Research on the Privacy Concerns and Protection Behavior of Social Media—A Case Study of “WeChat”
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Abstract. Through the use of model IUIPC scale “privacy concerns”, to respondent the WeChat users for the survey questionnaire, discussed privacy concerns, privacy concerns factors that influence the behavior of the interaction between privacy. Currently, WeChat users generally have a higher risk perception of privacy, but the respondent did not try some basis of privacy protection behavior. The dimension of IUIPC scale –“anxious”, does effect on privacy concern without affecting the “degree of trust” and “awareness of privacy”. In privacy concerns, the effective variables are “gender”, “education” and “anxious”.

Introduction

According to TNS survey, WeChat is most widely used in instant message and chatting in China. Survey in July 2015 has showed that during 16-65 year-old users, WeChat penetration rate reached up to 68.6%. Due to Tencent’s survey[1] shows that WeChat has been completely penetrated into Chinese first-tier cities, as of September 2015, WeChat’s penetration rate in Beijing, Shanghai, Guangzhou, Shenzhen and other big cities has reached to 93%. That means almost everyone in there has a WeChat account and long-term using. WeChat can be seen as an important carrier which has truly subverted the traditional mode of transmission in recent years. It also breaks the traditional mode of one-way information dissemination. The spread of the audience from passive to active, can not only involved in the process of information transmission, but also can make use of WeChat platform for information production, processing and transmission. Now, WeChat is the most widespread use chatting APP in China.

But when we widely use Wechat, there are some problems arise immediately, such as the leakage of personal information. In the last few years, WeChat users prefer to post their photos and locations in “moments”, showing the whole way of life and personal information, privacy protection has become a significant value of social media development.

After constantly burst into We chat privacy problem, we tend to conduct a questionnaire that based on China’s WeChat users aiming at how their attitudes about privacy concerns and protection. We do a network form survey within 20 days, 352 valid questionnaires had return. We hope that through this research to understand how Wechatusers’ privacy concerns, factors affecting privacy concerns and protection behavior.

Literature Review

For understanding Wechatusers privacy concerns and the protection behavior, at the beginning of the research we do a large number of study about literature collection. Basis on the literature, there are three major dimensions in the review.

Privacy Concerns

Information privacy refers to “the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others” (Westin, 1967)[2]. To measure individuals’ concerns about information privacy, practitioners have
often used a one-dimensional global information privacy concern (GIPC) scale (Smith et al. 1996)[3]. Malhotra & Kim & Agarwal (2004) offer a theoretical framework on the dimensionality of Internet users’ information privacy concerns (IUIPC)[4]. The notion of IUIPC in terms of three factors—namely, collection, control, and awareness. The collection factor captures the central theme of equitable information exchange based on the agreed social contract. Meanwhile, the control factor represents the freedom to voice an opinion or exit. Finally, the awareness factor indicates understanding about established conditions and actual practices. In this study, we will use the IUIPC to frame the model.

Factors Affect Privacy Concerns

Self-efficacy in privacy management, which has yet to receive sufficient attention in research on SNS privacy, may help to explain why SNS users voicing their concern about privacy still behave as if unconcerned (Chen, H. T., & Chen, W. 2015)[5]. Gender and education can affect the online users privacy concerns in China, and a lots of researches showed that gender keep an important dimension in privacy concerns, compare with male, female pay more attention on their security of online privacy (D. M. Moscardelli, R. Divine, 2007. In this study, we will add gender, education and income, these three variables as covariate variables[6].

Privacy Protection Behavior

To protect privacy on SNSs, users can adopt strategies to control what information they would like to disclose and share and with whom, including adjusting their profile visibility, friending, and self disclosure (Ellison & Vitak & Steinfield, 2011)[7].

Therefore, we propose and proposed model like figure1:

H1: IUIPC (collection, control, awareness) leads to positive effects on WeChat privacy concerns.
H2: IUIPC (collection, control, awareness) leads to positive effects on WeChat privacy protection behavior.
H3: Covariate (education, income) leads to positive effects on WeChat privacy protection behavior.
H4: Male are more willing to share personal information on WeChat than female.

Figure 1. Proposed model.

Participants

An online survey within 20 days has been done and 352 valid questionnaires returned back. All the participants are WeChat long-term users in China. The final sample (N = 352) included 175 male and 177 female. Participants’ education degrees ranged from junior high school to PhD, and Participants’ income ranged from 1000RMB-10000+RMB.

Design

Personal Dispositions

We use Malhotra’s scale: IUIPC (Internet User Information Privacy Concern) to create the
questionnaire. During the survey design, three major variables are involved. “Collection”,
“Control”, and “Awareness”. Also, we use “Degree of trust”, “anxious” and “awareness of privacy”
to explain the variables. All the variables use Likert scale, scale from 1-5.

**Covariates**

Factors other than those mentioned previously may influence WeChat users’ reactions to
information privacy concerns. To control for those unknown effects, we have included several
covariates in the model. Specifically, we included three demographic characteristics: gender (Milne
and Rohm 2000), education (Culnan1995, Milne and Rohm 2000, Phelps et al. 2000, Wangand
Petrison 1993) and income[8,9,10].

**Analysis and Results**

**Main Direct Effects of Privacy Concerns**

We analyzed all the data via STATA and as a test of H1&H3, the independent variables are:
awareness of privacy, degree of trust, anxious, education and income. To determine the effect of
privacy concerns, the linear-regression analysis has done as follow. All the variables are
demonstrated in Table 1.

| Privacy Concerns | Coef.   | Std. Err | t      | p>|t| | [95% Conf. Interval] |
|------------------|---------|----------|--------|--------|---------------------|
| Income           | -.1420423 | .09262  | -1.53  | 0.127  | -.324776 to 0.0406915 |
| Education        | .1969174 | .0663658 | 2.97   | 0.003  | .0659816 to .3278531 |
| Degree of trust  | -.0112978 | .0778113 | -0.15  | 0.885  | -.1648148 to .1422192 |
| Anxious          | .3856504 | .1010876 | 3.82   | 0.000  | .1862106 to .5850902 |
| Awareness of privacy | .0877464 | .1041143 | 0.84   | 0.399  | -.1174649 to .2933577 |
| _cons            | .8023917 | .4362057 | 1.84   | 0.067  | -0.0582163 to 1.663   |

The relationship between “education”, “anxious” and “privacy concerns” appears positive
significant at the 5% significant level, so we can explain H1 is partly right. Education” and
“Anxious” can affect “privacy concerns”.

**Main Direct Effects of Privacy Protection Behavior**

As a test of H2, the independent variables are: degree of trust, anxious, education and income.
Table2 represents the linear-regression result.

| Behavior of protection | Coef.   | Std. Err | t      | p>|t| | [95% Conf. Interval] |
|------------------------|---------|----------|--------|--------|---------------------|
| Degree of trust        | .5478224 | .0840071 | 6.52   | 0.000  | .3820856 to .7135797 |
| Anxious                | -.2130164 | .1133645 | -1.88  | 0.062  | -.436686 to .0106532 |
| Awareness of privacy   | .1686177 | .1126158 | 1.50   | 0.136  | -.0535746 to .3908101 |
| _cons                  | 1.98821  | .4752225 | 4.18   | 0.000  | 1.050591 to 2.92583   |

The relationship between “degree of trust”, “anxious” and “awareness of privacy” appears
positive significant at the 5% significant level, so we can explain H2 is partly right. “Education”
and “Anxious” can affect “behavior of protection”.

**Discussion and Conclusion**

The research is aim to know Chinese WeChat users’ privacy concerns and protection through
the online survey. It partly proves the UIIPC’ rationality of social media, and extends the UIIPC scale
from the area of e-commerce to other social media ways.

According to the verification, the assumption of H1, H2and H3 are partly right. The dimension of
IUIPC scale—“anxious”, does effect on privacy concern without affecting the “degree of trust” and “awareness of privacy”. In privacy concerns, the effective variables are “gender”, “education” and “anxious”. And the variables do effect on privacy protection behavior are including gender, education, degree of trust and anxious. To the WeChat users, although they have higher awareness of privacy, but it does not pay any action of protection, which makes the WeChat use become need more attention to safety problems. Furthermore, WeChat users can adopt other strategies to protect their own privacy, such as self-control and keep a watchful eye on their social media.

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Reference