

# **Communication Anxiety, Unwillingness-to-communicate, Impression Management and Self-Disclosure on the Internet**

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# **Communication Anxiety, Unwillingness-to-communicate, Impression Management and Self-Disclosure on the Internet**

## **Abstract**

This exploratory study investigates the relationships among real-life communication anxiety, online unwillingness-to-communicate, impression management, and self-disclosure in different Internet platforms. Data were collected using a convenient sampling method on 406 respondents, aged 16-35. Contrary to what was hypothesized, results show that people who have high degree of communication anxiety are also unwilling to communicate on the Internet. Moreover, the study also indicates that Internet users, who have a high degree of unwillingness-to-communicate offline to avoid the chance of becoming tongue-tied, tended to manage their impression online regularly. As expected, findings suggested that different dimensions of self-disclosure can be predicted by communication anxiety, unwillingness-to-communicate, and impression management. For example, in order to build up a good impression online, people usually disclose openly and fully about themselves. Communication anxiety was found significantly linked to negative and dishonest disclosure. In addition, Internet users are more likely to choose SNS platform as suitable place for impression management. Females feel more rewarding from online communication, so that they have strong willingness and intention to disclose their life on the Internet. What's more, older and better educated people are implied to express more in-depth opinion, emotion and belief on the Internet.

Word count: 195

Key words: Communication anxiety; impression management; unwillingness-to-communicate; self-disclosure online

## 1. Introduction

Increasingly the Internet has become one of the most important communication tools and seems to be the most popular medium rather than TV, newspaper, and radio among the youths. People apply the Internet for diverse purposes such as information seeking, entertainment, companionship, and interpersonal communication. The Internet has brought great impacts to the communication models because it provides a mediated environment for interpersonal communication, facilitating friendly or even romantic relationships (Erich and Rhonda, 2000). Therefore, the advent of computer-mediated communication (CMC) and its penetration into people's lives provides an interesting lens on human behavioral studies.

In recent years, Internet addiction was found increasingly serious among youths. It is believed that Internet addiction has relation with discontentedness and in real life. Fast living pace and high pressure lead to the dissatisfactions of self-expression, confiding, and relax. Therefore, most of them turn to the Internet for catharsis, indulging, decompression, looking for support and achievement. Especially, some young people, who are shy, lack of social skills and without self-confidence, starve for the Internet to help them fit into social circle. These shy individuals have been named as "OTAKU", a Japanese word, which means the people who prefer to stay home without any social communication with surroundings because they found the Internet perfectly satisfies their desires. Therefore, this study begins at the relation between real-life communication anxiety and Internet usage.

According to communication scholars, communicating with stranger will produce uncertainty and anxiety (Brislin, 1993). In fact, a significant number of people tend to avoid situations of public speaking, and an even greater number of people cannot perform as effectively as they otherwise can due to anxiety and stress. Therefore, seriously communication anxiety (CA) will lead to many psychological problems like cowardice, loneliness, and melancholy. At least, communication anxiety significantly leads to unwillingness-to-communicate (UC) in public because of shyness and fear of being stutter and slips of the tongue.

In recent year, some of the researches about UC and Internet usage suggest that people are more willing to communicate in anonymous online world (Rheingold, 1993; Parks and Floyd, 1996; Wallace, 1999). Internet users who were less valued in their face-to-face communication used the Internet more for interpersonal communication purposes (Papacharissi and Rubin, 2000). Papacharissi and Rubin also found that people who perceived the Internet as warm, social, and active, used it primarily to fulfill pastime, convenience, and entertainment desires, and for interpersonal utility, as opposed to information seeking. Therefore, this study focuses on whether CA situation can be improved in the online world, and examines that whether the CA people more depend on the Internet than non-CA person.

Unwillingness-to-communicate in real life does not mean the simultaneously unwilling-to-communicate online. So the Internet afforded the opportunities for shy people to feel free to express themselves. Online communication was seen as the quintessential playground for postmodern plurality, fragmentation, and contextual

construction of self (Bruckman 1993; Reid 1994; Turkle 1995). Based on the theoretical framework, it is valuable to investigate what kinds of role online impression management (IM) play in people's lives, and whether online IM can release the negative psychological state in real life.

Furthermore researchers also found that Internet communication enables a higher level of self-disclosure also because of its relatively anonymous nature (e.g., Bargh et al., 2002; Derlega et al., 1993), and it fosters idealization of the other in the absence of information to the contrary (Murray et al., 1996). Under the environment of web 2.0, people are encouraged to contribute content in the cyberspace. The increasing online interactions make the Internet more likely to be a real society. Therefore, it is meaningful to test the online self-disclosure situation and study whether online self-disclosure can benefit Internet users in psychological aspects and satisfy their communication fulfillment.

## **2. Literature Review**

### **2.1 Communication Anxiety**

Anxiety is a generalized or unspecified sense of disequilibrium. People experience some degree of anxiety whenever they communicate with others (Wang & Han, 2009). People tend to be anxious due to fear of four negative consequences namely negative self-conceptions, negative behavioral consequences, negative evaluations by strangers, and negative evaluations by members of their in groups

when they're interacting with strangers according to Gudykunst (1992). A significant number of people tend to avoid situations of public speaking, and an even greater number of people cannot perform as effectively as they otherwise can due to anxiety and stress.

Communication apprehension is a term often used synonymously with 'communication anxiety'. It is one of the major reasons an individual might be unwilling to communicate. Richmond & McCroskey (1989) defined communication apprehension as "an individual's level of fear of anxiety associated with either real or anticipated communication with another person or persons" (p. 37). This fear can range in scope from a trait-like predisposition to a state anxiety in a given context and/or situation.

A sizable body of research exists on communication apprehension. It is widely studied in many fields, for example, in medicine and health. Booth-Butterfield Chory, and Beynon (1997) found that people suffering CA will probably communicate less effectively with their health care providers about their health problems" (p. 246). MacIntyre and Thivierge (1995) have found the linking up of communication apprehension to personality traits. They asserted that "global traits of extraversion, emotional stability, and intellect were significantly correlated with public speaking anxiety" (p. 125).

Many negative "outcomes" were found correlated with high CA in researches with American students. In terms of "sociability, composure, competence, extroversion, social attraction, and desirability as an opinion leader", McCroskey and Richmond

(1976) found that high CA individuals are perceived negatively (as compared to people perceived to be more willing to communicate) (p. 20). Several studies indicate that individuals with high CA think less of themselves and are viewed less favorably by others (e.g., Colby, Hopf, Ayres, 1993; Hawkins & Stewart, 1991; McCroskey & Richmond, 1976).

## **2.2 Unwillingness-to-communicate**

Unwillingness-to-communicate is conceptualized as “a chronic tendency to avoid and/or devalue oral communication and to view the communication situation as relatively unrewarding” (p. 60) by Burgoon (1976). Former researches demonstrated that unwillingness-to-communicate has linked to anomia, alienation, introversion, low self-esteem, and high communication apprehension (Burgoon, 1976). The most popularly used scale ‘Unwilling-to-communicate Scale’ (UCS) is also created by Burgoon (1976). It is a 20-item measure and contain two-dimension: (a) Approach-Avoidance (USC-AA), which refers to “the degree to which individuals feel anxiety and fears about interpersonal encounters and are inclined to actively participate in them or not” (p. 63), and it predicts respondents’ total participation, information giving, information seeking, and satisfaction with the decision (Burgoon, 1977). The other dimension is (b) Reward (USC-R), which reflects “the degree to which people perceive that friends and family don’t seek them out for conversation and opinions, and that interactions with others are manipulative and untruthful”



(Burgoon and Hale, 1983, p. 240), and it predicts individual members' satisfaction with the decision (Burgoon 1977).

Unwillingness-to-communicate has been applied to mass media research (e.g., Armstrong and Rubin, 1989) and Internet use (e.g., Papacharissi, 2002; Papacharissi and Rubin, 2000). One study conducted by Armstrong and Rubin (1989) found that, as compared with non-callers, talk radio callers were less willing-to-communicate in face-to-face interaction and perceived face-to-face communication to be less rewarding. Similarly, Papacharissi and Rubin (2000) indicated that Internet users who were socially anxious and avoided face-to-face interaction, chose the Internet as a functional alternative channel to satisfy their need for interpersonal communication. In addition, it was also found that UC-Reward had a positive correlation with information seeking and a negative correlation with interpersonal utility. It suggests that those who felt valued in their interpersonal environment considered the Internet to be primarily an informational tool, whereas those who felt less valued in their face-to-face interaction turned to the Internet as an alternative communication tool.

In Ma and Leung's (2005) recent study, it is found that people who are 'more willing to participate in real life communication tend to disclose more intimately, positively, and to a greater extent about themselves in ICQ; whereas, people who find real life communication un-rewarding would tend to be more dishonest, negative, less desirable, and less open in disclosing their opinions and beliefs' (Leung, 2007). However, it is interesting to find, in Leung's further study, that 'people who were socially anxious and were unwilling-to-communicate face-to-face appeared to be

those who spent less time, and not more, using SMS' (Leung 2007). Recently Sheldon's (2008) concluded in her study that 'people who are involved in online relationships are those who are willing to communicate in real life' (Sheldon, 2008). Her study results showed that socially anxious individuals are more likely to form relationship in the online community. In light of this result, we can hypothesises that offline communication anxiety, will lead to the tendency of communication willingness on the Internet, and then impact on the Internet usage. Therefore, the first hypothesis in this study addressed the relationship between communication anxiety and online unwillingness-to-communicate.

H1: Internet users who score high on communication anxiety will have stronger willingness to communicate on the Internet (i.e., communication anxiety has a negative relationship with online unwillingness-to-communicate).

## **2.3 Impression Management**

The term "impression management" is usually used interchangeably with "self-presentation". Self-presentation as conceptualized here builds on Goffman's (1959) theories of identity and social performance. Goffman's thesis is that self-presentation is the intentional and tangible component of identity. Social actors engage in complex intra-self negotiations to project a desired impression. This impression is maintained through consistently performing coherent and complementary behaviors (Schlenker, 1975, 1980; Schneider, 1981). Goffman (1959)

terms this process impression management. Impression management refers to the process of influencing the impressions an audience forms about oneself. Other people's perceptions of us play a significant role in our lives; they influence our relationship, shaping the rewards we receive. In addition, Leary (1995) stated in his book that virtually everyone thinks about other people's impressions of him or her from time to time and some people worry a great deal about how others regard them. Our daily behavior, more or less, deeply influenced by impression management, concerns even our initial purpose is not impression management (Leary, 1995). Impression management holds various application in social behavior, as well as many factor have been hypothesized to relate to it. Leary (1995) also conceptualized a model to explain the motivation and style that people manage their public image. The three-stage model introduced two components would be considered in the integrated impression management process: impression motivation and impression construction, and they are discrete but interrelated. O'Sullivan (2000) developed an impression management model to outline the functional and strategic role of communication choice in social relationships.

Mnookin (1996) first concluded online impression management in her online community study, she stated impression 'need not in any way correspond to a person's real life identity; people can make and remake themselves, choosing their gender and the details of their online presentation' (1996). Online communications are characterized by a range of attributes that distinguish them from offline interactions, especially, anonymity. Joinson (2003) argued that impression

management opportunities come with the visual anonymity of the medium, because visually anonymous online communication provides Internet users much higher 'degree of freedom'. Besides visual anonymity, managed anonymity such as negotiable gender, age and ethnicity also be explicitly invited and required by online contexts. In previous research, some of these managed anonymity behavior have been examined, involving the choice of screen name (Bechar-Israeli, 1996; Chester, 2004), gender selection (Chester, 2004; Roberts and Parks, 1999; Turkle, 1995), and the role of the character description (Chester, 2004; Turkle, 1995).

Researchers also believe that certain social and material goals push people to manage impression in the real world, such as securing a job at an interview or attracting someone enough to get a date, development of identity and maintenance of self-esteem. While in the online world, researcher (Turtle, 1995) has ever examined the online impression management motivation. Findings suggest that motivation included a desire to build up relationships, express unexplored parts of identity or aspects that are inhibited in face-to-face interactions. Turtle (1995) also concluded that people are driven more by this desire to develop identity than a wish to deceive or manipulate. And these goals appear to be self-knowledge.

The high degree of freedom in online community gives users the opportunities of alternative presentations. Many researchers, including Wallace (1999) and Danet (1996), all support this view. And further studies reported that misrepresentations were more likely online than offline and were most often related to physical appearance and age (Cornwell and Lundgren, 2001). Some of the scholars noted that

impression management online offered opportunities to present highly desirable self-image and provided a chance for wish-fulfillment (Curtis, 1997; Reid, 1994; Romano, 1999). Chester (2004) used a two-stage mixed-method design to examine the issues of impression management online.

Since online community was proved as a free space for users to manage new expression, so that we can hypothesize that people, who have social anxiety in real life, will be more likely to manage their desirable impression online to make up for their dissatisfied impression in offline world. This study also tests the relationship between online impression management and Internet usage. Therefore, another two hypotheses is launched here:

H2: People who suffering communication anxiety are more likely to manage their new impression on the Internet. That is, communication anxiety is positive relate to online impression management.

H3: People who communicate more in the online world tend to have stronger degree of impression management. That is, online unwillingness-to-communication has negative relationship with online impression management.

In addition, demographics cannot be neglected when discussing the online behavior including different Internet platform usage, such as use time and disclosure frequency, will be also influenced by demographics. Therefore, the relationships between demographics and communication anxiety, online unwillingness-to-communicate, online impression management and different Internet platforms usage

were asked here.

RQ1: What are the relationships between demographics and communication anxiety, online unwillingness-to-communicate, online impression management and different Internet platforms usage?

## **2.4 Self-disclosure**

Self-disclosure is conceptualized as 'process of making the self known to others' (Jourard and Lasakow, 1958). It contains various purposes including enhancing mutual understanding (Laurenceau et al., 1998), and building up trust by making the disclosure more vulnerable (Rubin, 1975) because emotional expression easily make others moved and reduce the strangeness.

Internet, as the most important new technology in the 21st century, might well change the demands upon people to 'disclosing personal information to another person online might not involve the increased vulnerability that usually follows self-disclosure of personal information offline' (Ben-Ze'ev, 2003). Moreover, Internet changes the scope of personal information that can be disclosed or collected. A rapidly increasing body of experimental and anecdotal evidence suggests that CMC and general Internet-based behavior can be characterized as containing high levels of self-disclosure. Rheingold (1993) argued that 'new relationships can be formed in cyberspace, and the medium will be a place where people often end up revealing themselves far more intimately than they would be inclined to do without the

intermediation of screens and pseudonyms'. Wallace (1999) claims that 'the tendency to disclose more to a computer is an important ingredient of what seems to be happening on the Internet'. Parks and Floyd (1996) also found that 'people report disclosing significantly more in their Internet relationship compared to their real life relationships'. McKenna and Bargh (1998) argue that 'participation in online newsgroups give people the benefit of disclosing a long secret part of one's self'.

Explanations for high levels of self-disclosure in person-to-person CMC have tended to focus on the psychological effects of anonymity (Sobel, 2000). Theoretically, it has been argued that anonymity in CMC works by replicating a 'strangers on the train' experience (Bargh et al., 2002), promoting private self-awareness and reducing accountability concerns (Joinson, 2001), creating a need for uncertainty reduction (Tidwell and Walther, 2002) or a combination of the media and the process of interaction itself (Walther, 1996).

Consistent with Kraut et al. (1998), Papacharissi and Rubin (2000) found that Internet users who were less satisfied with their lives and who used the Internet for interpersonal utility reasons had a greater affinity with the Internet. Research findings have also shown that loneliness is inversely related to self-disclosure in the dimensions of positive–negative, honesty, and amount (Leung, 2002).

Since the Internet affords a level of anonymity that can reduce feelings of discomfort one may experience in face-to-face communication, we can hypothesize that the people with certain communication anxiety may feel less shy and embarrassed in the anonymous online world and have more courage to disclose

themselves. In addition, online self-disclosure enriches or even alters one's image so that it can be seen as one kind of impression management. In other words, the people who incline to manage his/her expression online that he/she will self-disclosure more online so that other person can get more information about him/her than to read about him/her again. Therefore, we asked two research questions as follows:

RQ2: What are the relationships between the different dimensions of online self-disclosure and communication anxiety, online unwillingness-to-communicate, and online impression management?

RQ3: To what extent can communication anxiety, online unwillingness-to-communicate, online impression management, and demographics predict online self-disclosure in terms of (1) intended disclosure, (2) amount, (3) positive–negative nature, (4) control of depth, and (5) honesty/accuracy on the Internet?

### **3. Methods**

#### **3.1 Sampling**

A questionnaire survey, using a purposive sampling method, was conducted in this study. The target of this study was Internet users aged 16–35 because it is observed that students and young office workers use Internet most often. To reach this pool of people, a web-based survey questionnaire were created on <http://www.sojump.com/jq/217955.aspx> and sent to the researcher's QQ list composing of about 200 classmates and friends. In turn, all of the respondents were



encouraged to send the questionnaire link to their own mailing lists after completion. Participation in this research was entirely voluntary. The questionnaire was written in English and conducted in Chinese. The sampling process lasted for 1 month from 21<sup>st</sup> March to 19<sup>th</sup> April 2010.

The total number of responses was 406, including 5 invalid ones. The female participants made up 56.40% and male 43.60%. Among them, 22.66% aged 20–22, and 62.07% aged 23–25. With regard to education, 59.36% had achieved bachelor degree or still were undergraduate students, 33.51% had attained master degree or higher levels. Meanwhile, majority (54.93%) of the participants were full time students without any income.

## **3.2 Measures**

### **3.2.1 Communication Anxiety**

Communication Apprehension Inventory (CAI) developed by Booth-Butterfield and Gould (1986) was used in this study. This inventory really comprises two separate but related scales designed to measure Trait and State communication apprehension. Only Form Trait was selected to be used on the questionnaire. Form Trait assesses persons' predispositions to experience anxiety in three generalized context: dyadic encounters, small groups, and public speaking performances (Booth-Butterfield and Gould, 1986). On the Form Trait, respondents indicated their levels of communication anxiety by responding to 21 statements. A 5-point Likert

scale was adopted with 5 = strongly agree and 1 = strongly disagree. The Cronbach's alpha of all the items was high at 0.864.

### **3.2.2 Unwillingness-to-communicate**

A 20-item Unwillingness-to-Communicate Scale (Burgoon, 1976) was used in this study. It included the dimensions of Approach-Avoidance (UCS-AA) and Reward (UCS-R), each with 10 items. This scale has been modified to adapt to the online context test. Low UCS-AA scores meant that a respondent was anxious or fearful about interpersonal encounters, whereas low UC-Reward scores implied that respondents found communication less rewarding, felt less valued, and were less sought out for conversation and opinions by friends and family. To be consistent, a 5-point Likert scale was adopted with 5 = strongly agree and 1 = strongly disagree. Reliability alpha for the UCS-AA dimension was 0.773, whereas the Cronbach's alpha for the UC-Reward dimension was 0.687.

### **3.2.3 Impression Management**

The Self-monitoring Scale (Snyder, 1974) was used in this study. The Self-Monitoring Scale is the most popular measure of impression management behavior. The Self-Monitoring Scale most directly assesses the degree to which people act like social chameleons. It measures the extent to which individuals in social situations actively monitor and control their public behaviors and appearances.

However, this scale has to be modified to adapt to the online context test and updated to follow the reality. The original scale consists of 25 items but only 10 items were selected and modified to adapt to online situation test in this study. To be consistent, a 5-point Likert scale was adopted with 5 = strongly agree and 1 = strongly disagree. Its reliability of the scale was unsatisfactory with alpha equal to 0.568.

### **3.2.4 Self-disclosure**

A Revised Self-Disclosure Scale (RSDS), developed by Wheelless and Grotz (1976), was employed in this study. This scale also has been modified to adapt to the online context test and updated to follow the reality. Five dimensions of self-disclosure in online communication were measured by 31 items using a 5-point Likert scale with 5 = strongly agree and 1 = strongly disagree. Five dimensions were derived to constitute an extensive connotation of self-disclosure including: (1) intent to disclose, (2) amount of disclosure, (3) positive–negative nature of disclosure, (4) honesty/ accuracy of disclosure, and (5) control of depth in disclosure. It is reported in Table 1 that the reliabilities alphas for the RSDS dimensions are as follows: intend, .596; amount, .609; positive-negative, .678; control of depth, .776; and honesty/ accuracy, .741.

< Insert Table 1 about here >

### **3.2.5 Different Internet Platform Usage**

Instant Messenger, Blog, SNS website, and BBS were considered as four

different platforms here. Different Internet platform usage was tested by 2 questions: (1) how many times a day do you spend in the following platforms; (2) how frequent do you disclose your life in the following platform. For question (1), it was scored 1=less than 2 hour, 2=2-5 hours, 3=5-10 hours, 4=10-15 hours, 5=15-20 hours, and 6=more than 20 hours. For question (2), it was scored 1=rarely, 2=occasionally, 3=frequently, 4=often, and 5=always. Higher score in first question implied that the respondent spend more time on the platform, whereas higher score in the second question mean that the respondent disclose more information about herself or himself on the platform.

### **3.2.6 Demographics**

The demographics of the Internet users included their age, gender, education, and income.

## **4. Findings**

### **4.1 Hypothesis Tests**

H1 boldly predicted that if one person suffers communication anxiety in real life, he or she will turn to the Internet, that is, more willing to communicate more on the Internet. However, H1 has been strongly opposed in this study. Results in Table 2 showed significant positive relation between communication anxiety and

unwillingness-to-communicate both in dimensions of approach-avoidance and reward. That means people who have higher degree of communication anxiety in real life, they are also unwilling to communicate on the Internet, as “the rich get richer, the poor get poorer” theory can tell. It indicated that people suffering communication anxiety do not regard online world as a brand-new free world for casual communication. Most of them believe that online world build up an extension part of real life that it cannot be isolated from real world. As for communication function, the Internet can be treated as a new platform instead of a new world because most of the time we are still communicate with people around us. Therefore, we cannot easily perform totally different between online and offline. In addition, the relationships between approach-avoidance ( $r = .372, p < .001$  in dyadic;  $r = .369, p < .001$  in small group;  $r = .322, p < .001$  in public speaking) are much stronger than reward ( $r = .165, p < .01$  in dyadic;  $r = .200, p < .001$  in small group;  $r = .121, p < .05$  in public speaking) to the communication anxiety. From this finding, it is found that the reasons of unwillingness-to-communicate on the Internet mainly lie on the personal character rather than the communication effect which the Internet maybe can improve a little bit owing to the features of being invisible. H2 hypothesized that there was a positive relationship between communication anxiety and impression management on the Internet. However, no significant link was found between these two factors. Thus H2 was not supported. H3 predicted a negative relationship between unwillingness-to-communicate and impression management. As stated in Table 2, impression management was significantly related to dimension of approach-avoidance in

unwillingness-to-communicate ( $r = -.143, p < .01$ ). It can be concluded that people who have no fears about expressing themselves will incline to packaging themselves with a positive impression on the Internet. In other words, the main purpose of talking more on the Internet was demonstrated as impression management. Therefore, H3 was supported in this study.

< Insert Table 2 about here >

## 4.2 Demographics and Online Behavior

Relations between demographics and communication anxiety, unwillingness-to-communicate, impression management were tested and results are represented in Table 3. According to the tests, males feel less rewarded when communicating ( $r = .214, p < .001$ ) on the Internet. This may be due to the characters of males themselves, who are independent, tough-minded, and unusually ask help from others when encountering problems, so that males do not expect much to look for support and comfort from communication with friends or families. Furthermore, males were found higher degree of impression management on the Internet ( $r = .100, p < .05$ ) because they are more anxious to keep up appearances. The findings indicated that older people suffer less anxiety in small group communication ( $r = -.101, p < .05$ ) and less unwillingness-to-communicate in dimension of approach-avoidance ( $r = -.104, p < .05$ ) under the Internet environment. It is believed that older people are more experienced in daily communication which included discussion while working and

dealing with the dissension and conflict. From the findings stated above, higher education level can lead to a lower unwillingness-to-communicate in dimension of reward ( $r = -.101, p < .05$ ) and less anxiety in small group communication ( $r = -.112, p < .05$ ). Specially, there is an interesting finding that income is strongly related to communication anxiety under all three conditions—dyadic ( $r = -.099, p < .05$ ), small group ( $r = -.106, p < .05$ ) and public speaking ( $r = .166, p < .001$ ). As we expected, higher income indicated higher social status and achievement, which provide people more encouraged, self-confident and sense of superiority in communication.

As shown in Table 3, relations analysis between demographics and different platform usage were conducted also. The results suggested that females are significantly more frequent to disclose their personal feelings, emotions, and experiences on the Internet, especially in Instant Messenger ( $r = -.131, p < .01$ ) and Blog ( $r = -.260, p < .001$ ) because females are more sentimental and talkative than males, and Instant Messenger and Blog were also more private place than SNS and BBS. In spite of this, age were found to related to both time spent in the Instant Messenger ( $r = .103, p < .05$ ) and BBS ( $r = .114, p < .05$ ), and frequency of disclosure in SNS ( $r = -.122, p < .05$ ). In addition, significant relationships were found between education and disclosure frequency in SNS ( $r = .16, p < .001$ ). This means that better educated people are more confident to express their opinions and beliefs in social network.

< Insert Table 3 about here >

### 4.3 Correlation and Regression Analysis of Self-Disclosure

Results from the correlation analysis in Table 4 show that communication anxiety is significantly but negatively related to the intended disclosure and honesty dimensions of self-disclosure on the Internet. This indicated that people who are less communication anxious tend to be honest and disclose themselves more intimately. Specifically, people who have heavier anxiety in dyadic communication tend to disclose very little on the Internet ( $r = -.100, p < .05$ ) while those who have heavier anxiety in small group and public speaking communication tend to disclose more negative and undesirable feelings on the Internet. As expected, unwillingness-to-communicate is significantly and negatively related to every dimensions of self-disclosure on the Internet. This means that people who are willing to participate in real-life communication and find their real life communication rewarding tend to be more honest, positive, and spend more time sharing their opinions and beliefs in their online self-disclosures. Furthermore, impression management was also strongly related to amount ( $r = .163, p < .001$ ), control of depth ( $r = .232, p < .001$ ), and honesty ( $r = -.131, p < .01$ ) dimensions of self-disclosure on the Internet. This suggests that in order to manage impression on the Internet, people will disclose more and fully information about themselves but less honest to do some cover-up work. Demographic differences were also found, males were inclined to express in-depth feelings, emotions, experiences and opinions on the Internet than females.

Regression results in Table 4 represented that intended disclosure of self-disclosure on the Internet is significantly predicted by approach-avoidance of



unwillingness-to-communicate ( $\beta = -.388, p < .001$ ). This suggests that people who have fears and socially anxious about communication with others are with less intention to disclose anything about themselves on the Internet. However, no significant relationship between communication anxiety, impression management and intended disclosure was found. The regression equation explained 21.3% of the variance. The amount dimension of self-disclosure on the Internet was analyzed next and two significant predictors were approach-avoidance of unwillingness-to-communicate ( $\beta = -.183, p < .01$ ) and impression management ( $\beta = .151, p < .01$ ). This suggests that the less fearful and the stronger will set up a new me in the online world to lead to a more fully disclosure of opinions and beliefs on the Internet. But only a total of 8.7% of the variance was accounted for. Furthermore, approach-avoidance of unwillingness-to-communicate ( $\beta = -.165, p < .01$ ) and reward of unwillingness-to-communicate ( $\beta = -.151, p < .01$ ) were found to be significant predictors for the positive–negative dimension of self-disclosure. This indicates that people who are socially anxious or feeling less rewarding with online communication are those who are more negative about themselves and about disclosing their thoughts and feelings on the Internet. The regression equation contributed 8.1 percent of the variance only. Control of depth in self-disclosure on the Internet was significantly predicted by approach-avoidance of unwillingness-to-communicate ( $\beta = -.172, p < .01$ ), reward of unwillingness-to-communicate ( $\beta = .125, p < .05$ ) and impression management ( $\beta=0.190, p=0.000$ ). This shows that the less fearful and less rewarding one finds in online communication, the deeper the persons will

self-disclose their opinions and beliefs on the Internet. In addition, these people tend to be more willingness to manage their online impression. The three predictors explained 10.5% of the variance. The honesty dimension of the self-disclosure was analyzed last. Results showed that small group communication anxiety ( $\beta = -.190, p < .01$ ), approach-avoidance of unwillingness-to-communicate ( $\beta = -.178, p < .001$ ), reward of unwillingness-to-communicate ( $\beta = .236, p < .001$ ) and impression management ( $\beta = -.147, p < .01$ ) were all significant predictors. Up to 20.7% of the variance was accounted for.

< Insert Table 4 about here >

## 5. Conclusions and Discussions

This study investigated the Internet users and examined their online communication platforms usage and helped to clarify our understanding of the relationship among real-life communication anxiety, online unwillingness-to-communicate, online impression management, online self-disclosure, and Internet platform usages. Based on findings above, some important and instructive conclusions can be summarized here.

Firstly, the main purpose of this study is to test the hypotheses. Unexpectedly, real-life communication anxiety was strongly and positively related to online unwillingness-to-communicate. This means that if one suffered communication anxiety, he or she will not likely to communicate whether in the real life or online world.

For this kind of people, visual anonymous and concealed identity of Internet cannot reduce their social anxiety and fear, as well as rebuild their self-esteem in the cyberspace. In contrast, a talkative person will have strong willingness to communicate on the Internet. However, it also suggested that people who always keep silence to prevent tension, have a high level of impression management intention on the Internet. It indicated there are a group of Internet users, attaching great importance to their impression, which have a high degree of unwillingness-to-communicate to avoid the chance of becoming tongue-tied but high intention to manage their impression in public. In addition, SNS becomes the most popular platform compared with others for impression management. It can be explained as that SNS provide multimedia ways for users to disclose their information, opinions, emotions, feelings, beliefs, and interests. Therefore, one can build up a multifaceted impression for others in SNS.

Secondly, gender differences distinctly exist in online unwillingness-to-communicate, impression management, and self-disclosure. Findings confirm that females disclose more about themselves on the Internet, as well as they feel more rewarding in online communication. This result is similar with the conclusions of Thomson and Murachver (2001) which argued that females tend to post more references to emotion, more personal information about themselves, more modals or hedges and more intension adverbs. For the choosing of self-disclosure platforms, older people tend to express opinions and feelings in their own Blogs while younger students seem to show preference to SNSs. As emerging Internet applications in

recent years, SNS websites make numbers of younger students more indulged and even addicted to the virtual society. Latest news and updates of friends and classmates around are strong attraction for the younger students, especially when they enter a brand new environment. At the same time, they are inclined to play active roles in SNS platform and let somebody followed, or make themselves under the spotlight in this new environment.

Besides, communication anxiety and online self-disclosure are negative related from the findings. It is concluded that people who are not anxious and feared in communication are more able to express their "true" selves and positive feelings on the Internet. Impression management was found to relate to amount, control of depth, and honesty of self-disclosure. People, who have strong inclination of impression management, seem to reveal more personal-even quite intimate-details about their lives in this very public forum. Moreover, they are usually motivated to express dishonest and inaccurate information to selectively promote themselves by covering up disadvantages.

Results from regression analysis shows that the intent in online self-disclosure was negatively predicted by approach-avoidance in unwillingness-to-communicate. This indicated that people, who are not afraid of contact with others, will disclose more initiatively and willingly about their life on the Internet. Furthermore, unwillingness-to-communicate and impression management are proved as predictors to control of depth in online self-disclosure. It suggested that in order to well manage one's impression, open and full expression of details in life is inevitable and necessary.

All these three factors—communication anxiety, unwillingness-to-communicate, and impression management were also identified as negative predictors for the positive–negative dimension of online self-disclosure. People who suffered communication anxiety cannot hide their pessimism and self-contempt when deliver themselves on the Internet. As for them, Internet is considered as a place to catharsis than sharing the joys of achievement in life.

Several limitation of this study should be recognized. First, the self-selected convenient sampling—snowball sampling conducted in this study was likely to represent a bias of portion of the population as a whole and the representativeness of the research cannot be ascertained. Owing to snowball sampling, respondents were mostly located in Hong Kong, Beijing and most of them are student s without any income. Second, the original measures are suitable for real-life situation test, but the measures used on this questionnaire are changed for online usage test, which are self-reported and not appropriate enough. Strictly speaking, the alpha values of the scales are not satisfactory. Thirdly, the scales used for designing the questionnaire were all in English, but the questionnaire for sampling was in Chinese, which may cause translation inaccuracy and disadvantageous influence on the research finding. Fourth, since the questionnaire length was too long to complete, futile answers occurred to some extent.

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**Table 1. Analysis of Self-Disclosure on the Internet**

<b>Self-Disclosure on the Internet</b>	<b>Mean</b>	<b>SD</b>	<b>Alpha</b>
<b><i>Intended Disclosure</i></b>			0.60
1. When I wish, my self-disclosures on the Internet are always accurate reflections of who I really am.	3.64	0.914	
2. When I express my personal feelings on the Internet, I am always aware of what I am doing and saying.	3.65	0.902	
3. When I reveal my feelings about myself on the Internet, I consciously intend to do so.	3.19	1.023	
4. When I am self-disclosing on the Internet, I am consciously aware of what I am revealing.	3.60	0.936	
5. I do not often talk about myself on the Internet.	2.84	1.037	
<b><i>Amount</i></b>			0.61
6. My statements of my feelings on the Internet are usually brief.	2.64	0.957	
7. I usually talk about myself on the Internet for fairly long periods at a time.	2.70	0.971	
8. My conversation on the Internet lasts the least time when I am discussing myself.	2.95	0.947	
9. I often talk about myself on the Internet.	2.62	0.946	
10. I often discuss my feelings about myself on the Internet.	3.00	1.005	
11. Only infrequently do I express my personal beliefs and opinions on the Internet.	3.06	0.993	
<b><i>Positive-Negative</i></b>			0.68
12. I usually disclose positive things about myself on the Internet.	3.29	0.906	
13. On the whole, my disclosures about myself on the Internet are more negative than positive.	3.33	1.044	
14. I normally reveal "bad" feelings I have about myself on the Internet.	3.18	1.035	
15. I normally "express" my good feelings about myself on the Internet.	3.20	0.862	
16. I often reveal more undesirable things about myself than desirable things on the Internet.	3.20	0.992	
17. I usually disclose negative things about myself on the Internet.	3.32	1.048	
18. On the whole, my disclosures about myself on the Internet are more positive than negative.	3.24	0.946	

**Table 1. Analysis of Self-Disclosure on the Internet (Cont.)**

<b><i>Control of Depth</i></b>			0.78
19.	I intimately disclose who I really am, openly and fully in my conversation on the Internet.	3.21	0.889
20.	Once I get started, my self-disclosures last a long time on the Internet.	2.78	0.967
21.	I often disclose intimate, personal things about myself without hesitation on the Internet.	2.44	1.035
22.	I feel that I sometimes do not control my self-disclosure of personal or intimate things I tell about myself on the Internet.	2.59	1.110
23.	Once I get started, I intimately and fully reveal myself in my self-disclosures on the Internet.	2.66	0.970
<b><i>Honesty-Accuracy</i></b>			0.74
24.	I cannot reveal myself when I want to on the Internet because I do not know myself thoroughly enough.	3.39	0.961
25.	I am often not confident that my expressions of my own feelings, emotions, and experiences are true reflections of myself on the Internet.	3.46	0.956
26.	I always feel completely sincere when I reveal my own feelings and experiences on the Internet.	3.16	0.993
27.	My self-disclosures on the Internet are completely accurate reflections of who my really am.	3.12	0.954
28.	I am not always honest in my self-disclosures on the Internet.	3.17	0.935
29.	My statement about my feelings, emotions and experiences on the Internet are always accurate self-perceptions.	3.39	0.826
30.	I am always honest in my self-disclosures on the Internet.	3.39	0.885
31.	I do not always feel completely sincere when I reveal my own feelings, emotions, behaviors or experiences on the Internet.	3.23	0.989

Scale used: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree. N=401.

**Table 2. Correlations among Communication Anxiety, Online Unwillingness-to-Communicate, and Online Impression Management**

	Communication Anxiety (CA)		Online Unwillingness to Communicate (UCS)			Online Impression Management (IM)
	Dyadic	Small Group	Public Speaking	Approach-Avoidance	Reward	
<b>CA</b>						
Dyadic		.534***	.573***	.372***	.165***	.040
Small Group			.671***	.369***	.200***	.002
Public Speaking				.322***	.121*	.077
<b>UCS</b>						
Approach-Avoidance					.341***	-.143**
Reward						.069
<b>IM</b>						

Notes:

Scales used: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree.

# $p \leq .1$ ; \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; N=401.

**Table 3. Correlation between Demographics and Communication Anxiety, Online Unwillingness-to-Communicate, Online Impression Management, Online Self-Disclosure and Different Internet Platforms Usage**

	Demographics			
	Gender <sup>c</sup>	Age	Education	Income
<b>Communication Anxiety</b>				
Dyadic	.028	-.058	-.040	-.099*
Small Group	-.000	-.101*	-.112*	-.106*
Public Speaking	-.087#	-.063	.015	-.166***
<b>Online Unwillingness to Communicate</b>				
Approach-Avoidance	-.081	-.104*	-.049	-.039
Reward	.214***	-.018	-.101*	.062
<b>Online Impression Management</b>				
	.100*	-.017	.056	-.031
<b>Time Spend in Different Internet Platforms Usage<sup>a</sup></b>				
Instant Messenger	-.017	.103*	.094#	.065
Blog	-.092#	.010	.038	.044
SNS	-.019	.037	.094#	-.048
BBS	-.013	.114*	.038	.044
<b>Frequency of Disclosure<sup>b</sup></b>				
Instant Messenger	-.131**	-.029	.044	-.036
Blog	-.260***	.014	.074	-.009
SNS	-.089#	-.122*	.160***	-.098#
BBS	-.035	.080	.006	.055

Notes:

<sup>a</sup> Time Spend in was coded 1=less than 2 hour, 2=2-5 hours, 3=5-10 hours, 4=10-15 hours, 5=15-20 hours, 6=more than 20 hours.<sup>b</sup> Frequency of Disclosure in was coded 1=rarely, 2=occasionally, 3=frequently, 4=often, 5=always.<sup>c</sup> Male was coded 1, and Female was coded 0.

Other scales used: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree.

# $p < .1$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; N=401.



Table 4. Regression analysis of Online Self-Disclosure

	Online Self-Disclosure									
	Intended Disclosure		Amount		Positive-Negative		Control of Depth		Honesty-Accuracy	
	r	$\beta$	r	$\beta$	r	$\beta$	r	$\beta$	r	$\beta$
<b>Communication Anxiety</b>										
Dyadic	-.212***	-.077	-.100*	-.056	-.096	.047	-.016	-.009	-.230***	-.075
Small Group	-.193***	-.055	-.058	.036	-.153**	-.059	-.005	.003	-.277***	-.190**
Public Speaking	-.122*	.094	-.043	.030	-.130**	-.038	-.000	.041	-.173***	.108
<b>Online Unwillingness to Communicate</b>										
Approach-Avoidance	-.439***	-.388***	-.229***	-.183**	-.228***	-.165**	-.145**	-.172**	-.306***	-.178***
Reward	-.231***	-.089	-.142**	-.094	-.213***	-.151**	.112*	.125*	-.331***	-.236***
<b>Online Impression Management</b>										
	.098	.050	.163***	.151**	-.029	-.043	.232***	.190***	-.131**	-.147**
<b>Demographic</b>										
Gender	-.023	-.036	-.019	-.033	.006	.023	.148**	.089	-.012	.040
Age	.026	-.024	-.004	-.025	.030	-.009	-.039	-.066	.080	.016
Education	.003	-.029	-.041	-.055	.030	.010	-.066	-.047	.039	-.008
Income	.035	.041	.041	.057	.025	.020	.049	.052	.072	.052
$R^2$		0.213		0.087		0.081		0.105		0.207
Adjusted $R^2$		0.193		0.064		0.058		0.082		0.187

## Notes:

- Male was coded 1, and Female was coded 0.
- Scales used: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree.
- \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; N=401