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It is not for fun: An examination of social network site usage

Chenyan Xu, Sherry Ryan, Victor Prybutok, Chao Wen

A B S T R A C T

Social networking sites (SNS) have become a significant component of people's daily lives and have revolutionized the ways that business is conducted, from product development and marketing to operation and human resource management. However, there have been few systematic studies that ask why people use such systems. To try to determine why, we proposed a model based on uses and gratifications theory. Hypotheses were tested using PLS on data collected from 148 SNS users. We found that user utilitarian (rational and goal-oriented) gratifications of immediate access and coordination, hedonic (pleasure-oriented) gratifications of affection and leisure, and website social presence were positive predictors of SNS usage. While prior research focused on the hedonic use of SNS, we explored the predictive value of utilitarian factors in SNS. Based on these findings, we suggest a need to focus on the SNS functionalities to provide users with both utilitarian and hedonic gratifications, and suggest incorporating appropriate website features to help users evoke a sense of human contact in the SNS context.

1. Introduction

There has been major growth of social networking sites (SNS) such as Facebook, LinkedIn, Twitter, and Google Plus. While the use of SNS has affected individuals' daily lives, they have also captured the attention of organizations because they create business opportunities for both e-business and traditional companies.

SNS, on their own, can be profitable business entities, generating revenues for their stakeholders, as demonstrated by the success of Facebook, LinkedIn, and Twitter. Other e-commerce companies can, of course, integrate SNS features into their existing web applications to enhance or retain their use in important applications. Also, SNS methods can provide new opportunities for traditional organizations to optimize their internal operations and to enhance their communication with customers, partners, and suppliers. Regardless of the differences in how their business values are appropriated, SNS cannot succeed without having customers, employees, and partners use them. This is because, as a groupware technology, SNS rely on the interactions between their users and thus their value increases as the network of users expands. Therefore, it is important to understand user behavior (why people use SNS) and usage patterns within SNS. However, to date, few studies have systematically examined what determinants contribute to SNS usage.

Our effort, which examined why individuals adopt SNS, corresponds to one of the five IS research cores identified by Sidorova et al. [20]: (1) how IT systems are developed and how (2) individuals, (3) groups, (4) organizations, and (5) markets interact with IT.

The IT and individuals core primarily examines psychological aspects of human–computer interactions, focusing on research themes such as technology acceptance, IT adoption, trust, and website design. Therefore, our paper represents a mainstream area of IS research, contributing to the development of the discipline.

In IT adoption research, TAM is the dominant theory explaining user acceptance of IS. One of its major drawbacks is that with the changing use of IT in many contexts, added factors, such as perceived enjoyment, and subjective norm need to be included to enhance its explanatory power. TAM has been considered problematic because it treats IT as a black box and fails to answer a basic question: what actually makes a system useful [1]? Therefore, we took an alternative approach, drawing on the system’s uses and gratifications theory (U&G) from the Communication field as an underlying theoretical foundation for examining individuals’ adoption of SNS. According to U&G, users play a role in selecting media to gratify their needs. One medium is chosen over others because of its ability to better serve users’ gratifications. Thus, our first research question was:

RQ1. What gratifications do individuals seek in using SNS?

Our interest, however, was broader than simply identifying the types of gratifications. We wanted to explore their effects on SNS usage with other representative factors that might be predictive. In addition to gratifications, U&G asserts that socio-psychological factors, such as loneliness, also play a role in predicting new technology adoption. Additionally, considering the social-technical nature of SNS, we further examined the effect of social presence on SNS usage. Therefore, our second research question was:

RQ2. What are the factors that predict SNS usage?

In order to address this, we proposed a model consisting of use gratifications, loneliness, and social presence as predictors of SNS usage. 2. Theoretical framework Our research model incorporated three different theories: U&G, utilitarian and hedonic motivation, and social presence. Both U&G and social presence are rooted in the Communication field. While social presence theory is often used in IS research, the general understanding of U&G is not common. In computer-mediated communication (CMC), U&G plays an important role when examining individuals’ use of new media. Considering that CMC also deals with the same environment, we believed that U&G might provide another perspective to understand user acceptance of IT.

2.1. Uses and gratifications theory

U&G is useful in studying users’ socio-psychological needs – those which attract and hold them to a particular media and its contents. It asserts that media differ in their abilities to accommodate users’ needs; individuals play an active role in selecting media based on the types of gratifications they seek. The gratifications can be either instrumental (e.g., information seeking) or non-instrumental (e.g., entertainment). The theory has three basic assumptions [17]. First, people are active users of media. Second, they select media for intentional communication purposes and their behaviors are goal-

directed. Third, they are aware of their motives for selecting a particular type of medium rather than alternatives.

U&G has been widely employed in investigating a wide range of traditional media like newspapers, radios, telephones, etc. The Internet and other web based applications enhanced U&G's predictive power because in CMC settings, users become empowered because it is relatively easy for them to switch from one medium to another providing similar services or content. Thus, U&G has been extended to examine new media technologies such as short message services, electronic bulletin boards, virtual communities, and instant message software (IM) like ICQ3 [12]. These studies identified a list of gratifications such as affection, convenience, coordination, entertainment, relaxation, escape, fashion, interpersonal utility, information seeking, sociability, and self-expression that influence different media use.

2.2. Utilitarian and hedonic gratifications

We split gratifications associated with SNS usage into two: utilitarian and hedonic.

2.2.1. Utilitarian and hedonic motivation

The concepts of utilitarianism and hedonism have had various nuanced meanings throughout history stemming from the Greek hedonism and the English utilitarianism philosophies respectively.

In the scientific inquiry of why people shop, two types of motivation have been identified [22]. Utilitarian motivation assumes that shopping results from a mission or task to procure a product or service, focusing on the functional aspect of shopping; thus it is rational, mission-critical, and goal-oriented. The benefit resulting from a utilitarian motivation can only occur if the product or service is acquired, the mission is completed, and if it is completed efficiently. Hedonic motivation focuses on a consumers' emotional needs, taking into consideration the non-functional benefits derived from the shopping experience, including happiness, fantasy, awakening, sensuality, and enjoyment; thus according to the hedonic perspective, the reasons that people shop is simply because they love the process, which does not require the acquisition of a product or service.

The rapid development of the Internet offered businesses of all sizes the opportunity to sell products or services online. Researchers have explored online shopping behavior from both aspects of utilitarian and hedonic motivation [2]. Utilitarian motivation included convenience, cost saving, customization, and diversified selection, etc. while hedonic motivation included the experience of adventure, fashion, social interaction, and pleasure. Of course these two are not mutually exclusive because people perceive IT as social actors with human-like traits [13] instead of as emotionless black boxes. Thus utilitarian and hedonic motivation might coexist to influence people's technology adoption decisions [26].

2.2.2. The development of utilitarian and hedonic gratifications

IS researchers have extended utilitarian and hedonic concepts to distinguish IS system [23], to rationalize user experience constructs such as playfulness, cognitive absorption, and visual appeal [e.g., 4], and to understand technology adoption outcomes [28].

Premkumar et al. [18] found that utilitarian outcomes, hedonic outcomes, and social outcomes contributed to usage. The phrase utilitarian outcomes was defined as the effectiveness of individual activities enhanced by using IM, while hedonic outcomes was defined as the pleasure derived from using IM. Both factors reflect IM's abilities to gratify adopters' needs (to communicate effectively or to have fun). In the U&G paradigm, media users actively turn to and continue to use a particular type of medium because of the gratifications they obtain from that medium. Gratification, consistent with outcome, is closely associated with the system's ability to accommodate users' needs. Therefore, we categorized use gratifications into utilitarian gratification, the gratification related to enhanced effectiveness and efficiency of social activities as a result of using the SNS, and hedonic gratification, the pleasure, relaxation, self-determination, and fulfillment of socio-psychological needs derived from using the SNS.

2.3. Loneliness

Previous U&G studies have tended to incorporate individual factors, such as loneliness, being unwilling-to-communicate, self-esteem, self-disclosure, and shyness, because they work with use gratifications to frame audience behavior. For the sake of a parsimonious research model, we selected loneliness as the representative psychological factor affecting SNS usage.

Loneliness is a sense of isolation from others (real or imagined) which causes feelings of sadness, depression, or anxiety. In investigating the relationship between loneliness and new technology use, previous efforts have proposed two opposing hypotheses [e.g., 24]. According to the social compensation hypothesis, the Internet, with its lower level of social presence and anonymity, liberates lonely people. It gives them an opportunity to approach others by reducing the risks of being embarrassed if they are rejected. The rich-get-richer hypothesis, however, argues otherwise, stating that the Internet primarily benefits extraverted individuals, allowing expansion of their already extensive social network. How psychological factors predict SNS usage, therefore, has yet to be determined.

2.4. Social presence theory

Social presence is defined as the degree that a medium allows users to establish personal connections with others, to experience others as being psychologically present, and to feel a sense of human contact via that medium [11]. IT like emails, websites, and IM are viewed as low in social presence because of their limited capability to transmit natural language, instant feedback, and multiple cues such as body language, voice tone, and inflection. Therefore, increasing a website's social presence level has long been the focus of IS research.

3. Hypothesis development

3.1. Use gratifications and SNS usage

Previous U&G studies of CMC applications include cellular phones, electronic bulletin boards, emails, IM, short message services, the Internet, user-generated content, web-based information services, and virtual communities [e.g., 6, 15] where gratifications were found to be very predictive of media usage. Hence, we hypothesized:

Hypothesis 1.

Individual gratifications will positively influence SNS usage.

3.2. Utilitarian versus hedonic gratifications

According to Van der Heijden [25], SNS are a type of hedonic IS because their dominant design objective is to encourage prolonged use, and like computer games and IM, a private environment like a home is an ideal place for SNS usage. While productivity-oriented constructs like perceived usefulness are the dominant predictors of intention to use for utilitarian IS, such constructs as perceived enjoyment are likely to be dominant for hedonic IS. Moreover, previous SNS research has argued that SNS are primarily used for hedonic rather than utilitarian purposes [21]. Therefore, we hypothesized:

Hypothesis 2. Hedonic gratifications are stronger predictors of SNS use than utilitarian gratifications.

3.3. Loneliness and SNS usage

We were interested in deciding whether the social compensation hypothesis or rich-get-richer hypothesis ruled in the context of SNS. Sheldon [19] found that (in terms of Facebook use) people who are more involved in online relationships are those who are willing to communicate in real life. Lu and Hsiao [14] found that extraverts think more highly of the social value of SNS than do introverts. These findings suggest that the rich-get-richer hypothesis may dominate in SNS. Thus, we posited:

Hypothesis 3. Loneliness will have a negative effect on SNS usage.

3.4. Social presence and SNS usage

Previous research has identified both direct and indirect effects of social presence on users' behavioral intention or actual use of IT such as the Internet, IM, emails, and e-commerce [e.g., 7]. Thus, we hypothesized:

Hypothesis 4. Social presence will positively influence SNS usage.

4. Methodology

4.1. Item development and refinement

In order to answer our two research questions, we developed the initial survey instrument with a primary focus on identifying possible SNS gratifications and creating appropriate measurements based on a comprehensive review of the literature, beginning with an examination of previous U&G literature on Internet studies, and technologies akin to SNS. A tentative list was compiled at this stage, including gratifications such as coordination, entertainment, escape, relaxation, and stylishness. We assumed that these gratifications could also be obtained by using SNS. Next, we organized a focus group discussion with two purposes: (1) to verify the preliminary list, and (2) to distill the unique gratifications for SNS usage. Ten university students with considerable SNS use experiences participated. They were screened from a larger pool who had reported that they had used main SNS for more than a year, owned several SNS accounts, and spent more than one hour per day at those SNS. To further screen them, we asked them basic questions concerning SNS use experiences to make sure that they were representative users, familiar with major SNS functions (i.e., a person who claimed to use SNS only for playing games was eliminated). This discussion resulted in eight gratifications: affection, coordination, disclosure, entertainment, escape, immediate access, relaxation, and stylishness. Table 1 shows a description of each. Using a focus group helped us understand that SNS usage patterns can be characterized by five main activities – posting, viewing, sharing, replying, and playing. Table 2 provides a description of each activity. SNS usage was later measured by asking people how often they made posts, viewed others' posts, shared interesting contents, replied to others, and played website games, as well as how often they used their SNS and how long each session lasted. Social presence was measured using questions adapted from Gefen and Straub's [5] study on e-commerce. Loneliness was measured with the 8-item UCLA Loneliness scale [8]. All the questions were based on a 5-point Likert scale with 1 representing strongly disagree, 3 representing neutral, and 5 representing strongly agree. To ensure the content validity of all the measurements, two scholars with expertise in SNS research and the U&G approach were asked to examine the survey. Then the surveys with revised items were examined by five Ph.D. students in related fields to identify confusing or ambiguous items. After analyzing their feedback, a number of minor revisions were made to refine the questionnaire.

4.2. Data collection: sample and procedure

A total of 160 subjects, who were undergraduate and graduate students at a major public state university in the southwestern U.S., participated in the study. They received extra credit for participation, and 148 of them successfully completed the questionnaires. University students were chosen as the target sample because their likelihood of active SNS use was high. Among the sample, 54.7% were male; the highest interaction was with friends (see Table 3). They reported that they spent an average of 12.0 h per week on SNS.

Table 1
Descriptions of SNS gratifications.

Gratification	Description
Affection	People adopt SNS as a channel to express their heartfelt sentiments to friends
Coordination	People use SNS to organize social activities, make arrangements, and disperse information
Disclosure	People need to have someone to talk with when surfing on SNS
Entertainment	People use SNS as an entertaining tool for fun and pleasure
Escape	People turn to SNS for a moment of being away from current pressures
Immediate access	People use SNS to transcend temporal and geographic limitations to get connected with others
Relaxation	People use SNS to get relaxed and to relieve stress and boredom
Stylishness	People use SNS as a status symbol

Table 2
Descriptions of SNS activities.

Activity	Description
Posting	Publishing information like photos or photo albums, videos, events, or just random thoughts using the enabling tools offered by SNS
Viewing	Browsing others' published information or profiles
Sharing	Sharing amusing, inspiring or valuable sources (posted by one person) with other SNS friends
Replying	Responding to others' comments, posted or shared pictures, videos, and status
Playing	Playing social games embedded in SNS

Table 3
Mode and frequency of communication.

Group	Percentage
Face-to-face friends	84
Classmates	51
Family	45
Cyberfriends	14
Strangers	6

To test H2, it was necessary to split the SNS gratifications into the utilitarian and hedonic dichotomy. Based on the ways they are conceptualized, we first theoretically categorized coordination and immediate access as utilitarian gratifications and categorized affection, disclosure, entertainment, escape, relaxation, and stylishness as hedonic gratifications. To further validate such classification, 25 undergraduate students in the university were recruited to perform this task: specifically, they were asked to categorize the eight gratifications

as either utilitarian or hedonic based on the coding rules that we provided to illustrate our definitions of these two gratification types.

5. Data analyses and results

A partial least squares (PLS) approach was used to assess the psychometric properties of the measurement scales and to test the proposed hypotheses. PLS is appropriate to use when the objective is to maximize prediction accuracy through variance explained and when cross-sectional survey data are used. The WarpPLS 2.0 software package was used for our estimation.

5.1. Assessment of measurement and classification validation

Construct reliability was measured by Cronbach alpha, Fornell's composite reliability, and AVE. As shown in Table 4, the Cronbach alpha of all constructs ranged from 0.86 to 0.94, higher than the recommended minimum cutoff of 0.70. As to composite reliability, the lowest value was 0.90, satisfying the benchmark of 0.70. In addition, it was desirable for AVE to exceed 0.50. All of the AVE values in our study were higher than the threshold of 0.50.

To ensure construct validity, the items within one construct should demonstrate relatively high correlation (convergent validity) whereas the items from different constructs should be characterized by low correlation (discriminant validity). Convergent validity is considered acceptable when all item loadings exceed 0.70. Because of their cross-loadings on other constructs, RE1, RE3, EN3, LO3, LO6, SU7 were eliminated from subsequent analysis. With respect to discriminant validity, the correlations between items in any two constructs should be lower than the square root of the AVE shared by items within a construct. According to Table 5, the square root of AVE for each construct was greater than the off-diagonal elements.

To examine for common method variance (CMV), we employed the Harman's one-factor test. It revealed that there were more than one factor, with the first accounting for 45% of the variance, lower than the 50% threshold value. We thus conclude that CMV was unlikely to be a serious concern.

To analyze the coders' independent classifications of the gratifications, inter-rater reliability was assessed with Fleiss's Kappa. In our study, the computed Fleiss's Kappa was 0.62 ($p < 0.001$), suggesting a high level of agreement among the 25 coders. Therefore, we concluded that the classification of gratifications was reliable.

5.2. Hypothesis testing

Though we initially thought that there were eight gratifications specific to SNS usage, factor analysis revealed that entertainment and relaxation loaded together on one factor. Given the commonality between these two, we labeled the combined factor leisure. Also, each gratification exhibited a high level of reliability. Therefore,

Table 4
Descriptive statistics of reliability indices and factor loadings for constructs.

Item	Factor analysis										Construct reliability (α)	Composite reliability	AVE
	Stylishness	Coordination	Immediate access	Affection	Escape	Disclosure	Leisure	Social presence	Loneliness	SNS usage			
ST1	0.92	-0.02	-0.04	0.07	-0.03	-0.03	0.04	-0.13	-0.03	0.11	0.87	0.91	0.73
ST2	0.92	-0.07	0.01	0.04	0.00	-0.06	-0.01	-0.08	-0.05	0.14			
ST3	0.77	-0.06	0.24	-0.11	0.17	-0.05	-0.07	0.03	0.01	-0.20			
ST4	0.79	0.16	-0.20	-0.03	-0.13	0.15	0.03	0.21	0.08	-0.08			
CO1	-0.02	0.91	0.22	0.00	-0.07	0.00	0.04	0.04	-0.01	-0.07	0.91	0.94	0.79
CO2	-0.02	0.92	0.15	-0.01	-0.06	0.01	-0.06	0.13	0.01	0.00			
CO3	0.01	0.87	-0.10	-0.04	0.03	0.03	0.04	-0.17	0.05	0.08			
CO4	0.02	0.86	-0.30	0.05	0.12	-0.04	-0.02	0.00	-0.05	-0.02			
IA1	-0.12	-0.19	0.88	-0.09	-0.02	0.05	0.09	0.02	0.00	0.09	0.91	0.93	0.74
IA2	-0.10	0.04	0.89	-0.04	0.03	0.03	0.03	0.00	0.01	-0.20			
IA3	0.09	0.09	0.88	0.18	-0.06	-0.06	0.04	0.01	0.02	-0.22			
IA4	0.06	0.05	0.90	0.15	0.02	0.02	-0.05	-0.10	-0.03	-0.05			
IA5	0.08	0.01	0.74	-0.25	0.03	-0.04	-0.13	0.10	-0.01	0.47			
AF1	0.02	-0.16	0.05	0.93	-0.08	0.08	-0.05	0.01	0.06	0.10	0.93	0.95	0.82
AF2	-0.13	0.12	-0.06	0.92	0.03	0.03	-0.07	-0.13	-0.02	0.17			
AF3	0.12	0.18	0.02	0.85	0.12	-0.16	-0.02	0.11	-0.04	-0.26			
AF4	0.01	-0.12	-0.01	0.91	-0.06	0.04	0.14	0.02	-0.01	-0.04			
ES1	-0.07	0.24	0.08	-0.24	0.82	-0.22	-0.19	0.34	0.11	0.01	0.86	0.90	0.70
ES2	0.10	0.23	0.05	-0.16	0.84	-0.15	-0.20	-0.07	0.01	0.12			
ES3	0.03	-0.14	0.03	0.34	0.85	0.09	0.16	-0.19	-0.03	-0.27			
ES4	-0.05	-0.32	-0.15	0.05	0.85	0.27	0.22	-0.07	-0.09	0.14			
DI1	-0.06	-0.19	0.03	0.16	0.03	0.82	0.35	-0.19	0.13	-0.06	0.87	0.91	0.73
DI2	-0.10	-0.13	-0.02	0.02	0.15	0.87	0.00	0.01	-0.04	-0.08			
DI3	0.07	0.16	-0.01	0.08	-0.13	0.86	-0.19	-0.03	0.02	0.13			
DI4	0.09	0.15	0.01	-0.25	-0.06	0.85	-0.16	0.20	-0.11	0.00			
RE2	-0.01	-0.02	0.04	0.24	0.16	0.04	0.88	0.00	0.06	-0.43	0.94	0.95	0.70
RE4	-0.03	-0.17	-0.07	0.05	0.21	0.14	0.82	0.22	-0.01	-0.21			
RE5	0.04	-0.01	-0.09	0.02	0.25	0.16	0.81	0.26	0.02	-0.38			
EN1	-0.03	-0.06	-0.01	0.07	-0.19	-0.08	0.82	-0.18	-0.01	0.18			
EN2	-0.08	0.21	0.18	-0.06	-0.17	-0.09	0.78	0.31	0.10	0.12			
EN4	0.07	-0.01	-0.03	0.02	-0.09	-0.01	0.85	-0.32	-0.04	0.08			
EN5	0.01	-0.09	-0.11	-0.08	-0.09	-0.06	0.86	-0.28	-0.11	0.40			
EN6	0.02	0.14	0.10	-0.26	-0.08	-0.10	0.85	0.03	-0.02	0.25			
SP1	-0.09	0.05	-0.03	0.00	-0.02	0.04	0.11	0.88	0.00	-0.16	0.91	0.93	0.74
SP2	0.02	0.03	0.02	-0.18	0.13	-0.10	-0.10	0.88	-0.08	0.20			
SP3	0.00	0.12	0.05	-0.24	0.03	-0.11	0.10	0.81	-0.13	0.16			
SP4	0.01	-0.08	-0.10	0.18	-0.02	0.12	-0.01	0.87	0.04	-0.15			
SP5	0.05	-0.12	0.07	0.23	-0.11	0.04	-0.10	0.86	0.17	-0.03			
LO1	-0.01	-0.16	-0.03	0.01	0.07	0.14	0.11	-0.09	0.80	0.04	0.90	0.92	0.67
LO2	0.05	-0.10	-0.03	-0.08	0.15	0.12	-0.24	0.02	0.80	0.24			
LO4	-0.08	0.07	0.14	0.02	-0.03	0.06	-0.10	-0.09	0.89	-0.02			
LO5	-0.09	0.11	0.04	0.19	0.14	-0.10	-0.22	0.03	0.86	-0.25			
LO7	0.05	0.09	-0.01	0.04	-0.32	-0.16	0.34	0.11	0.74	-0.13			
LO8	0.10	-0.01	-0.13	-0.20	-0.03	-0.07	0.17	0.03	0.81	0.13			
SU1	-0.07	0.14	-0.15	-0.06	-0.05	0.00	0.30	0.00	-0.01	0.83	0.88	0.91	0.62
SU2	0.04	-0.16	-0.42	0.02	0.18	0.19	0.27	-0.26	0.03	0.73			
SU3	-0.03	0.21	-0.05	0.14	-0.01	0.07	-0.23	0.16	-0.10	0.82			
SU4	0.06	0.07	0.31	-0.40	-0.15	-0.08	-0.02	0.10	0.03	0.78			
SU5	0.00	-0.26	0.00	0.28	-0.07	0.01	-0.16	0.08	0.03	0.81			
SU6	0.02	-0.02	0.31	-0.01	0.12	-0.19	-0.14	-0.11	0.03	0.76			

Table 5
Correlation of latent variables.

	Stylishness	Coordination	Immediate access	Affection	Escape	Disclosure	Entertainment/relaxation	Social presence	Loneliness	SNS usage
Stylishness	0.85									
Coordination	0.27	0.89								
Immediate access	0.18	0.66	0.86							
Affection	0.42	0.61	0.60	0.90						
Escape	0.26	0.46	0.55	0.42	0.84					
Disclosure	0.53	0.47	0.42	0.59	0.47	0.85				
Leisure	0.32	0.68	0.67	0.61	0.64	0.54	0.83			
social presence	0.38	0.60	0.57	0.71	0.49	0.54	0.76	0.86		
Loneliness	0.28	0.01	0.00	0.02	0.26	0.35	0.06	0.08	0.82	
SNS usage	0.28	0.76	0.76	0.70	0.53	0.48	0.75	0.75	-0.01	0.79

The diagonal elements in bold are the square root of the average variance extracted.

for RQ1, we found that affection, coordination, disclosure, escape, immediate access, leisure, and stylishness were the seven gratifications that individuals seek in using SNS.

To answer RQ2, the hypotheses were tested using PLS to perform a bootstrap procedure with 100 resamples. Fig. 1 shows the results. The research model explained 79% of the variance in SNS usage. Both coordination and immediate access were found to be strong positive predictors of SNS usage. Affection was found to have positive effect on SNS usage at the 0.05 level. Leisure was found to have only marginal effect on SNS usage. Disclosure, escape, and stylishness were not found to be significant predictors of SNS usage. Therefore, H1 was only partially supported. Social presence was found to have a positive effect on SNS usage at the .05 level. Thus, H4 was supported. Given the insignificant effects of disclosure, escape, and stylishness on SNS usage, H2 was not supported. Indeed, the results suggested that there were stronger impacts of utilitarian than hedonic gratifications in predicting SNS usage. In addition, the negative effect of loneliness on SNS usage was not significant. Hence, H3 was not supported.

6. Discussion

6.1. Gratifications and SNS usage

We found that immediate access, coordination and affection have strong positive impacts on SNS usage, and leisure has only a marginal positive effect. Like other web-based applications, SNS create a sense of connectivity among users. Moreover, the prevalence of smartphones allows users to visit SNS and engage their friends through mobile devices 24/7. These factors, working together, may help explain many of the reasons why SNS are used for immediate access gratification. The effect of coordination might be attributable to SNS' one-to-many communication mode. Thus, SNS are effective and efficient channels for users to organize social activities, make arrangements, and disperse news and messages without having to send the same content to different people. Immediate access and coordination, as two utilitarian gratifications, reveal the functional and utilitarian use of SNS. Moreover, SNS allow people to respond and show heartfelt sentiments to their friends who disclose feelings and recent encounters. Showing such emotive supports enables people to fulfill their inner socio-psychological needs. We believe that the marginal effects of leisure on SNS usage may be the result of removing the playing social games item from the SNS usage scale. Previous studies have shown that enjoyment, as one dimension of flow experience, contributes to online game playing [9]. In a post hoc PLS analysis, leisure was found to be the most influential predictor of the playing social games item.

6.2. Utilitarian and hedonic gratifications

While it is taken for granted that SNS are primarily used for fun, we found evidence to the contrary. We expected that users might adopt SNS primarily for hedonic

gratifications in the early stage. After they start deriving utilitarian gratifications, hedonic gratifications get less important and predictive in SNS usage. Magni et al.'s [16] work showed that, as time passes, the effects of hedonic factors decrease whereas the effects of utilitarian factors (e.g., performance expectancy) increase people's intentions to explore technologies. When people initially use SNS, they may only use some basic functions that are primarily designed to serve hedonic gratifications. As their understanding of the focal SNS evolves, people may discover add-on features or adapt existing features for utilitarian purposes. In sum, our findings did not deny the role of hedonic gratifications in SNS usage. We do, however, believe that SNS users consciously know what they are doing. They choose to participate in SNS activities due to the functionalities offered by them as opposed to engaging in activities simply because they are enjoyable or satisfy certain types of socio-psychological needs.

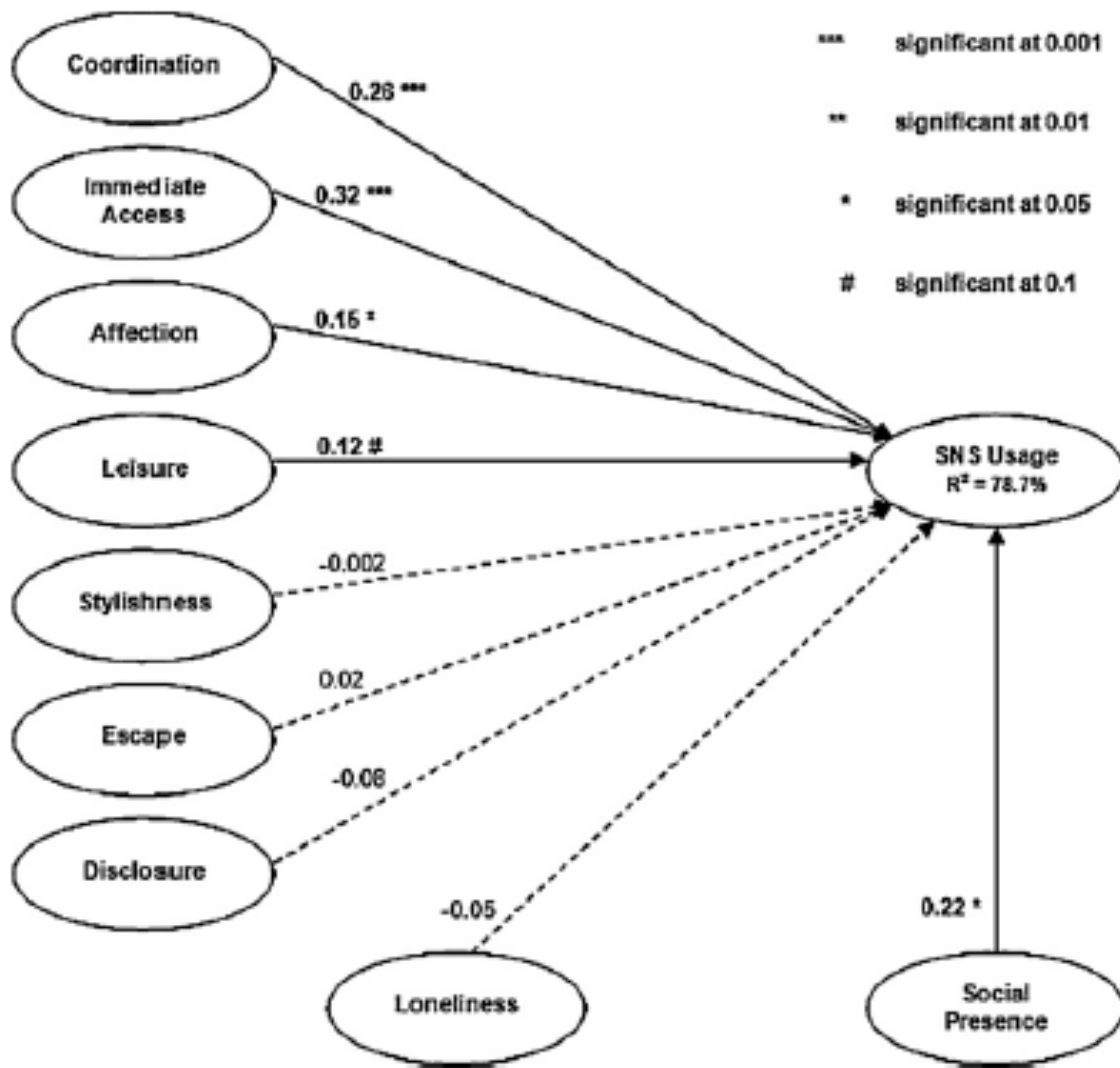


Fig. 1. PLS results.

6.3. Loneliness and SNS usage

We found that loneliness does not reduce SNS usage. This suggests that it is mainly the attributes of the media rather than individuals' socio-psychological attributes that draw them to use CMC technologies. On the other hand, it may well be that the SNS weaken the role of loneliness in predicting technology usage. Probably, for utilitarian purposes people spend time using SNS as a daily routine. Then loneliness is not a significant predictor of SNS usage.

6.4. Social presence and SNS usage

We found that social presence had a positive impact on SNS usage. An important commonality among communication tools such as mail, pagers, telephones, and IM is that they were designed for communication that involves interacting with other people. This is aligned with the primary objective of SNS: to encourage social. As such, it is no surprise that social presence directly affects SNS usage.

7. Limitations

There are some limitations to our research. First, the study participants were undergraduate students (with an average age of 21) and graduate students (with an average age of 31). However, according to Nielson's 2011Q3 social media report,⁴ people aged 18–34 are the most avid users of social media. Therefore, they are representative sample subjects for SNS studies. Second, CMV is a potential threat to studies that use self-reported data; our study was no exception. Although Harman's single factor test revealed that the first factor accounted for 45% of the variance, this is lower than the normal 50% threshold value.

8. Conclusion

We contributed to IS research in several ways. First, it introduced U&G from the Communication field as a new avenue for IS research to examine such CMC phenomena. Conversely, U&G could provide design guidance as it assumes that media differ in their ability to serve users' needs. For example, because immediate access provides gratification for both SNS and mobile phone users, SNS practitioners can either offer versions of their websites that are more compatible with mobile phones or incorporate website features that mimic the way that mobile phones connect people.

Second, we found that people take advantage of the SNS platforms to immediately access friends, to organize social activities, and to disperse news in an effective and efficient way. These two utilitarian gratifications show how SNS are playing an increasingly important role as a medium for political communications and persuasion. In the U.S. presidential elections, all major candidates now establish accounts on popular SNS for such purposes [27].

SNS can be profitable through revenue sources such as subscription fees, advertising, and the sales of digital items [10]. It is important for SNS practitioners to understand why people use SNS so that they can encourage more people to join. We found four gratifications that individuals seek by using SNS: coordination, immediate access, affection, and leisure. In addition, social presence was found to influence SNS usage. Internet sites are generally perceived as low in social presence, but this can be improved by the proper use of certain website design features such as email after-sales support, online chat system, online message board, virtual communities, and socially rich material. SNS developers may consider incorporating these elements to fit the new context.

SNS can support four types of organization activities – branding, sales, customer service and support, and product development [3]. They allow organizations to gain short-term competitive edges using SNS. Given that people may play the dual role of consumers and employees, our work can also provide guidance for traditional organizations that deploy SNS both externally and internally. Acknowledgements We would like to thank the three anonymous reviewers and Dr. Edgar H. Sibley for their insightful comments which substantially improved the quality of this paper.

Appendix A. Construct items

Stylishness

ST1 To look stylish

ST2 To look fashionable

ST3 To not look old-fashioned without a using SNS (R)

ST4 To have it as a status symbol

Coordination

C01 To spread news (messages, events and other information) fast and easily

C02 To disperse news (messages, events and other information) to multiple friends at one time quickly and easily

C03 To make arrangements to get together

C04 To organize social events

Immediate access

IA1 To access to others anytime

IA2 To access to others wherever they are

IA3 To be available for my friends anytime

IA4 To be available for my friends no matter where I am

IA5 To keep in contact with people I have no time to meet face-to-face

Affection

AF1 To show others I care about their feelings

AF2 To show others encouragement

AF3 To help others

AF4 Because I am concerned about others

Escape

ES1 To get away from what I am doing

ES2 To put off something I should be doing

ES3 To forget about my problems

ES4 To get away from pressures (or responsibilities)

Disclosure

DI1 Because I need someone to talk to or be with

DI2 Because I just need to talk about my problems sometimes

DI3 To post my feelings to attain others' attention quickly and easily

DI4 To get a quick response from others when I desire attention

Leisure

RE1* To relieve boredom by interacting with people

RE2 Because it relaxes me

RE3* To help pass the time

RE4 Because it is relaxing

RE5 Because it makes me feel less tense

EN1 To have fun

EN2 To enjoy the pleasure of interacting with people

EN3* To play tricks and to joke with friends

EN4 To have a good time

EN5 Because it is entertaining

EN6 Because I enjoy it

Social presence

SP1 There is a sense of human contact in my SNS website

SP2 There is a sense of personalness in my SNS website

SP3 There is a sense of sociability in my SNS website

SP4 There is a sense of human warmth in my SNS website

SP5 There is a sense of human sensitivity in my SNS website

Loneliness

L01 I lack companionship

L02 There is no one I can turn to

L03* I am an outgoing person

L04 I feel left out

L05 I feel isolation from others

L06* I can find companionship when I want it

L07 I am unhappy being so withdrawn

L08 People are around me but not with me

SNS usage

SU1 On average, each week I use my SNS website often

SU2 For each log session, I use my SNS web site long

SU3 On my SNS, I often post something

SU4 On my SNS, I often view something

SU5 On my SNS, I often share something

SU6 On my SNS, I often reply to others

SU7* On my SNS, I often play website games

* Denotes items that were dropped after factor analysis.

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