loyalty with social exchange theory (SET), which is frequently used to explain the impact of the exchange relationship from social and economic perspectives. While the loyalty concept is widely employed in many academic disciplines (e.g., marketing and consumer behavior), this study contributes to the field of SNS research by explaining communication media users' repeated behavior and persistence using the concept of loyalty.

Theoretical Foundations

Social Exchange Theory (SET)

SNSs are regarded as online communities in which members take responsibility for managing their online territory (Jin et al. 2010). Such member-initiated online communities help members develop their own social networks and support the community by engaging in ongoing interaction, thereby reinforcing the creation of concrete relationships among members. An online community and its member relationships are also viewed from an exchange perspective known as social exchange. According to Blau's (1964) social exchange theory, these interactions are interdependent and contingent on actions with another person. Two exchange perspectives are considered: social exchange and economic exchange. Both stem from a cost-benefit exchange concept wherein individuals remain in a relationship if the perceived benefit outweighs the perceived investment (cost). Unlike economic exchange, the perceived benefit and cost of a social exchange usually comprise an intangible asset exchange such as emotion, respect, or caring among individuals (Gefen and Ridings 2002); therefore, good feelings, respect and perceiving more caring during reciprocal exchanges results in ongoing relationships. Additionally, social exchange activities do not ensure feasible reciprocal returns from invested cost (Chadwick-Jones 1976; Gefen and Ridings 2002; Liao 2008; Skageby 2010; Skerlavaj et al. 2010). Gefen and Ridings (2002) note that social exchange guarantees only "the assumed cooperative intentions of the other party (that is, the belief that the other party will reciprocate as they are expected)" (p. 51).

Two cognitive processes are involved in reciprocal relationships: the comparison level and the comparison level of alternatives (Kramer 2005). At the comparison level, the reciprocal relationship is retained when the perceived benefit outweighs the perceived cost after the two are directly compared. For example, SNS users will attain better relationships with their friends if the perceived benefit (e.g., closer relationships with friends than before) is greater than the perceived cost (e.g., effort, time expenditure). At the comparison level of alternatives, individuals compare the cost-benefit ratio directly with the alternatives. These results serve as the rational basis to decide whether to remain in the relationship even if there are no satisfactory results (because of a lack of satisfying alternatives). For instance, SNS users will continue using SNSs if there are no better communication alternatives. According to Blau (1964), three constructs—commitment, perceived benefit, and trust—form the basis of social exchange theory.

Commitment

Commitment is defined as "a desire to maintain a relationship" (Fullerton 2003, p. 334), and it is considered "an implicit or explicit pledge of continuity between relational partners" (Fullerton 2005, p. 1374). From a social exchange perspective, community members' commitment is an important factor in sustaining the online community in that it affects member sustainability; attaining continuous perceived benefits from ongoing reciprocation between parties results in the formation of commitment, which is "central in distinguishing social from economic exchange" (Cook and Emerson 1978, p. 728). According to Meyer and Allen (1991), commitment consists of three dimensions: affective commitment, continuance commitment, and normative commitment.

Affective commitment is an "affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organization" (Allen and John 1990, p. 2). This form of commitment stems from the emotional attachment between parties in reciprocal involvement. In the context of marketing, customers will stay with a certain brand or service provider if they experience a high sense of liking or belonging; that emotional bond will lead to future

usage (Huang et al. 2007).

Continuance commitment is "a tendency to engage in consistent lines of activity based on the individual's recognition of the costs (or lost side bets) associated with discontinuing the activity" (Allen and Meyer 1990, p. 3). Continuance commitment is anchored in rational dependence. Fullerton (2003) suggested that "a consumer is likely to be committed to a relationship if he or she faces concrete switching costs or if the benefits that he or she receives from the partner are not easily replaceable from other potential exchange partners from the marketing perspective" (p. 335). Consequently, individuals remain in a current relationship with their parties either because of insurmountable switching costs or a lack of sufficient alternatives. While affective and continuance commitment are denoted as emotional attachment and rational dependence or entrapment, respectively, Grayson and Ambler (1999) asserted that they are not mutually exclusive; commitment can be formed as either affective or continuance, or neither, or merely a single form of commitment from an individual's behavior. Nevertheless, both affective and continuance commitment are important in explaining SNS use. If SNS users retain their benefits or are able to enhance their social relationships with others by using SNSs, they feel a favorable attachment toward the SNS, which leads to additional commitment to the site. If SNS users are aware that many of their friends use Facebook, for example, it will be difficult for them to switch to another SNS because they would need to convince their friends to join the SNS as well.

Normative commitment is described as the extent to which the committed party has a strong belief in his or her responsibility or obligation to do something. "Employees with strong affective commitment remain because they want to, those with strong continuance commitment because they need to, and those with strong normative commitment because they feel they ought to do so" (Allen and Meyer 1990, p. 3). However, normative commitment is not applicable in this study because SNS users are free to switch to any SNS or other computer-mediated communication (CMC) medium and have no responsibility or obligation to any SNS provider beyond any potential contractual obligation (Jin et al. 2010).

Perceived Benefit

Perceived benefit is deemed another salient determinant of the reciprocal parties remaining in a relationship. The theory posits that a person retains his or her relationship if the perceived benefit compensates for the perceived cost of the ongoing reciprocal social relationship; otherwise, the reciprocal party will leave the relationship, resulting in failure to maintain it. These open-ended relationships rely more on perceived benefit that stems from high resource *particularism* (e.g. affection) than resource *universalism* (e.g. monetary value) (Foa and Foa 1974). From a marketing perspective, the relational benefit is comparable. Bitner, Gwinner, and Gremler (1998) defined *relational benefit* as "the benefit customers receive from long-term relationships above and beyond the core service performance" (p. 102). This implies that a continuous long-term relationship is sustainable only if both reciprocal parties are beneficial to each other such that the perceived (relational) benefit is foundational to the supportive relationship between the parties (Hennig-Thurau et al. 2002). For example, in employer-employee relationships, employees are willing to make an effort when performing their tasks if they are rewarded or receive benefits from their organization. Eventually, this mutually beneficial relationship results in high employee retention (Muse et al. 2008). Studies of social networks in learning- and knowledge-intensive organizations have suggested that, where reciprocity was expected but not found, perceived benefit may be the driving force of the relationship. Specifically, in a knowledge exchange, experts become sources of knowledge but have little chance to gain additional knowledge from that network (Huber 2001). These experts may perceive a benefit in the social status that evolves from being the expert (Lazega et al. 2006). In the same way, SNS users may perceive a benefit from the status of having multiple friends, connections, and so on.

Trust

Trust is defined as "the willingness of a party to be vulnerable to the actions of another party, with the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Liao 2008, p. 1883). Trust is a key construct in SET in that SET is anchored in an individual's faith in cooperative interaction and trust and reduces the uncertainty

and risk involved in relationships (Luo 2002; Wu et al. 2010). Past research has revealed that trust influences repeat purchases and helps retain relationships between sellers and buyers (Li et al. 2006; Liu et al. 2004). McKnight and colleagues (1998) suggested the following key dimensions of the development of trust: personal traits, personal interaction, structural assurance, initial impressions, and situational normality. Similarly, McKnight and Chervany (2001) asserted that predictability, benevolence, ability, and integrity are key factors in forming trust.

In Zucker's (1986) study, three types of trust are described: characteristics-based trust, process-based trust, and institution based-trust. First, characteristics-based trust is trust formed as a result of similarities and commonalities, either general (e.g., culture, gender, and ethnicity) or specific (e.g., family and kinship). The more cultural and social values that an individual holds in common with the transaction or exchange parties, the more trust is developed between them. For example, the empirical literature has shown that preferred SNSs vary from one ethnic group to another (Hargittai 2007; Vasalou et al. 2010). Additionally, young people have reported that they and their social networking friends were originally offline acquaintances, indicating that SNSs serve as a medium to maintain existing relationships rather than to acquire new friends (Ellison et al. 2007). Second, process-based trust anchors an individual's satisfaction level based on previous transactions or experiences (Gefen 1997). Sun (2010) investigated trust in the context of online sellers' continued use of an auction website and found that it impacted both perceived usefulness and enjoyment of using the marketplace. Little evidence has been found regarding why SNS users exhibit repetitive visiting behaviors. However, Wu and Tsang (2008) found that, in a virtual-community context such as an SNS, three characteristics of trust—competence, integrity, and predictability—were positively associated with a virtual community member's tendency to remain on the site over time and were found to increase users' willingness to visit the same website. Last, institution-based trust refers to the guarantee of a given transaction and set of exchange under a form of certification provided by guarantors or a third party (Karpinski 2000). For example, professional certificates such as medical, CPA, or financial certificates guarantee the owner's standard of ethical practice to build trust in the bearing party (Zucker 1986). Similarly, effective monitoring of a website plays an important role in developing users' trust in that it prevents illegal actions or undesirable behaviors under appropriate regulations (Sun 2010).

Satisfaction

According to the investment model and social influence theory, both of which originate from social exchange theory, satisfaction is regarded as a key function of benefit and cost in a reciprocal relationship. Research has shown that when satisfaction is positive, the individual is likely to develop commitment and loyalty to the parties or artifact of the relationship. For example, Davis-Sramek et al. (2009) showed that retailer satisfaction had a significant impact on retailer commitment in the context of business-to-business commerce. Park and Kim (2006) found that information satisfaction and relational benefits were important antecedents of commitment in the context of online shopping. In a similar fashion, Dimitriades (2006) revealed that customer satisfaction had a significant effect on company commitment. His large and diverse sample included four types of service providers, including financial, retail, transportation, and entertainment providers.

Loyalty

Unlike commitment, which measures an individual's cognitive perception of attitudes of attachment to a certain brand, loyalty involves both brand behavior and attitude (Pritchard et al. 1999). After Copeland (1923) addressed the concept of loyalty, early loyalty studies focused heavily on consumers' repeat purchasing behavior over time. For example, Brown (1952) proposed four types of loyalty to brands: no loyalty, unstable loyalty, undivided loyalty, and divided loyalty. However, during the past few decades, many researchers have claimed that studying loyalty only from a behavioral perspective is problematic because this approach has difficulty distinguishing between true and spurious loyalty (e.g., Day 1969).

Day (1969) argued that "the key point is that these spuriously loyal buyers lack any attachment to brand attributes, and they can be immediately captured by another brand that offers a better deal" (p. 30). Accordingly, Day (1969) suggested two dimensions of loyalty formation—attitudinal and behavioral—that

depend on the consumer's characteristics when purchasing products, such as habits, convenience, and environmental cues. His suggestion was the first attempt to combine attitudinal and behavioral concepts (Bove and Johnson 2009). Similarly, Jacoby (1971) stipulated that loyalty arises from non-random, repeat purchasing of a specific brand among alternatives under psychological evaluation. Jacoby and Chestnut (1978) identified three evaluation phases that play important roles in identifying true loyalty in consumers' minds: cognition, affect, and intention.

In the 1990s, some researchers also supported the importance of two-dimensional loyalty factors in both conceptual and empirical studies (Dick and Basu 1994; Keller 1993; Oliver 1999). Dick and Basu (1994) viewed *customer loyalty* as "the strength of the relationship between an individual's relative attitude and repeat patronage" (p. 99). They propose the following four types of loyalty: true loyalty (high relative attitude and high repeat patronage), latent loyalty (high relative attitude and low repeat patronage), spurious loyalty (low relative attitude and high repeat patronage), and no loyalty (low relative attitude and low repeat patronage) (Dick and Basu 1994). Using an attitudinal and behavioral loyalty perspective, Oliver (1997) defined *loyalty* as "a deeply held commitment to re-buy or -patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing despite situational influences and marketing efforts having the potential to cause switching behavior" (p. 392). He framed the process of loyalty development into four consecutive stages: 1) *cognitive loyalty*, or belief in a brand that is preferable to alternatives; 2) *affective loyalty*, or a favorable attitude toward a certain brand based on previous satisfaction; 3) *conative loyalty*, or commitment to a specific brand; and 4) *action loyalty*, or readiness to act and overcome obstacles that prevent acts such as repeat patronage (Oliver 1999). Oliver's (1999) four-stage model has been adopted by many researchers because each construct is comprehensive and empirically evaluated and because the model's validity is supported under many research contexts (e.g. Frost et al. 2010; Harris and Goode 2004). Recently, in addition to attitudinal and behavioral perspectives, the composite perspective takes into account the affective characteristics of loyalty to supplement its predictive power (Bowen and Chen 2001).

While many academic disciplines have studied the concept of loyalty in the various research contexts, few studies have examined loyalty in the context of IS. For example, a study of online bank customers addressed loyalty as an outcome variable and found customer satisfaction and brand reputation positively affected both affective and conative loyalty, switching costs positively affected affective loyalty (opposite of the anticipated direction), and affective loyalty had an effect on conative loyalty (Methlie and Nysveen 1999). Although the traditional concept of loyalty has focused on offline transactions, with products and services and the patronizing of a certain brand as antecedents of creation of individual's loyalty, other researchers have investigated in customer loyalty in online environments such as e-retailing or e-business. Anderson and Srinivasan (2003) defined e-loyalty as "the customer's favorable attitude toward an electronic business resulting in repeat buying behavior" (p. 125). E-loyalty is the result of association with antecedents such as e-satisfaction. Because thus far very few explicit definitions of SNS loyalty have been suggested, the current study extends the concept of e-loyalty to SNS loyalty in the communication-based artifact. Accordingly, SNS loyalty refers to the SNS medium user's affirmative attitude toward SNS and strong commitment to repeated usage of SNS in communicating activities when associating and perceiving beneficial consequences. Whereas the conventional concept of loyalty relies on satisfactory experience with a product or service, SNS loyalty must rely primarily on communication performance with a reciprocal party, and is therefore influenced strongly by affective and cognitive perception of human interaction within the SNS environment. This is the primary differentiation between SNS loyalty and more conventional concepts of IS loyalty.

Research Hypotheses and Model

Prior literature from the social exchange perspective has revealed that trust can affect users' perception of satisfaction (e.g. Chiou 2004; Harris and Goode 2004; Singh and Sirdeshmukh 2000). In the context of IS disciplines such as online shopping, e-commerce, and virtual learning environments, IS users' satisfaction was found to be directly related to the development of trust in terms of diminishing potential perceived risk from others' opportunistic behavior in an exchange relationship (Lee and Turban 2001). Deng and colleague's (2010) research indicated that customers' recognition of poor service provision or an inferior product based on past experience had a negative effect on satisfaction, and that trust was a

significant predictor of customer satisfaction in the context of mobile instant messaging services. Chiu and colleagues (2009) also confirmed that customers' trust in an online vendor increased customer satisfaction in the context of online shopping. In an analysis of online bookstores and flight purchasing, customers' trust was shown to play a pivotal role in enhancing customer satisfaction (Harris and Goode 2004). Therefore, applying prior literature arguments in the context of online communication media, this study posits following:

> **H1a**: An SNS user's trust in the SNS will be positively associated with the user's satisfaction with the SNS.

Morgan and Hunt (1994) noted that trust between parties induced commitment to the extent that "an exchange partner believes that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it" (p. 23). Lin et al. (2010) showed that online members' trust directly affected online team commitment. Similarly, in the context of a virtual community, community members' trust had a significant impact on commitment to a virtual community; trust reduced anxiety about opportunism and boosted member mutuality (Wu et al. 2010). Trust in other Facebook users was shown to be a reason for disclosure of personal information (Tow et al. 2010), indicating commitment to the Facebook relationship. Therefore, this study hypothesizes the following:

> **H1b**: An SNS user's trust in the SNS will be positively associated with the user's commitment to the SNS.

Empirically, Jin and colleagues' (2010) study of online communities found that perceived benefit was an essential predictor of the development of commitment. They noted that perceived benefit in social exchanges between members of an online community is a key factor that affects relationship retention over time. Park and Kim (2006) found that relational (perceived) benefit played an important role as an antecedent to website commitment. Analogous to the concept of perceived usefulness from the technology acceptance model (TAM) (Davis et al. 1989), perceived benefit aligns with IS adoption and future usage behaviors in terms of enhancing their satisfaction and profit/non-profit gains. Wu and Wang (2006) confirmed a positive relationship between perceived benefit and satisfaction in the context of knowledge management systems (KMS). Yen and Lu (2008) also found that the perceived net benefit of buyers via online auctions had a significant effect on their satisfaction. In the context of mobile banking usage, Kim, Shin, and Lee (2009) confirmed a significant relationship between relative benefit of a similar concept with perceived benefit and initial trust.

Accordingly, the current study posits more perceived benefit from communication with friends via SNS, resulting in retaining better relationships with SNS users and increased trust in SNSs as a reliable communication medium. Moreover, when an SNS user perceives a benefit to his or her use of an SNS, that benefit will have a positive effect on satisfaction and commitment to the SNS. Therefore, this study hypothesizes the following:

> **H2a**: An SNS user's perceived benefit from the SNS will be positively associated with the user's trust in the SNS.

> **H2b**: An SNS user's perceived benefit from the SNS will be positively associated with the user's satisfaction with the SNS.

> **H2c**: An SNS user's perceived benefit from the SNS will be positively associated with the user's commitment to the SNS.

Prior literature has also identified satisfaction as a salient antecedent in the development of loyalty (Shankar et al. 2003). For example, in a study of online transactions, Anderson and Srinivasan (2003) found that e-satisfaction played an important role in strengthening e-loyalty and the intention to repurchase in the context of online auctions. From a marketing perspective, satisfaction with the product, sales process, and after-sale service had a significant impact on customer loyalty to a car manufacturer in Germany (Homburg and Annette Giering 2001). Similarly, in the context of business-to-consumer online

marketing, high customer satisfaction increased customer loyalty in a study of online shoppers (Chang et al. 2009). Accordingly, satisfaction with the process, services, and benefits of an SNS should result in increased loyalty and commitment to the site and its members. Thus, we posit:

> **H3a**: An SNS user's satisfaction with the SNS will be positively associated with the user's commitment to the SNS.

> **H3b**: An SNS user's satisfaction with the SNS will be positively associated with the user's loyalty to the SNS.

Along with other key constructs, such as trust and perceived benefits, commitment is an important dimension that may help explain social relationships under the social exchange theory. In early research, the concept of commitment was confined to a feeling of identification and attachment (Fullerton 2003). However, researchers have recently determined that commitment consists of more complex and multi-dimensional constructs such as affective commitment, continuance commitment, and normative commitment (Meyer and Allen 1991). In relation to loyalty and commitment, prior literature has demonstrated that either or both affective and continuance commitments can be positively associated with loyalty depending on the research context (Huang et al. 2007; Meyer et al. 1993). Prior studies have claimed that affective commitment delineated the emotional perspective of loyalty in terms of inflating the degree of behavioral intention and subsequent behavior (Davis-Sramek et al. 2009), although few have investigated relationships within the context of IS.

Along with prior studies, the current study assumes that commitment to an SNS entails engaging in a relationship with the membership of the SNS (affective) and/or engaging in consistent relationship behavior with the SNS membership (continuance). This engagement builds loyalty to the SNS whereby the frequency and strength of the relationship are as important as the relationship itself. Therefore, this study hypothesizes the following relationship between loyalty and commitment in the context of an SNS:

> **H4**: An SNS user's commitment to the SNS will be positively associated with the user's loyalty to the SNS.

The research model is shown in Figure 1.

Figure 1. Research Model and Hypotheses
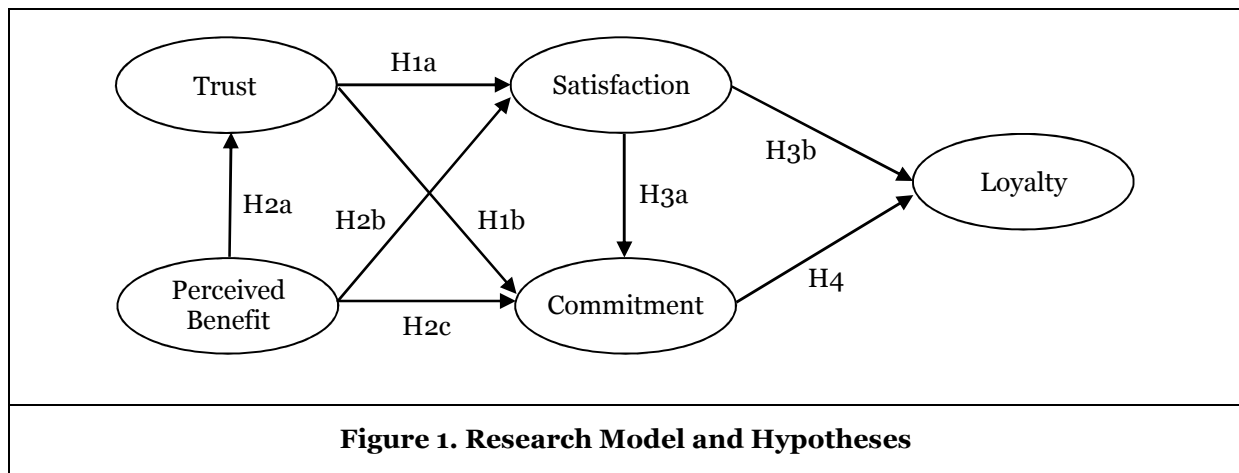
Research Method

Research Context

The current study selected Facebook (facebook.com), one of the most popular SNSs, as its research context. Facebook, as of the end of March 2012, has more than 901 million active users; more than 500 million active users log on every day and use 70 different languages, and 80%, or more than 720 million of them reside outside of the United States. According to current statistics, more than 488 million Facebook users access the site via mobile devices such as smartphones or iPads (Facebook 2012).

Selection of Measurement Items

This study measured a total 5 constructs using a web-based survey. All survey questions used a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Items measuring perceived benefit and commitment were adapted from Jin et al. (2010); items measuring trust were adapted from Fogel and Nehmad (2009); items measuring satisfaction were adapted from Spreng, McKenzie and Olshavasky (1996); items measuring loyalty were adapted from Srinivasan et al. (2002); additional commitment items were adapted from Fullerton (2005) (See Appendix). The items were Facebook specific. For example, a perceived benefit item was "I value the close, personal relationship I have with my friends on Facebook." A loyalty item was "I try to use Facebook whenever I need to interact with my friends online." A trust item was "Facebook is a trustworthy social networking site." The resulting instrument was pilot tested by a small group of graduate students.

Data Collection

Procedures

The current study utilized a web-based survey, which has the following advantages over paper-based surveys: lower cost, faster response, ease of use, accessibility, and high response rate (Kaplowitz et al. 2004). First, the researchers in this study informed participants of the purpose of study and how to join the survey. An email providing a link to the survey was then sent to participants who were interested in participating.

Target respondents were 343 students who were enrolled in a southeastern university in the United States. A student sample is appropriate for the research, in accordance with prior literature in which social technology-oriented research frequently used students as research participants (e.g. Roblyer et al. 2010; Subrahmanyam et al. 2008). More than one-third of Facebook's 845 million active users are less than 32 years old; more than 80% report themselves to have some amount of college education. In the United States, 47% of Facebook users are between 18 and 34 years of age (www.socialbakers.com).

Participant Description

Respondents who did not have Facebook experience were moved from the results, leaving a total of 291 usable responses (85% response rate); 42.3% of participants were female and 56.7% were male (three participants did not report their gender). The majority of participants were between 19 and 22 years old (66.0%); 21.3% of participants were between 23 and 27 years of age, 11.3% of participants indicated they were over age 28, and four participants did not report their age. 46.4% of participants used Facebook for more than five years and 34% of participants used Facebook for more than three years but less than five years. 13.1% of participants used Facebook for more than one year, but less than three years, and 6.5% of participants reported they have used Facebook for less than one year.

Results

This study analyzed survey results using the partial least squares (PLS) methodology via SmartPLS 2.0 M3 beta (Ringle et al. 2005). All variables examined this study are reflective.

Measurement Model Assessment

Convergent Validity

Multiple statistical methods are available to establish convergent validity (Hair et al. 2006); this study employed four tests as indicators of convergent validity: 1) levels of standardized factor loadings, 2) average percentage of variance extracted (AVE), 3) composite reliability, and 4) coefficient alpha (Cronbach's alpha).

First, for acceptable factor loadings to qualify as demonstrative of construct validity, Chin (1998) suggested that factor loadings should be "at least 0.6 and ideally at 0.7" (p. 13), and, more strictly, Barclay et al. (1995) asserted that the factor loadings should exceed 0.7. Items with loadings at or above 0.7, and without cross-loadings were retained.

Second, all constructs were well above acceptable levels of average variance extracted (0.50), indicating that all indicators qualified for convergent validity (see Table 1).

Third, each construct's composite reliability ranged from 0.87 to 0.95, indicating that all reliabilities were above the recommended criteria (0.7), which is a good benchmark to assess convergent validity (Bagozzi and Yi 1988). Last, Cronbach's alpha values range from 0.80 to 0.92, which exceeds the minimum requirement of 0.6 (Hair et al. 2006). Each of these indicates convergent validity (Table 1).

Table 1. Convergent Validity			
Construct	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha
Commitment	0.86	0.95	0.92
Loyalty	0.71	0.91	0.86
Perceived Benefit	0.62	0.87	0.80
Satisfaction	0.84	0.92	0.82
Trust	0.81	0.94	0.92

Discriminant Validity

The current study also assessed discriminant validity by examining 1) the comparison between correlations among constructs and the square root of the AVEs and 2) cross-loadings among items and constructs (Chin 1998). All correlations among the constructs are less than the square root of the AVEs, indicating acceptable discriminant validity (Table 2). Greater loadings of measured items were obtained from indicators on their latent variable than any other constructs. All examined cross-loadings indicate satisfactory evidence of discriminant validity in this study.

Table 2. Discriminant Validity						
Construct	AVE	Commitment	Loyalty	Perceived Benefit	Satisfaction	Trust
Commitment	0.86	**0.93**	0.00	0.00	0.00	0.00
Loyalty	0.71	0.44	**0.84**	0.00	0.00	0.00
Perceived Benefit	0.62	0.58	0.58	**0.79**	0.00	0.00
Satisfaction	0.84	0.45	0.59	0.62	**0.92**	0.00
Trust	0.81	0.37	0.42	0.44	0.46	**0.90**

Common Method Bias

This study examined common method bias using four tests. First, researchers conducted Harman's one-factor test to ascertain the existence of common method bias as suggested by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). Analysis revealed four factors; the first factor explained 40.20% and the total four factors explained 68.83% of the total variance; this indicated no significant common method bias exists.

Second, following Pavlou, Liang, and Xue's (2007) study, researchers compared correlations among constructs. The results revealed no constructs correlated over 0.9 (the highest correlation between satisfaction and perceived benefit is 0.62), indicating no common method bias.

Third, in order to examine "the effects of a single unmeasured latent method factor" (Podsakoff et al. 2003, p. 894), the PLS model employed a new latent variable, named 'method,' with all indicators from the existing constructs to identify the degree of variance explanation by both the new method construct and the original constructs. The results revealed that 12 method factor loadings (out of 17) were not significant at the 5% confidence level. Additionally, the average explained variance of the principal indicators is much higher than that of the method indicators (the ratio of principal indicators variance to method variance is 60.2:1), indicating no significant common method bias (Liang et al. 2007; Williams et al. 2003).

Last, this study applied Lindell and Whitney's (2001) partial correlation procedure. The test first deployed a marker variable that is theoretically unrelated to other constructs or "the smallest observed correlation among the manifest variables as a proxy for common method variance" (Podsakoff et al. 2003, p. 893) as a marker variable in cases that employ a post hoc method when research does not employ a marker variable at the time of the study. Following prior studies (Lindell and Whitney 2001; Malhotra et al. 2006), common method variance-adjusted correlations were calculated using a correlation of 0.37 between commitment and trust. All adjusted correlations were statistically significant at a 5% confidence level, except for the second lowest correlation between the trust and loyalty constructs (significant at the 10% level of confidence), indicating minimal common method bias.

Structural Model Assessment And Hypothesis Testing

The Facebook users' trust had a significant relationship with satisfaction (β = 0.23, p < 0.001) and with commitment (β = 0.12, p < 0.05). Similarly, perceived benefit was positively associated with trust, satisfaction, and commitment (β = 0.44, p < 0.001; β = 0.52, p < 0.001; β = 0.46, p < 0.001, respectively). Facebook users' commitment also contributed significantly to users' loyalty (β = 0.21, p < 0.001). However, while Facebook users' satisfaction was positively associated with loyalty (β = 0.50, p < 0.001), there was no relationship to commitment (Table 3 and Figure 2).

Figure 2. Analysis of Research Model (Hypotheses Testing)

Note: **p<0.001, *p<0.05
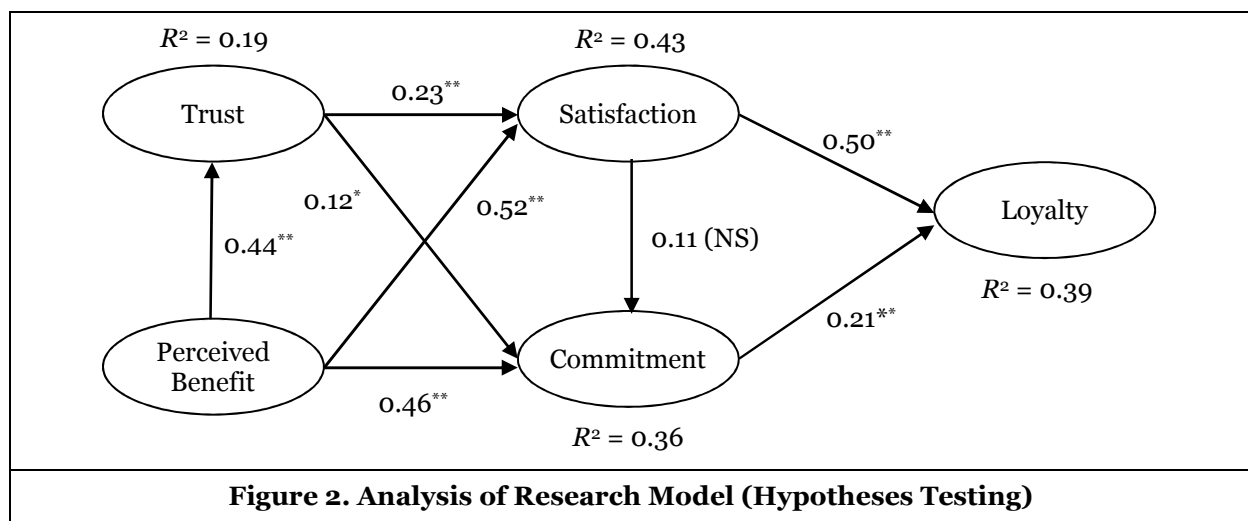
Facebook users' perceived benefit explained 19% (adjusted R^2 =0.19) of the trust variance, which is significant. Trust and perceived benefit explained 43% (adjusted R^2 =0.43) of the satisfaction variance and 36% (adjusted R^2 = 0.36) of the variance of commitment with satisfaction. Facebook users' loyalty is accounted for 39% (adjusted R^2 =0.39) of the joint variance of satisfaction and commitment.

| Table 3. Summary of Hypotheses Test				
	Hypotheses	Coefficients	*p*-value	Supported
H1a	Trust → Satisfaction	0.23	0.00	Yes**
H1b	Trust → Commitment	0.12	0.03	Yes*
H2a	Perceived Benefit → Trust	0.44	0.00	Yes**
H2b	Perceived Benefit → Satisfaction	0.52	0.00	Yes**
H2c	Perceived Benefit → Commitment	0.46	0.00	Yes**
H3a	Satisfaction → Commitment	0.11	0.09	No
H3b	Satisfaction → Loyalty	0.50	0.00	Yes**
H4	Commitment → Loyalty	0.21	0.00	Yes**

Note: ** $p<0.001$, * $p<0.05$

Discussion

We first examined how trust affects satisfaction and commitment. As hypothesized, findings show that trust has a positive relationship with both satisfaction (H1a) and commitment (H1b). Users report more satisfying interactions with Facebook as trust increases, much like those with instant messaging and virtual learning environments. This positive relationship with commitment is likely the result of the pervasiveness of Facebook as a communication medium throughout the United States, particularly with college-aged individuals. The support of H1a and H1b indicates that social exchange theory can be extended to include social networking sites in addition to previously researched areas of IS. However, the causal order of exchanges and relationships has been argued in social exchange theory (Cropanzano and Mitchell 2005). Interpersonal reciprocity strengthens individual bonds with another more than does negotiation. On the other hand, relationships themselves vary the nature of exchanges, meaning that once a social-exchange relationship is initiated, exchanging parties will treat each other differently than before. While such reverse-causal relationships have been argued, examples of research findings have revealed that the exchanges cause the relationships; successful reciprocal relationships lead to the development of trust (Cropanzano and Mitchell 2005). Although social exchange theory supports the direction of trust affecting satisfaction as found in our research, there have been arguments that satisfaction has a reverse relationship with trust. For example, Friend et al. (2011) found that satisfaction has a positive effect on the development of trust in the context of buyer and seller relationships in the offline transaction environment. They posited that buyers' trust results from consistent fulfillment of favorable performance and services and that this fulfillment leads to an increased level of satisfaction. To assess the applicability of such arguments to SNSs, the current study conducted a post-hoc analysis that revealed that such a reversal is also supported in this research sample (See Figure 3). The findings revealed that satisfaction with Facebook use positively affects trust on Facebook but that this reversal does not materially change the model. This in itself is an interesting contribution that shows that there are undercurrents working between these constructs that need to be further developed and investigated.

Furthermore, although the survey instruments from the current study measured user trust of Facebook (artifact itself), Facebook is somewhat different from previously investigated artifacts in that Facebook's

attraction is not a product or service; rather, it is interaction with friends. An interesting question regarding trust, then, is whether our sample, which is composed largely of young individuals, trusts Facebook as an artifact or as the individuals within Facebook? Anecdotally, it is accepted that Facebook is an online community in which members connect with other members on a social level. Research has revealed that there is an element of attaching social characteristics to IS artifacts (e.g., Al-Natour and Benbasat 2009; Al-Natour et al. 2011; Nass et al. 1995). Because Facebook users communicate primarily with friends with whom they had a relationship prior to Facebook (e.g., Ellison et al. 2007), it is reasonable to suggest that the idea of trusting Facebook itself (that is, the artifact) is not what is important to the member; rather, the trust lies with the members' friends. For example, Kolek and Saunders (2008) found that very few Facebook users (11%) restrict access to their profiles. Tow et al. (2010) found that many Facebook users simply believe that online communities are safe, which may be a reflection of the trust the users have in their friends. Although our sample is likely to be affected by this belief and the issue of age-related decrease in the need for trust to support privacy concerns, Tow et al.'s (2010) research involved Facebook users of all ages. The idea of trust in the members over trust in the artifact is salient and worthy of further study.

Figure 3. Post – hoc Analysis of Research Model (Alternative Hypotheses Testing)
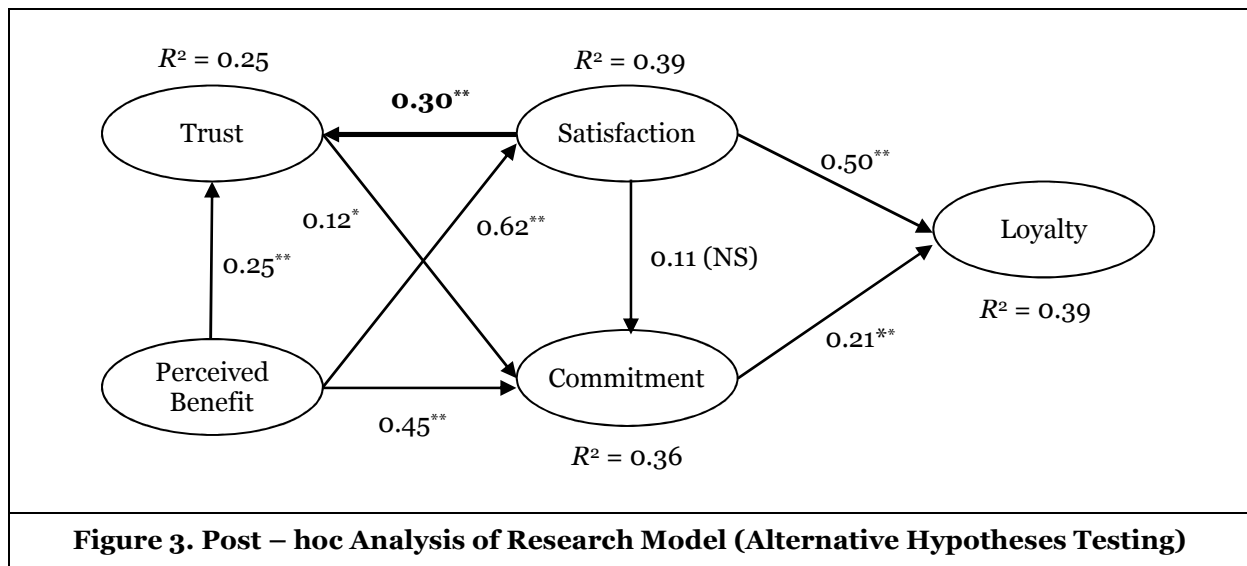
Note: **$p<0.001$, *$p<0.05$

Our next set of hypotheses, still within the theoretical framework of SET, involves the relationships between perceived benefit and trust, satisfaction, and commitment. Our findings support our hypotheses in that there are significant positive relationships for trust, satisfaction, and commitment; these expected findings are in accordance with SET. Users who perceive higher levels of benefit from using Facebook develop higher levels of trust, satisfaction, and commitment on Facebook. Of the three, perceived benefit most strongly affects satisfaction ($\beta = 0.52$, $p < 0.001$), which implies that Facebook users' satisfaction is anchored in cumulative satisfaction rather than in transaction-specific satisfaction from ongoing communication activities (Chang et al. 2009; Johnson and Fornell 1991; Oliver 1997). This conclusion is also supported by the fact that 93.5% of the survey participants have used Facebook for between one year and five years, again suggesting a visible cumulative effect. In addition, perceived benefit is rooted in "the benefit customers receive from long-term relationships above and beyond the core service performance" (Bitner et al. 1998, p. 102). SET also posits that social exchanges trigger the feelings of obligation, trust, and gratefulness, whereas economic exchange tends not to (Cropanzano and Mitchell 2005). The current study findings support this argument in the context of communication-based artifact in that perceived benefit from using Facebook confirms favorable association with trust, satisfaction, and commitment.

The third set of hypotheses linked satisfaction to commitment and loyalty. Our finding that the relationship between satisfaction and commitment is not significant is unexpected. It appears, at least for this sample, that satisfaction with Facebook and commitment to Facebook are separate issues. It is possible that previous research in this area, which focused on products and services, does not extend to a

communication-based artifact such as Facebook. It may also be that commitment to Facebook is so strong that satisfaction simply does little to increase it. We did, however, find support for our hypothesis that satisfaction would have an effect on loyalty. The finding of a significant positive relationship between satisfaction and loyalty is an important contribution. The relationship between satisfaction and loyalty solidifies our position that, although loyalty is often not included in IS continuance models, its use is necessary.

Given the strength of the paths between perceived benefit and satisfaction and between satisfaction and loyalty, a post-hoc mediation analysis was conducted to investigate the possibility that satisfaction may be a mediator of a perceived benefit—loyalty effect—although this direct effect was not originally hypothesized. Results indicate that satisfaction partially mediated the effect between perceived benefit and loyalty.

Our final hypothesis is that commitment will have a positive association with loyalty. This hypothesis was also supported. Facebook users who develop commitment to using it go on to develop loyalty toward it. Overall, the finding implies that Facebook users' loyalty is anchored in both commitment to and satisfaction with Facebook; however, satisfaction with Facebook usage contributes more to loyalty formation than does commitment. In addition, its significant relationship with commitment links it to SET, supporting our contention that loyalty is a logical extension of that theory.

Theoretical Contribution and Practical Implications

The current study and findings emphasize the value and role of perceived benefit toward other behavioral and rational perceptions. The empirical analysis employed in this study identified perceived benefit as an explanation of the trust variance; perceived benefit from SNS use alone accounted for 19% of the total variance. Additionally, our finding of a positive relationship between commitment and loyalty in the context of a communication medium is aligned with Fullerton's (2003) research in the context of customers and service provider in that "when customer commitment is based on shared values and identification, it has a uniformly positive impact on customer loyalty" (p. 333). The positive relationship between satisfaction and loyalty is also supported by Chang et al.'s (2009) empirical study of e-marketing. Accordingly, communication medium is similarly aligned with some product- and service-related context research.

The study contributes to both SET and IS loyalty research in four ways. First, while IS researchers have studied SNS users' characteristics, perceptions, and behaviors, few studies have identified mutual relationships among users from the social exchange perspective and how this perspective affects user persistence. The findings of this study suggest that SET theory supports the development of loyalty to SNS. Specifically, the findings of the current study suggest that communication activities play an important role in the development of loyalty to an SNS. Our second contribution involves the relationship between commitment and loyalty, thus extending SET. The relationships between our SET constructs and satisfaction and the amount of variance in satisfaction accounted for by the grouping of trust and perceived benefit further support our contribution. Additionally, the findings reveal reciprocal interactions between trust and satisfaction constructs. Because of the nature of social exchange, the relationships between these two dimensions are important findings but underscore the need for further development and research. Last, the findings of this study also reveal the importance of perceived benefit in the trust factor. Much prior literature has focused on direct relationships of perceived benefit to trust. However, in the context of SNSs and their users, the current study identifies perceived benefit as having an impact on, rather than being impacted by, trust. Thus, SNS users' perceived benefit is an important antecedent in developing trust in SNSs.

Our findings give rise to some practical implications. Similar to Jin et al.'s (2010) research on online communities, this study indicates the importance of perceived benefit to the development of commitment. Williams and Cothrel's (2000) research regarded member commitment as an asset of community in that it engenders another outcome, for example, loyalty. The results of this study confirm that commitment plays an important role in loyalty. Developers can increase IS loyalty through increased commitment by increasing the user's perception of benefits and trust. More practically, for SNS organizations involved in

profit-related activities, such as adoption of social-context advertising based on SNS users' posting behaviors, retention of loyal users has high profit potential. Likewise, retention of loyal users can increase the rate at which new users adopt the SNS as loyal users acts as recruiters. Consequently, the importance of the concept of loyalty to SNS cannot be disregarded. User satisfaction is another salient factor affecting SNS user retention in terms of loyalty. Dissatisfied users are more likely to switch to another SNS. Therefore, managers' efforts to implement more web applications to enable easier, more secure communication will increase SNS users' trust, perceived benefits, and commitment to the SNS.

Limitation and Future Research

Like all studies, this study has some limitations. First, the sample consists of students. While students have appropriate Facebook experience and this sample has long-term experience with Facebook, students may still give rise to some unintended effects. For example, older SNS users tend to have a network of people of more diverse ages and interests than younger users (Pfeil et al. 2009). It is possible that loyalty may be a product of narrow interests. Further research with a more varied sample might help isolate whether the relationships among constructs in this research were the result of the student sample. A second limitation of this study is related to the nature of the cross-sectional study in measuring SNS users' loyalty formation that leads users to repeatedly visit the SNS. Also, the SNS users' initial adoption and use will be different from post-adoption use depending on the time frame of exposure to the SNS. To remedy the deficiency of the cause-effect inference, a longitudinal design is recommended for future research. Last, the current study focuses on Facebook. Although Facebook is considered to be the most popular SNS, it is not the only form of SNS. Future research should examine other forms of SNS to investigate whether the research model findings vary.

Conclusion

This study examined the salient determinants that affect SNS users' loyalty to SNSs by incorporating SET and satisfaction. Our results indicate that the extended model is viable and informative. This study provides a theoretical foundation for future research in socially oriented IS and some practical implications for SNS design.

Appendix

The construct survey items are listed below.

Facebook Usage

How long have you used Facebook?
    A. More than five years
    B. More than three years but less than five years
    C. More than one year but less than three years
    D. More than six months but Less than one year
    E. Less than six months

Satisfaction	
How do you feel about your overall experience of using Facebook?	
Sat1[*]	Very dissatisfied – Very satisfied.
Sat2[*]	Very displeased – Very pleased.
Sat3	Very frustrated – Very contented.
Sat4	Absolutely terrible – Absolutely delighted.

Trust	
Trt1	Facebook is a trustworthy social networking site.
Trt2	I can count on Facebook to protect my privacy.
Trt3	I can count on Facebook to protect personal information from unauthorized use.
Trt4	Facebook can be relied upon to keep its promises.
Perceived Benefit	
PB1	The friendship aspect of my relationship with my friends on Facebook is important to me.
PB2	I enjoy spending time with my friends on Facebook.
PB3	I value the close, personal relationship that I have with my friends on Facebook .
PB4**	I value the convenience Facebook provides me.
PB5**	I value the time Facebook saves me.
PB6**	I value the advice Facebook provides me.
PB7	I have better communication with others because of Facebook.
Commitment	
Cmt1*	I want to remain in my relationship with Facebook because I genuinely enjoy interacting with it
Cmt2**	I want to remain in my relationship with Facebook because it provides useful information
Cmt3**	I want to remain my relationship with Facebook because it will be costly for me to find another social networking site
Cmt4	I feel emotionally attached to Facebook
Cmt5	I feel a strong sense of identification with Facebook
Cmt6	Facebook has a great deal of personal meaning for me
Loyalty	
Loy1**	I seldom consider switching from Facebook to another social networking site
Loy2	As long as the present applications (posting messages, uploading photos or videos, tagging, commenting, notes or events) provided by Facebook continues, I doubt that I would switch social networking sites.
Loy3	I try to use Facebook whenever I need to interact with my friends on online.
Loy4*	I enjoy using Facebook.
Loy5	To me, Facebook is the best social networking site to communicate with my friends.
Loy6	I believe that Facebook is my favorite social networking site.

Note: * deleted because of high cross loading, ** deleted because of low factor loading

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