

Association for Information Systems

AIS Electronic Library (AISeL)

ICIS 2022 Proceedings

Cybersecurity, Privacy and Ethics in AI

Dec 12th, 12:00 AM

The Role of Psychological Ownership in Privacy Risk Compensation: A Moderated Mediation Model

Lijun Wang

University of Science and Technology of China, WLJ18764675349@mail.ustc.edu.cn

Jun Zhang

University of Science and Technology of China, is_junzhang@whu.edu.cn

Jingzhi Zhang

Beijing Normal University - Hong Kong Baptist University United International College, jingzhizhang@uic.edu.cn

ZHENG Xiabing

University of Science and Technology of China, isxzheng@ustc.edu.cn

Follow this and additional works at: <https://aisel.aisnet.org/icis2022>

Recommended Citation

Wang, Lijun; Zhang, Jun; Zhang, Jingzhi; and Xiabing, ZHENG, "The Role of Psychological Ownership in Privacy Risk Compensation: A Moderated Mediation Model" (2022). *ICIS 2022 Proceedings*. 8.
<https://aisel.aisnet.org/icis2022/security/security/8>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2022 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

The Role of Psychological Ownership in Privacy Risk Compensation: A Moderated Mediation Model

Short Paper

Lijun Wang

University of Science and Technology
of China
Hefei, Anhui, China
wlj18764675349@mail.ustc.edu.cn

Jun Zhang¹

Wuhan University
Wuhan, Hubei, China
is_junzhang@whu.edu.cn

Jingzhi Zhang

Beijing Normal University-Hong Kong
Baptist University United International
College
Zhuhai, Guangdong, China
jingzhizhang@uic.edu.cn

Xiabing Zheng

University of Science and Technology
of China
Hefei, Anhui, China
isxzheng@ustc.edu.cn

Abstract

Social media users tend to disclose a large amount of private information despite their high privacy concerns, which is termed as the privacy paradox in existing literature. Recent studies have found that privacy paradox can be explained by a privacy risk compensation process: users engage in privacy protection behaviors to cope with privacy threats, which in turn increase their privacy disclosure. However, it remains unclear under what condition the privacy risk compensation process can take place. In this study, we integrate the psychological ownership theory with risk compensation theory, and find that psychological ownership plays a moderation role in strengthening the privacy risk compensation. An online survey was conducted with 300 Facebook users, and our hypotheses were greatly supported. Our findings encourage social media platforms to provide more functional design elements to support users' privacy protection behaviors and satisfy their motivational needs of psychological ownership of privacy.

Keywords: Privacy paradox, privacy risk compensation, privacy protection, psychological ownership, moderated mediation effect

Introduction

With the widespread use of the mobile Internet, social media have become the main channels for people to obtain information, establish social relations, and maintain social activities in daily life (Qiu et al. 2021). According to Mohsin (2022), the number of daily active users of Facebook exceeded 2 billion in 2021. For heavy social media users, personal privacy information can be easily accessed and transmitted by others, which arouses great concern about information privacy. Most of the prior studies on online information disclosure have suggested that privacy concerns of social media users will negatively affect their privacy self-disclosure (Bansal and Gefen 2010; Lowry et al. 2011). Intuitively, with a higher degree of privacy concerns, social users are less likely to disclose their private information on social media.

¹ Corresponding author.

However, existing studies have also identified a counterintuitive positive association between privacy concerns and self-disclosure, which is termed as the *privacy paradox* in the information systems literature. There are often great discrepancies between users' privacy concerns and disclosing behaviors—technology users tend to disclose large amounts of private information about themselves during technology use, despite their high level of privacy concerns (Pavlou 2011; Smith et al. 2011). Users tend to disclose their data “as if they didn't care”, even if they declare to be highly worried about their privacy (Xu et al. 2011).

The positive association between privacy concerns and self-disclosure has been widely explained from the perspective of self-efficacy theory (Boss et al. 2015). Recently, some studies have argued that this positive association between privacy concerns and self-disclosure can also be explained by a privacy risk compensation process (Mousavi et al. 2020). Risk compensation refers to an increase in individuals' risk-taking behavior after the individuals successfully implement interventions to alleviate the risks (Westercamp et al. 2014). Accordingly, during the use of social media, a privacy risk compensation process takes place as follows: when a social media user perceives a high degree of privacy risks, the user will be more likely to cope with the potential threat by adopting privacy settings offered by the platform; after the privacy-protection behaviors have been performed, users become less careful and tend to disclose more information on social media (Brandimarte et al. 2013; Mousavi et al. 2020). Although this privacy risk compensation perspective has only been preliminarily validated, it shed some light for subsequent research to understand the complex dynamics between privacy protection and privacy disclosure during the long-term use of technology. During the use of social media, there could be either a positive or negative relationship between privacy concerns and private self-disclosure, depending on whether the underlying privacy risk compensation process can take place or not. The relationship will be positive only if there exists a strong and salient privacy risk compensation process, which can dominate and replace the direct negative effect. However, in the extant literature, the understanding of the boundary conditions when privacy risk compensation can take place is still limited. To fill this research gap, we extend the extant literature by investigating (1) the factors that facilitate the privacy risk compensation process and (2) the boundary conditions for the privacy risk compensation process to take place.

Specifically, we introduce psychological ownership of private information as the key stimulating factor for privacy risk compensation. Personal perception of the importance and necessity of taking protective measures is an important determinant that can arouse the risk compensation process. According to Westercamp et al. (2014), in the context of HIV prevention, whether the degree of compensatory risk behavior offsetting the vaccine effect depends on not only the vaccine efficacy and HIV virulence but also people's attention to personal health (McCormack et al. 2016). Extending this finding to our research context, we argue that in the decision-making of privacy disclosure, users' sense of ownership of personal information can be an important factor affecting the risk compensation process. We contend that people tend to pay more attention to information and things that are perceived to be owned by themselves, which facilitates their risk compensation behaviors. In line with our argument, recent research has shown that people's sense of ownership of private information can facilitate their adoption of defensive and protective measures against potential threats (Karahanna et al. 2018). Recognizing this research opportunity, we integrate risk compensation theory and psychological ownership theory to depict a full picture of the privacy risk compensation process during the use of social media. We propose the following research questions:

RQ1: How can the privacy paradox (positive relationship between privacy concerns on self-disclosure) be explained by the risk compensation process in users' privacy management?

RQ2: How does psychological ownership play a role in moderating the privacy risk compensation process?

In the following sections, we will first introduce our theoretical background of risk compensation and psychological ownership theory and then propose our research model and hypotheses. Empirical details, including how we conducted an online survey to test the moderated-mediation effect induced by psychological ownership of privacy, as well as the data analysis results, will also be briefly introduced.

Theoretical Background

Privacy Risk Compensation and Privacy Paradox

Risk compensation theory has been used in decision-making literature to understand individuals' risk-taking behaviors, such as risky investment behavior, substance use, risky sexual behavior, and so forth

(Hasanzadeh et al. 2020). Naturally, perceived risk has a negative impact on individuals' risk-taking. For example, the risk of getting infected with COVID-19 prevents people from traveling. However, perceived risks will also motivate individuals to adopt safety interventions to cope with the potential risk (Wilde 1989). Taking the COVID-19 vaccines and wearing face masks are the most commonly adopted safety measures to cope with the pandemic. Finally, after the safety intervention has been implemented, individuals will compensate for safety intervention by engaging in more risky behaviors. For example, people travel more frequently during the pandemic after their vaccination, which facilitates the spread of the COVID-19 pandemic (Troger and Caplan 2021). In this example, perceived risks of becoming infected will have a *direct negative influence* on people's risk-taking (i.e., traveling) behavior, as well as an *indirect positive influence* on their risk-taking behavior.

We can adapt risk compensation theory to the context of information privacy and understand the privacy paradox with a *privacy risk compensation process*. According to Karwatzki et al. (2017), during the use of social media, individuals will inevitably encounter potential privacy threats, such as unnecessary contact, identity theft, and inappropriate online information sharing. Online privacy concerns will lead users to adopt some privacy security settings to protect themselves from any potential privacy violation. After privacy settings, users will psychologically perceive that they are in a relatively safer environment, which encourages them to disclose more personal information. The privacy risk compensation process has been validated by prior studies, including Brandimarte et al. (2013) and Mousavi et al. (2020).

However, it remains unclear whether privacy risk compensation can fully offset the direct negative effect of privacy concerns and under which conditions the privacy risk compensation process will take place. Recognizing this limitation in extant literature, this paper will focus on the factors that can facilitate privacy risk compensation as well as the contingencies upon which the privacy risk compensation process is more likely to occur.

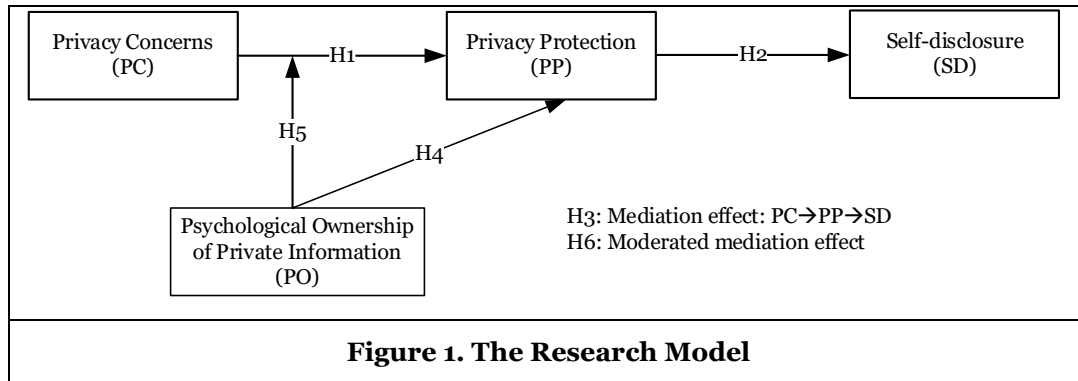
Psychological Ownership of Private Information

Research shows that taking privacy concerns as the main influencing factor affecting disclosure decisions cannot fully explain the multifaceted motives of privacy disclosure decisions (Crossler and Bélanger 2019). Online social media users may pay attention to the control of personal data for reasons other than privacy. For example, humans need to experience a sense of psychological ownership of tangible or intangible objects, which are considered to be a part of self-expansion (Baxter et al. 2015). Psychological ownership refers to the feeling of possession and is psychologically associated with the object of possession (Shu and Peck 2011). The sense of psychological ownership is similar to the individual feeling that the target object or part of the object of ownership is "their" state (Schwarz 1990).

Psychological ownership motivation refers to the driving force of participation behavior (Karahanna et al. 2018). Psychological ownership motivation reflects the collective motivational impetus offered by psychological ownership motives and explains the root cause of psychological ownership. Psychological ownership motivation has three dimensions—the need for having a place, the need for self-identity, and the need for efficacy and effectance (Karahanna et al. 2018). Therefore, this paper argues that users not only have legal ownership of the personal information shared on social media but also have a sense of psychological ownership of the information they disclosed because the personal information shared by users on social platforms can meet the above three needs of psychological ownership. First, the social media in which individuals have made many emotional and energy investments may be regarded by users as their own psychological "home". Second, by using social media, the digital content shared by users can convey the information of what kind of person I am to others, and then meet the psychological needs for self-identity. Third, positive feedback such as praise and views of "personal works" published by users on social media can help individuals meet their psychological needs for efficiency and effectiveness.

In short, private information about oneself, including the information shared on social media, is to some extent psychologically owned by the social media user. In the next hypothesis development section, we will further explain the effects of psychological ownership on influencing users' privacy risk compensation process and their privacy disclosure decisions.

Research Model and Hypothesis Development



The Privacy Risk Compensation Process

In the social media context, privacy is defined as the claim of individuals to determine for themselves when, how, and to what extent information about them is communicated to others (Tsai et al. 2011). Research shows that in the context of social media, users are more concerned about how other users can access and use their personal information without their consent than about how companies and third parties will use their information (Acquisti et al. 2015). Accordingly, from a control perspective, privacy concerns can be defined in a social media context as individuals' concerns about losing the ability to control personal information, including losing control over when to disclose, what to disclose, and to whom they disclose.

Although the use of social media has brought benefits to people and people have been satisfied in many aspects of social media, in the process of using social media, people will encounter potential privacy threats, such as unnecessary access, identity theft, and inappropriate online information sharing. These privacy threats have aroused people's concerns about potential and actual privacy risks. When a high degree of privacy concerns is perceived, users tend to cope with such concerns by engaging in privacy protection behaviors. Most commonly, social media users protect themselves by changing the privacy settings provided by the platform or proactively editing the content they have disclosed. Research has shown that privacy concerns can encourage users to carry out more privacy protection behaviors. For example, users can cope with privacy threats through a series of privacy security settings (Jiang et al. 2013). Taking Facebook as an example, the frequently used privacy protection methods include denying access from the public, audience management (i.e., allowing only selected friends to view the posts), hiding/editing/deleting the content one has posted, and giving inaccurate or misleading information about oneself (i.e., privacy misrepresentation) (Young and Quan-Haase 2013). These privacy protection behaviors can be regarded as protective interventions to cope with users' privacy concerns. Therefore,

H1: *Privacy concerns are positively associated with the privacy protection behaviors of social media users.*

Next, we argue that the implementation of privacy protection can further facilitate the self-disclosure of social media users. Self-disclosure refers to the act of revealing truthful personal information to others (Jiang et al. 2013). Social media users disclose personal information in exchange for social benefits. Self-disclosure in social media can have users develop positive personal images, build and maintain social relationships with others, and publicly express their ideas. According to risk compensation theory, individuals become more careful when they perceive greater risks but behave more carelessly when they feel more protected (Mousavi et al. 2020). For example, researchers found that drivers engaged in more dangerous driving behaviors when wearing seat belts (Evans and Graham 1991), and people traveled more frequently during the COVID-19 pandemic after getting vaccinated (Troger and Caplan 2021). In line with this logic, the implementation of privacy protection strategies can alleviate privacy threats and increase people's security perception about their information privacy. After privacy settings, users will psychologically perceive that they are in a relatively safe privacy environment, which reduces users' concerns about privacy disclosure. As a result, after privacy protection, individuals will engage in insecure privacy behaviors more frequently, such as sharing more private information on social media. Therefore,

H2: *Privacy protection is positively associated with the self-disclosure of social media users.*

The above H1 and H2 jointly describe a privacy risk compensation process, which consists of two steps. As the first step, privacy concerns can encourage users to adopt privacy protection strategies, and as the second step, the implementation of privacy protection further facilitates their self-disclosure behavior. Integrating the above arguments, we hypothesize:

H3: *Privacy protection positively mediates the influence of privacy concerns on self-disclosure.*

The Direct and Moderation Effects of Psychological Ownership of Privacy

Here, we argue that in addition to privacy concerns, users' psychological ownership of privacy also has a positive effect on the implementation of privacy protection measures. As mentioned earlier, for social media users, there are three motivational needs of psychological ownership of privacy, namely, the need for having a place, the need for self-identity, and the need for efficacy and effectance (Karahanna et al. 2018). Research shows that the level of psychological ownership largely depends on the degree of an individual's control over the target object. When people lose control over something they own, they will feel a strong sense of loss, frustration, and pressure (Morewedge et al. 2021). Hence, if a user perceives a higher level of psychological ownership of privacy, (s)he will be more afraid of losing control over private information. With a stronger willingness to prevent uncomfortable feelings (i.e., a sense of loss and emotional distress) and to maintain exclusive control over one's private information, the user is more likely to perform privacy protection behaviors during the use of social media. Thus, we hypothesize:

H4: *Psychological ownership of private information has a positive effect on privacy protection.*

Research on psychological ownership has found that when people perceive that the target object changes from "not mine" to "mine", individuals are more likely to take action to avoid the loss of control over the object (Baxter et al. 2015). Individuals with strong psychological ownership of the target object not only show higher value evaluation of the object but also have strong emotional attachment and control needs for the object (Lee and Chen 2011). Adapting this argument to our research context, when private information changes from the state of "not mine" to the state of "mine" psychologically, users can become more sensitive to the potential threats to that private information. When users have very strong psychological ownership of personal information on social media, they will highly value the information and demonstrate a strong emotional attachment to the private information. Given the same degree of privacy risks and privacy concerns, users will only take protective measures to cope with the threats when the information is perceived to belong to themselves. In contrast, for private information that is not perceived to belong to them, users tend to feel reluctant to take protective actions even if the information is at risk. In sum, a strong sense of psychological ownership strengthens the positive effect of privacy concerns on the implementation of privacy protection behavior. We hypothesize:

H5: *Psychological ownership of privacy will positively moderate the relationship between privacy concerns and privacy protection, such that the positive effect of privacy concerns on privacy protection will be stronger for users with higher psychological ownership of private information.*

The First-Stage Moderated Mediation Model

Finally, integrating H1, H2, H3, and H5, we formally propose the hypothesis about a *first-stage moderated mediation effect*. Namely, the indirect effect of privacy concern is mediated by privacy protection (i.e., H3 of the risk compensation process); this mediation effect is further moderated by users' psychological ownership of private information (i.e., H5).

In brief, H1, H2 and H3 jointly present a privacy risk compensation process, which serves as a potential explanation for the privacy paradox. Users' privacy protection plays a key mediation role in privacy risk compensation. However, we argue that such a privacy risk compensation process will not always occur. According to H5, for users with higher psychological ownership, the mediation effects (i.e., $a*b$) will be strengthened. In contrast, for users with a low degree of psychological ownership, the privacy risk compensation effect will be less salient. Therefore, we propose the following moderated mediation effect:

H6: *The indirect effect of privacy concerns on self-disclosure, which is mediated by privacy protection, is stronger for users who have a higher degree of psychological ownership of their private information.*

Data Collection Procedures, Samples, and Measurements

We conducted an online survey to empirically test our proposed research model. Survey respondents were recruited from Amazon Mechanical Turk. We required our respondents to be above 18 and Facebook users with 1 year or more experience in using Facebook. Eventually, 300 valid responses were obtained. Among the 300 valid respondents, 39.7% (n=119) were female. The majority of the respondents (77%) were aged between 25 and 45. More than 70% of the respondents have used Facebook for over 5 years.

Measurement scales of latent constructs in our research model were adapted from well-established scales in the extant literature. Specifically, Privacy concern was measured with 7 items adapted from Bansal and Gefen (2010). Self-disclosure was measured with 7 items adapted from Jiang et al. (2013). Psychological ownership of private information was measured with 7 items adapted from Lee and Chen (2011) and Paré et al. (2006). Privacy protection was measured with 5 items adapted from Young and Quan-Haase (2013).

Data Analysis Results

We used SmartPLS 3.3.3 to test H1-H5 in the baseline research model because PLS-SEM is more appropriate for theory building and preliminary model building. We follow the standard procedures to first assess the measurement model and then the structural model. In addition, we used the PROCESS plug-in in SPSS24.0 to test the moderated mediation effect in the structural model (Hayes et al. 2017).

Constructs	Means	SDs	PC	SD	PO	PP
PC	5.100	1.440	0.778			
SD	5.376	1.269	0.269	0.894		
PO	5.532	0.968	0.361	0.551	0.861	
PP	3.515	0.861	0.478	0.523	0.494	0.773
Table 1. Means, Standard Deviations, and Correlations among Latent Constructs						

Notes. (1) PC =Privacy Concern; SD = Privacy Self-disclosure; PO =Psychological Ownership of Private Information; PP =Privacy Protection; (2) the square roots of AVEs are in the diagonal of the table.

Assessment of Measurement Validity, Reliability, and Common Method Variance

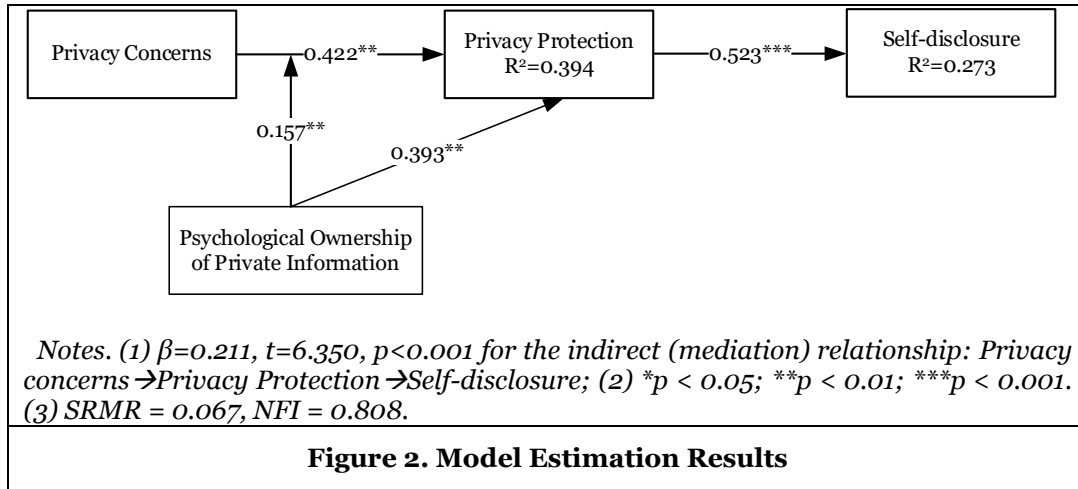
The results demonstrate good reliability and validity of our measures. Convergent validity was established as the loadings of all the items are above 0.7 on their respective constructs, and the average variances extracted (AVEs) of all constructs are above 0.5. Discriminant validity was established as the square roots of the AVEs of each latent construct are greater than its correlations with other constructs. In addition, the Heterotrait-Monotrait ratios of all latent constructs are below 0.85. The composite reliability and Cronbach's α of each construct are greater than 0.7, indicating good reliability. Finally, we utilized Harman's single factor analysis to assess the potential common method variance (CMV). The interpretation rate of the maximum factor variance was 39.562%, below the threshold of 40% (Podsakoff and Organ 1986). Thus, CMV is not a major concern in our study.

Results of Hypothesis Testing

We performed the bootstrapping algorithm with 5,000 resamples in SmartPLS 3.3.3 to test the direct effects, mediation effect, and moderation effect in H1-H5. The results are presented in Figure 2. Not surprisingly, H1 - H5 were all strongly supported. We then examined the moderated mediation relationship as proposed in H6. First, according to Figure 2, the interaction effect (privacy concern * psychological ownership) has a significant positive effect on privacy protection ($\beta = 0.157$, $P < 0.001$). This serves as a prerequisite for us to further examine the moderated mediation model.

Next, we used "Model 7" in the PROCESS macro compiled by Hayes et al. (2017) in SPSS to examine the moderated mediation effect. Model 7 assumes that the first half of the mediation model is moderated, which is the case in our study. The results in Table 2 show that after adding psychological ownership into the model, the product term of privacy concern and psychological ownership has a significant predictive effect

on privacy protection ($\beta = 0.111, P < 0.001$), providing support for the moderated mediation effects in H6. Notably, the moderate effect of psychological ownership of private information mainly occurred in the first half path of the mediation effect of risk compensation, and hence, it was a first-stage moderated mediation.



	Privacy Protection			Self-disclosure		
	B	SE	t-statistics	B	SE	t-statistics
PC	0.375	0.046	8.115**	0.042	0.084	0.501
PO	0.259	0.033	7.764**	/	/	/
PP	/	/	/	0.834	0.095	8.824**
PC x PO	0.111	0.024	4.696**	/	/	/
Constant	3.466	0.041	85.299**	2.168	0.3399	6.379**
R-square	0.382			0.263		

Table 2. The Moderated Mediation Effect

Notes. PC=Privacy Concern; SD=Self-disclosure; PO=Psychological Ownership; PP=Privacy Protection.

Discussion

To summarize, the proposed research model was largely supported by the preliminary empirical results. First, privacy concerns facilitate social media users' privacy protection (H1 supported), which further results in increased self-disclosure (H2 supported). Hence, privacy protection serves as a mediator for the positive association between privacy concerns and self-disclosure (H3 supported). In addition, we found that perceived psychological ownership of private information not only directly promotes privacy protection (H4 supported), but also strengthens the effect of privacy concerns on privacy protection (H5 supported). Psychological ownership thus strengthens the mediation effects of privacy protection (H6 supported).

Our study makes several contributions to the literature and theories. Most importantly, we advanced the understanding of the privacy paradox by revealing the boundary conditions for a privacy risk compensation process to take place. We integrate the theoretical lens of psychological ownership with privacy risk compensation and find that psychological ownership of private information plays a crucial moderation role that strengthens the privacy risk compensation process. In short, privacy concerns indirectly influence self-disclosure through the positive mediation effect of privacy protection; this mediation effect is further moderated by users' sense of psychological ownership. In conclusion, for users with high psychological ownership of their private information, the risk compensation process will be more salient and more likely to offset the negative direct influence of privacy concerns.

Our findings have several important practical implications. First, our findings suggest that social media platform owners should provide users with more privacy protection measures by better designing the privacy settings. Many platform owners believe that providing privacy protection settings will prevent users from sharing personal information. However, our research finds that when owners provide privacy protection functions, users will feel that their privacy can be fully protected on the platform, and will share more personal information. Therefore, they should allow users to have control over when, how, and to whom they disclose private information. These privacy protection functions serve as a prerequisite for the privacy risk compensation process to occur. These privacy settings will not limit users' privacy disclosure but will encourage users to generate more posts. Second, social media platform owners should adopt more design elements, which can satisfy users' need for having a place (e.g., private profiles and personal collections), the need for self-identity (e.g., identity labels and group badges), and the need for efficacy and effectance (e.g., visible and editable history of activities and personal information), to support users' psychological ownership of their private information.

This study inevitably has some limitations, yielding several opportunities for future research. First, we used cross-sectional data to validate our research model, which cannot fully reveal the dynamics in privacy risk compensation. In future research, we plan to further conduct a longitudinal, multistage online survey to validate the privacy risk compensation process. Second, this study uses self-reported measures of privacy disclosure, which suffers from the concern of social desirability bias. In future research, we plan to collect respondents' social media posts as an objective measure of our dependent variable. Third, the context of Facebook limited the generalizability of our findings, and future research can extend our model to other social media contexts. Last but not least, in further research, we plan to enrich our model by further investigating the design elements that can enhance users' psychological ownership perceptions, which is practically useful for social media platform owners to better design their websites and applications.

Acknowledgments

This work is supported by the National Natural Science Foundation of China (Grant No. 72171217, 71801205, and 71701195), the Fundamental Research Funds for the Central Universities (No. WK2040000031), and the BNU-HKBU United International College Research Start-Up Fund (No. R72021123).

References

- Acquisti, A., Brandimarte, L., and Loewenstein, G. 2015. "Privacy and Human Behavior in the Age of Information," *Science* (347:6221), pp. 509-514.
- Bansal, G., and Gefen, D. 2010. "The Impact of Personal Dispositions on Information Sensitivity, Privacy Concern and Trust in Disclosing Health Information Online," *Decision Support Systems* (49:2), pp. 138-150.
- Baxter, W. L., Aurisicchio, M., and Childs, P. R. 2015. "A Psychological Ownership Approach to Designing Object Attachment," *Journal of Engineering Design* (26:4-6), pp. 140-156.
- Boss, S. R., Galletta, D. F., Lowry, P. B., Moody, G. D., and Polak, P. 2015. "What Do Systems Users Have to Fear? Using Fear Appeals to Engender Threats and Fear That Motivate Protective Security Behaviors," *MIS Quarterly* (39:4), pp. 837-864.
- Brandimarte, L., Acquisti, A., and Loewenstein, G. 2013. "Misplaced Confidences: Privacy and the Control Paradox," *Social Psychological & Personality Science* (4:3), pp. 340-347.
- Crossler, R. E., and Bélanger, F. 2019. "Why Would I Use Location-Protective Settings on My Smartphone? Motivating Protective Behaviors and the Existence of the Privacy Knowledge-Belief Gap," *Information Systems Research* (30:3), pp. 995-1006.
- Evans, W. N., and Graham, J. D. 1991. "Risk Reduction or Risk Compensation? The Case of Mandatory Safety-Belt Use Laws," *Journal of Risk and Uncertainty* (4:1), pp. 61-73.
- Hasanzadeh, S., de la Garza, J. M., and Geller, E. S. 2020. "How Sensation-Seeking Propensity Determines Individuals' Risk-Taking Behaviors: Implication of Risk Compensation in a Simulated Roofing Task," *Journal of Management in Engineering* (36:5), p. 04020047.
- Hayes, A. F., Montoya, A. K., and Rockwood, N. J. 2017. "The Analysis of Mechanisms and Their Contingencies: Process Versus Structural Equation Modeling," *Australasian Marketing Journal* (25:1), pp. 76-81.

- Jiang, Z., Heng, C. S., and Choi, B. C. 2013. "Research Note—Privacy Concerns and Privacy-Protective Behavior in Synchronous Online Social Interactions," *Information Systems Research* (24:3), pp. 579-595.
- Karahanna, E., Xu, S. X., Xu, Y., and Zhang, N. A. 2018. "The Needs—Affordances—Features Perspective for the Use of Social Media," *Mis Quarterly* (42:3), pp. 737-756.
- Karwatzki, S., Dytynko, O., Trenz, M., and Veit, D. 2017. "Beyond the Personalization—Privacy Paradox: Privacy Valuation, Transparency Features, and Service Personalization," *Journal of Management Information Systems* (34:2), pp. 369-400.
- Lee, Y., and Chen, A. N. 2011. "Usability Design and Psychological Ownership of a Virtual World," *Journal of Management Information Systems* (28:3), pp. 269-308.
- Lowry, P. B., Cao, J., and Everard, A. 2011. "Privacy Concerns Versus Desire for Interpersonal Awareness in Driving the Use of Self-Disclosure Technologies: The Case of Instant Messaging in Two Cultures," *Journal of Management Information Systems* (27:4), pp. 163-200.
- McCormack, S., Dunn, D. T., Desai, M., Dolling, D. I., Gafos, M., Gilson, R., Sullivan, A. K., Clarke, A., Reeves, I., and Schembri, G. 2016. "Pre-Exposure Prophylaxis to Prevent the Acquisition of Hiv-1 Infection (Proud): Effectiveness Results from the Pilot Phase of a Pragmatic Open-Label Randomised Trial," *The Lancet* (387:10013), pp. 53-60.
- Mohsin, M. 2022. "10 Facebook Statistics Every Marketer Should Know in 2021." Retrieved April 30, 2022, from <https://www.oberlo.com/blog/facebook-statistics>
- Morewedge, C. K., Monga, A., Palmatier, R. W., Shu, S. B., and Small, D. A. 2021. "Evolution of Consumption: A Psychological Ownership Framework," *Journal of Marketing* (85:1), pp. 196-218.
- Mousavi, R., Chen, R., Kim, D. J., and Chen, K. 2020. "Effectiveness of Privacy Assurance Mechanisms in Users' Privacy Protection on Social Networking Sites from the Perspective of Protection Motivation Theory," *Decision Support Systems* (135), p. 113323.
- Paré, G., Sicotte, C., and Jacques, H. 2006. "The Effects of Creating Psychological Ownership on Physicians' Acceptance of Clinical Information Systems," *Journal of the American Medical Informatics Association* (13:2), pp. 197-205.
- Pavlou, P. A. 2011. "State of the Information Privacy Literature: Where Are We Now and Where Should We Go?," *MIS Quarterly* (35:4), pp. 977-988.
- Podsakoff, P. M., and Organ, D. W. 1986. "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management* (12:4), pp. 531-544.
- Qiu, L., Chhikara, A., and Vakharia, A. 2021. "Multidimensional Observational Learning in Social Networks: Theory and Experimental Evidence," *Information Systems Research* (32:3), pp. 876-894.
- Schwarz, N. 1990. *Feelings as Information: Informational and Motivational Functions of Affective States*. The Guilford Press.
- Shu, S. B., and Peck, J. 2011. "Psychological Ownership and Affective Reaction: Emotional Attachment Process Variables and the Endowment Effect," *Journal of Consumer Psychology* (21:4), pp. 439-452.
- Smith, H. J., Dinev, T., and Xu, H. 2011. "Information Privacy Research: An Interdisciplinary Review," *MIS Quarterly* (35:4), pp. 989-1015.
- Trogen, B., and Caplan, A. 2021. "Risk Compensation and Covid-19 Vaccines," *Annals of Internal Medicine* (174:6), pp. 858-859.
- Tsai, J. Y., Egelman, S., Cranor, L., and Acquisti, A. 2011. "The Effect of Online Privacy Information on Purchasing Behavior: An Experimental Study," *Information Systems Research* (22:2), pp. 254-268.
- Westercamp, N., Agot, K., Jaoko, W., and Bailey, R. C. 2014. "Risk Compensation Following Male Circumcision: Results from a Two-Year Prospective Cohort Study of Recently Circumcised and Uncircumcised Men in Nyanza Province, Kenya," *AIDS and Behavior* (18:9), pp. 1764-1775.
- Wilde, G. J. 1989. "Accident Countermeasures and Behavioural Compensation: The Position of Risk Homeostasis Theory," *Journal of Occupational Accidents* (10:4), pp. 267-292.
- Xu, H., Luo, X. R., Carroll, J. M., and Rosson, M. B. 2011. "The Personalization Privacy Paradox: An Exploratory Study of Decision Making Process for Location-Aware Marketing," *Decision Support Systems* (51:1), pp. 42-52.
- Young, A. L., and Quan-Haase, A. 2013. "Privacy Protection Strategies on Facebook: The Internet Privacy Paradox Revisited," *Information, Communication & Society* (16:4), pp. 479-500.