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Online Users' Cynical Attitudes towards Privacy Protection: Examining Privacy Cynicism

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ABSTRACT

As the complexity of managing online personal information is increasing and data breach incidents frequently occur, online users feel a loss of control over their privacy. Such a situation leads to their cynical attitudes towards privacy protection, called privacy cynicism. This study aims to examine the role of privacy cynicism in online users' privacy behaviors. Data were gathered from a survey that 281 people participated in and were analyzed with covariance-based structural equation modeling. The findings of this study reveal that privacy cynicism has not only a direct influence on disclosure intention but also moderates an effect of privacy concerns on the intention. The analytical results also indicate that there is a nonlinear effect of privacy cynicism on the outcome variable. This study developed the concept of privacy cynicism—a phenomenon that significantly affects online privacy behavior but has been rarely examined. The study is an initial research into the nature and implications of privacy cynicism and furthermore clarified its role by the nonlinear relationship between privacy cynicism and the willingness to disclose personal information.

Keywords: Privacy Cynicism, Privacy Concerns, Online Privacy

Ⅰ. Introduction

Online privacy has been considerably discussed and investigated for over a decade (Clarke, 2014; Smith et al., 2011). As our daily lives become more digitized, the widespread use of personal information by Internet service providers has fueled debate over information privacy and security. While the digital environment offers an unprecedented opportunity to develop more accurate personalized services, it also raises significant privacy concerns. Frequent and serious data breaches have elevated such concerns. For example, Yahoo exposed user data of 500 million accounts in 2014, and over 412 million accounts of FriendFinder Networks were hacked in 2016 (Computerweekly, 2016). It is estimated that there were 53,308 incidents of information security in 2018 (Verizon, 2018). Faced with increasing online privacy

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threats, users with privacy concerns may take further actions to protect their privacy. However, the perception of privacy threats, called *privacy concerns*, does sometimes not lead to appropriate privacy-protective responses. Such a result may be caused by their cynical attitudes that privacy leakage is vulnerable and out of personal control (Hargittai and Marwick, 2016).

Prior studies suggest that cynicism, defined as a negative attitude characterized by distrust, hopelessness, and disillusionment, develops from unmet expectations (Andersson, 1996; Bateman et al., 1992; Johnson and O'Leary-Kelly, 2003). When people provide personal information over the Internet, they generally expect to keep their information protected from being misused. Despite their expectations, privacy breaches do occur, and people feel powerless to change this situation where online personal information cannot be fully controlled from being used as one expected (Hargittai and Marwick, 2016). The unfulfilled expectations, therefore, breed considerable cynicism about privacy protection among users and ultimately influence their privacy behaviors. In this study, we define one's psychological state of distrust towards Internet service providers' protection motives and powerlessness to protect one's own personal information as *privacy cynicism*. A major consequence of cynicism is a reduced effort to achieve goals as cynical individuals are not motivated to take further steps to make improvements (Andersson, 1996; Wanous et al., 1994). For example, it was shown that cynicism in the workplace reduces employees' willingness to solve work-related problems (Maslach et al., 2001). Accordingly, privacy cynicism may be a significant factor influencing users' efforts to make privacy behaviors, regulating their actions to reduce privacy threats.

A substantial body of research has elucidated the pivotal role of privacy concerns in privacy-related behaviors (Dinev and Hart, 2006; Jiang et al., 2013; Jung and Lee, 2015; Son and Kim, 2008). Prior research, however, has reported mixed results regarding the influence of privacy concerns on privacy decisions. Several studies show that despite their huge privacy concerns, individuals intend to disclose personal information in the Internet space (Ansari and Gupta, 2018; Chen and Chen, 2015; Hallam and Zanella, 2017; Liu et al., 2019; Taddicken, 2014). Such a phenomenon is described as privacy paradox indicating a discrepancy between the perception of privacy threats and coping practices (Norberg et al., 2007). The phenomenon suggests further exploration of a relation of privacy concerns and the following outcomes. We expect that privacy cynicism can affect individuals' perceptions and practices regarding privacy threats. Online users' cynicism may cause a perception of the ineffectiveness of privacy-protection practices. Therefore, despite the perception of privacy threats, online users with cynical attitudes can provide their personal information as they have. In order words, privacy cynicism might intervene the influence of privacy concerns on the following behaviors. Privacy cynicism might also cause direct behavioral changes in privacy decision making by promoting a sense of resignation (Kanter and Mirvis, 1989; Stivers, 1994). Individuals with great feelings of privacy cynicism would be less likely to take specific protective action by assuming that privacy-protective responses are ineffective in ensuring information security. Building on these arguments, this study aims to examine the role of privacy cynicism in Internet users' privacy behavior. Because there is scant empirical research on privacy cynicism, this work could provide a fundamental understanding of how cynical attitudes towards privacy influence information disclosure behavior. Further, we intend to investigate the nonlinear effect of privacy cynicism on the out-

come variable. It has been shown that the coping mechanisms of individuals to stressful situations may well vary depending on the degree of cynicism they experience (Andersson, 1996; Reichers et al., 1997). The nonlinear model is thus believed to better describe how their behaviors vary with different degrees of privacy cynicism of individuals. While a recent study has shown that a sense of privacy fatigue which reflects widespread cynicism regarding privacy issues has a significant impact on individual privacy behaviors (Choi et al., 2018), this nonlinear effect of privacy cynicism is still unknown. To our best knowledge, this is the first work to examine the nonlinear model for measuring cynical attitudes towards privacy protection, expanding on the previous study of privacy fatigue. While theoretical investigations on this issue are scarce, there is compelling indirect evidence to support it (e.g., Morin et al., 2013; Reichers et al., 1997; Wanous et al., 2000). This attempt is also meaningful in that it provides a better understanding of the true nature of relations between the constructs. Besides, this study empirically explores the relations among individual privacy concerns, privacy cynicism, and the willingness to disclose personal information by conducting a multi-group analysis. This evaluation is intended to identify how privacy cynicism affects the traditional decision-making process of privacy management.

Ⅱ. Theoretical Framework and Hypothesis Development

2.1. Individual Privacy Concerns

Privacy refers to the claim of individuals to control information about themselves (Westin, 1967). The concept of privacy has become highly salient because private information can be readily reused or shared in the Internet space (Bélanger and Crossler, 2011). In keeping with the open nature of the Internet, online privacy has been a perennial topic of discussion among researchers and practitioners, representing a key point of debate in understanding how individuals make privacy-related decisions within an online setting. While the components of benefit from information disclosure include financial rewards, personalization, and social adjustment, individual privacy concerns associated with the possibility of information misuse or identity theft are of critical importance in determining online service usage (Smith et al., 2011). In this respect, prior studies on online privacy have focused on understanding what motivates or hinders Internet users to divulge their information. The previous studies have indicated that an individual's behavioral intention to provide personal information on the Internet depends on a risk-benefit assessment of information disclosure that reflects underlying privacy concerns (Dinev and Hart, 2006; Li et al., 2017; Xu et al., 2009). This evaluation procedure is known as privacy calculus, in which consumers weigh the competing interests of information provision (Culnan and Armstrong, 1999). In this process, individuals inherently seek to maximize positive outcomes and minimize harmful impacts, and it has been shown that privacy concerns play a dominant role in determining the cost-effectiveness of information exchange between Internet companies and consumers (Malhotra et al., 2004).

Individuals who have a strong sense of privacy concerns would not easily abandon their efforts to control their own information, because they believe that the misuse of private information has the potential to be a serious problem (Van Slyke et al., 2006). Prior work has shown that individuals may take protective actions to address their privacy concerns, in-

volving misrepresentation of personal information, a spread of negative word of mouth, or complaints to companies (Son and Kim, 2008). In the same vein, individuals can take to mitigate the potential threats of information abuse by simply choosing not to provide their information. It is viewed as a deliberate risk-avoidance strategy to deal with privacy risks (Lwin et al., 2007). As demonstrated by prior studies, since privacy risks constitute an essential component in the decision of whether to divulge personal information (Anderson and Agarwal, 2011; Culnan and Armstrong, 1999; Malhotra et al., 2004), such avoidance could be a general response of individuals to avoid the potential harm posed by information disclosure. Empirical evidence has demonstrated that individuals with higher levels of privacy concerns are less likely to disclose personal information in various online contexts (Bansal and Gefen, 2010; Xu et al., 2009). Accordingly, in line with general privacy-protective behavior, this study hypothesized as follows:

H1: Individual privacy concerns have a negative effect on the willingness to disclose personal information.

2.2. Privacy Cynicism

Cynicism is defined as a negative and pessimistic attitude towards an object arising from unmet expectations (Johnson and O'Leary-Kelly, 2003; Maslach et al., 2001). Cynicism has specific objects, including work, political practice, or management (Chylinski and Chu, 2010; Hanson et al., 2010; Kanter and Mirvis, 1989). Unmet expectations of individuals develop a general sense of stress, and prolonged exposure to the stressors may ultimately provoke psychological strain (Rubino et al., 2009). Previous work has identified that cynicism is generated in the presence of psychological strain that reflects a stress reaction (Schaufeli et al., 1996). For instance, in organizational research, it has been shown that employee strain posed by high workload, low organizational support, or a lack of integrity leads to increased cynicism towards the organization (Chiaburu et al., 2013; Dean et al., 1998). This sense of cynicism which captures the reactions to a comprehensive set of expectations has been found to result in a state of resignation (Dean et al., 1998; Kanter and Mirvis, 1989). It is recognized as a dysfunctional means of coping with the psychological strain, in which individuals deliberately distance themselves from the stress (Lee and Ashforth, 1993; Naus et al., 2007). In this respect, the notion of cynicism, indicating an individual psychological state characterized by pervasive hopelessness and disillusionment (Andersson, 1996), has been proposed as a central concept in understanding individuals' reactions to the stressor in social and organizational contexts. In particular, organizational cynicism has been shown to produce negative responses, including lower levels of performance, satisfaction, and motivation at work (Abraham, 2000; Chiaburu et al., 2013; Dean et al., 1998). The previous findings suggest that individuals with cynical attitudes are not intending to take active steps to achieve better performance. Several studies have also developed a discourse on individuals' cynical attitude towards information privacy. Hoffmann et al. (2016) have proposed the term of privacy cynicism which refers to a sense of powerlessness towards managing personal information on the Internet. The study argued that individuals faced with serious privacy threats may believe that they cannot manage their own information as intended. In a similar vein, a recent study demonstrated that a sense of privacy fatigue which refers to a concept encompassing emotional exhaustion and cynicism towards information pri-

vacy issues affects the privacy behaviors of Internet users (Choi et al., 2018). Other researchers have introduced a concept of privacy apathy, reflecting that individuals become indifferent to information privacy issues due to frequent exposure to data breach incidents (Sharma and Crossler, 2014; Yoo et al., 2012). Nevertheless, while ongoing studies attempt to provide a discourse on cynical attitudes towards online privacy, there is still little empirical work regarding how users' cynical attitudes towards privacy protection influence privacy-related behaviors. In this respect, this study focused on the influence of privacy cynicism as represented in the sense of powerlessness over privacy management. The concept of privacy cynicism was chosen over other related constructs because it is considered to be more representative to capture individual perspectives about the pervading privacy issues. More specifically, while the characteristics of cynicism and apathy overlap, there exists a slight difference between them. The point is that whereas apathy is identified as an entire lack of interest on an object, cynicism represents a disillusioned attitude with a specific stance towards it (Bhavnani, 1991). Therefore, given that individuals face severe challenges on privacy management despite their intention to protect personal information, it is carefully speculated that they may have a cynical attitude towards information privacy, rather than a complete indifference on it. It was also shown that privacy cynicism, a key sub-dimension of privacy fatigue, is a particularly strong predictor of privacy-related behaviors (Choi et al., 2018). In line with these considerations, it was expected that it would be fruitful to focus specifically on the conception of cynicism in order to construct a cogent model for predicting online privacy behaviors.

On the contrary to the hypothesized relationship between individual privacy concerns and the willingness to disclose personal information, individuals' privacy decisions determined by a sense of cynicism may not necessarily coincide with privacy-protective responses. When consuming goods and services, individuals have intrinsic motivation to achieve desired ends (Peterman, 1997). They adjust their behaviors in response to the possible outcomes, determining whether to maintain the task goal or disengage from further efforts (Garbarino and Johnson, 2001). In this respect, a symptom of cynicism can play a role in regulating individuals' privacy behaviors. In an online context, consumers provide personal information for service usage, and at the same time, they commonly expect their information to be protected from being misused. However, at present, repeated data breaches make individuals feel that they are not in control of their own information. Consumers even express doubt about the effectiveness of privacy-enhancing technologies (Hargittai and Marwick, 2016). Furthermore, it has been claimed that Internet users are often confronted with difficulties in achieving the expected level of information protection (Liu et al., 2011). The main point to note is that privacy cynicism which can be argued to result from these unmet expectations in the information exchange between Internet companies and users may lead to a dysfunctional pattern of privacy management. The primary deficit experienced by individuals with cynicism is a psychological withdrawal from the task (Kanter and Mirvis, 1989; Schaufeli and Taris, 2005). Since individuals with strong feelings of privacy cynicism may believe that there is no way to effectively control personal information on the Internet, they would not actively engage in managing their data. They may be less motivated to take further efforts to protect their information, following the manifestation of cynicism (Dean et al., 1998). In a similar vein, an earlier study showed that individuals who

have lost interest in information security issues due to unending data breaches are more likely to voluntarily disclose their information in a social network service (Sharma and Crossler, 2014). Consequently, individuals with higher levels of privacy cynicism would be expected to have reduced efforts to decide whether to divulge private information, distancing themselves from the privacy-related challenges.

Most of the cynicism studies have suggested a linear relationship between cynical attitudes and related behaviors (Chiaburu et al., 2013; Dean et al., 1998; Johnson and O'Leary-Kelly, 2003). However, it has been also argued that there might be the possibility of nonlinear effects of cynicism on its consequences (James, 2005). For example, the previous study suggested that the effects of organizational cynicism on job strain might differ beyond a specified threshold (James, 2005). In the context of information privacy, there may also be a nonlinear effect of cynicism on its outcomes. As described above, individuals with a pervasive feeling of privacy cynicism might be highly likely to disclose private information, because they would not ponder on whether to divulge their information. The evidence indicates that such withdrawal behavior is regarded as the most common response to cynicism, referred to as a stress reaction to reduce the time spent on certain practices (Hanisch and Hulin, 1991). The critical point to note here is that these dysfunctional patterns of coping with stress become more elaborate as cynicism is highly prevalent among individuals (Reichers et al., 1997; Wanous et al., 2000). This can be explained by the fact that individuals with low cynicism are not especially prone to disillusionment (Kanter and Mirvis, 1989). For example, in a study that examined the effects of cynicism about organizational change, it was found that cynics had a higher absenteeism rate than non-cynics (Reichers et al., 1997). In other words, those who have cynicism above a certain threshold were more likely to rely on avoidance modes of coping with stress. As a more concrete example, the previous study has shown that there was a curvilinear relationship between cynicism and commitment to the organization (Morin et al., 2013). These results imply that individual attitudes and behaviors may vary based on a threshold degree of cynicism. In line with the above reasoning, this study posits that individuals with privacy cynicism above a certain threshold would be more apt to distance themselves from the privacy-related challenges. It is expected non-cynics would not believe as strongly as cynics that they are not able to achieve the desired levels of privacy management, despite their best intentions. They may instead focus their efforts on making an information disclosure decision so as to keep their privacy. On the other hand, individuals with some degree of privacy cynicism would not ponder on whether to disclose their information. In keeping with these arguments, it is expected that the effects of privacy cynicism on disclosure intention may substantially increase beyond a specific threshold value. Accordingly, the following hypotheses were proposed:

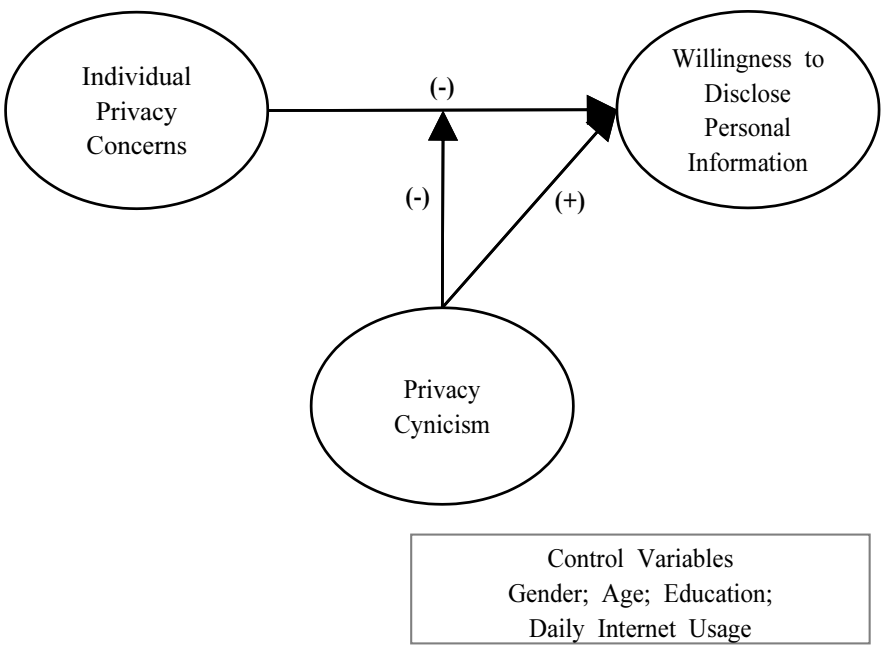
H2: Privacy cynicism has a positive effect on the willingness to disclose personal information.

H3: Privacy cynicism has an increasing incremental effect on the willingness to disclose personal information.

2.3. The Moderating Role of Privacy Cynicism towards Privacy Protection

Online users with strong privacy concerns are less likely to disclose private information in order to alleviate information security threats (Bansal and Gefen, 2010; Xu et al., 2009). As shown by the previous

work (Lwin et al., 2007), it is seen as a typical response of individuals to privacy threats. Likewise, as discussed earlier, the negative relationship between individual privacy concerns and the willingness to disclose personal information represents a coping response to reduce the likelihood of misuse or abuse of private information. In other words, such a reaction is aimed at achieving privacy protection goals. However, for individuals experiencing severe privacy cynicism, the protective action may be no longer a common practice, because cynical individuals who suffer from prolonged stress of unmet expectations are not motivated to achieve existing goals (Andersson, 1996). The previous study has indicated that cynicism leads to a profound decrease in motivation to achieve better performance (Wanous et al., 1994). This is because highly cynical individuals are more likely to develop a sense of hopelessness about the future, which leads to behavioral changes towards their desired goals (Reichers et al., 1997). It was also found that those more cynical even have lower levels of self-efficacy which refers to the degree to which an individual believes that they can successfully perform specific tasks (Maslach et al., 2001). Indeed, prior research on privacy cynicism has shown that some consumers stated that data breaches are inevitable so that they are not willing to attempt to overcome these challenges despite being aware of potential privacy risks (Hargittai and Marwick, 2016). It provides the basis to argue that individuals with strong privacy cynicism have far less motive and self-efficacy to achieve their privacy protection goals. Therefore, given the characteristics of cynicism, individuals with higher privacy cynicism would not devote enough effort to achieve the existing goals of protecting information privacy. This study suggests that privacy cynicism could intervene the influence of privacy concerns on information disclosure intentions.



Note: The model included a test for the effect of the squared term of Privacy Cynicism

<Figure 1> Research Model

Consequently, the following hypothesis was proposed:

H4: Privacy cynicism negatively moderates the relationship between individual privacy concerns and the willingness to disclose personal information.

In addition, this study also examined whether demographic characteristics, including gender, age, education level, and daily Internet usage, are associated with the intention to reveal private information. Daily Internet usage was measured by the amount of time spent on the Internet. The proposed research model is presented in <Figure 1>.

Ⅲ. Methods

3.1. Participants

An online survey was conducted for data collection. The participants were obtained from an online research firm in South Korea. After excluding invalid responses, two hundred eighty-one participants were included in the final sample. The mean age of participants was 40.726 years, and the gender distribution of the sample was 50.0% male. Their daily Internet usage time was 3.186 hours on average. The demographic characteristics of the sample are described in <Table 1>.

3.2. Measures

The variables in this study were adapted from previous research on online privacy and general cynicism. The instruments were shown to be reliable and valid in previous studies with general population samples. All items were measured by a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). More specifically, measurement items for Individual Privacy Concerns (IPC) were adapted from Dinev and Hart (2006). IPC was assessed through 4 items

<Table 1> Demographic Information (n = 281)

Measures	Item	Frequency	Percentage (%)
Gender	Male	140	49.8
	Female	141	50.2
Age	20-29	60	21.4
	30-39	66	23.5
	40-49	73	26.0
	50-59	82	29.2
Education	High school or below	53	18.9
	Associate and Bachelor degree	206	73.3
	Master's degree or higher	22	7.8
Daily Internet Usage	Less than 1 hour	27	9.6
	1-2 hours	60	21.4
	2-3 hours	53	18.9
	3-4 hours	54	19.2
	More than 4 hours	87	31.0

that portray general privacy concerns of Internet users. Scale items for Privacy Cynicism (PCY) were borrowed from Choi et al. (2018). The study used the subscale of Maslach Burnout Inventory-General Survey (MBI-GS), referring to a more generic instrument that measures cynicism without interpersonal features (Schaufeli et al., 1996). This study also used the subscale of MBI-GS to measure the cynicism in terms of information privacy. Measurement items for the Willingness to Disclose Personal Information (WD) were adapted from Malhotra et al. (2004). WD included 3 items that addressed the respondent's intention to disclose personal information to online vendors. The final scales are listed in <Table 2>.

Ⅳ. Results

4.1. Confirmatory Factor Analysis

Structural equation modeling (SEM) was used to test the proposed research model in this study. Data analysis followed a two-step analytical procedure in the SEM, where the measurement and structural models are assessed separately (Anderson and Gerbing, 1988). Before undertaking the main study, data were also screened for multivariate assumptions. The normality of the distribution of all variables was validated based on kurtosis and skewness. The values of kurtosis and skewness were within ±2.0, indicating that the data is normally distributed (Krathwohl, 2009). The variance-inflation factor (VIF) was estimated to assess multicollinearity among independent variables. All VIF scores were less than 2 and well below the cut off point of 10 (Hair et al., 1998), suggesting that multicollinearity was not a serious problem in this study. Additionally, we conducted Harman's single factor test (Harman, 1976) to check for common method bias which may threaten the validity in the cross-sectional survey design (Podsakoff et al., 2003). The result showed that the first factor accounted

<Table 2> The Measurement Items

Variables	Items	Authors
Individual Privacy Concerns	1. I am concerned that the information I submit to online vendors could be misused.	Dinev and Hart (2006)
	2. I am concerned that a person can find private information about me on the Internet.	
	3. I am concerned about providing personal information to online vendors, because of what others might do with it.	
	4. I am concerned about providing personal information to online vendors, because it could be used in a way I did not foresee.	
Privacy Cynicism	1. I have become less interested in online privacy issues.	Choi et al. (2018)
	2. I have become less enthusiastic in protecting personal information provided to online vendors.	
	3. I doubt the significance of online privacy issues more often.	
Willingness to Disclose Personal Information	1. I am willing to disclose personal information asked by online vendors within the next three years.	Malhotra et al. (2004)
	2. I will probably disclose personal information asked by online vendors within the next three years.	
	3. I will likely disclose personal information asked by online vendors within the next three years.	

for 41.086% of the total variance, well below the threshold of 50% (Podsakoff et al., 2003).

The confirmatory factor analysis (CFA) was conducted to examine a factor structure of the constructs in this study (<Table 3>). Item loadings ranged from .619 to .924, exceeding the acceptable level of .6 (Hair et al., 1998). The results showed satisfactory scale reliability with Cronbach's alpha ranging from .800 to .870 and composite reliability ranging from .803 to .867, which is above the acceptable level of .7 (Nunnany, 1978). The average variance extracted of the three factors exceeded the threshold of .5, ranging from .576 to .681 (Fornell and Larcker, 1981). Furthermore, the square root of AVE values for each construct exceeded the correlation coefficients between factors (<Table 4>), meeting the criteria for discriminant validity (Fornell and Larcker, 1981).

Next, this study examined how well the data fit the measurement model. Three types of goodness-of-fit measures were examined (<Table 5>): (1) absolute fit measures, (2) incremental fit measures, (3) parsimonious fit measures (Hooper et al., 2008). More specifically, the model fits were assessed by seven fit indices: χ^2/degree of freedom, Goodness-of-fit index (GFI), Root mean square error of approximation (RMSEA), Comparative fit index (CFI), Normal fit index (NFI), Parsimonious comparative fit index (PCFI), and Parsimonious normal fit index (PNFI). As shown in <Table 5>, the model fit indices were within acceptable ranges (Hair et al., 1998; Hu and Bentler, 1999): χ^2/degree of freedom = 3.572; GFI = .928; RMSEA = .096; CFI = .944; NFI = .925; PCFI = .671; PNFI = .658.

<Table 3> Results of Confirmatory Factor Analysis (CFA)

Factors	Std. Factor Loading	Cronbach's Alpha (a)	Composite Reliability (CR)	Average Variance Extracted (AVE)
IPC1	.924	.870	.867	.627
IPC3	.905			
IPC4	.673			
IPC2	.619			
PCY2	.769	.800	.803	.576
PCY1	.781			
PCY3	.725			
WD3	.921	.849	.862	.681
WD1	.898			
WD2	.624			

<Table 4> Correlation Coefficient Matrix

	Mean	Std. Dev.	Max	Min	1	2	3
1. IPC	5.373	.868	7.000	2.750	.792		
2. PCY	3.983	.848	6.330	1.000	-.300	.759	
3. WD	3.967	.820	6.000	1.000	-.284	.501	.825

Note: Diagonal values are the square root of the AVE

<Table 5> Measures of the Model Fit

Measures Index	Threshold	Measurement Model	Structural Model
Absolute Fit Measures			
χ^2/d.f.	< 3**; < 5*	3.572	2.665
GFI	> .9**; > .8*	.928	.901
RMSEA	< .08**; < .1*	.096	.078
Incremental Fit Measures			
CFI	> .9**	.944	.906
NFI	> .9**; > .8*	.925	.859
Parsimonious Fit Measures			
PCFI	> .5**	.671	.759
PNFI	> .5**	.658	.720

Note: Acceptability: ** acceptable, * marginal

4.2. Path Analysis

The research model was tested using a covariance-based structural equation modeling (CB-SEM). We used AMOS 21.0 program for SEM using maximum likelihood estimation. Since several studies have questioned the statistical power of a structural equation model approach using partial least squares (PLS) in estimating nonlinear effects (Goodhue et al., 2007; Ping, 1995), this study employed the covariance-based approach to examine the role of privacy cynicism in online privacy behavior. We added the quadratic term of privacy cynicism, based on a two-step procedure of the single indicator method proposed by Ping (1995). The single indicator was calculated by the product of the sum of the indicators. Furthermore, all indicators were mean-centered prior to analyses to avoid potential multicollinearity problems (Cohen et al., 2003). The factor loading ($\lambda_{x:x}$) and error variance ($\varepsilon_{x:x}$) for the single indicator were estimated using the following equations and fixed with calculated values (Ping, 1995). More specifically, λ_{xi} and ε_{xi} refer to the loadings and error variances of the linear measurement model:

$$\lambda_{x:x} = (\lambda_{x1} + \lambda_{x2} + \lambda_{x3})\,(\lambda_{x1} + \lambda_{x2} + \lambda_{x3}) \quad (1)$$

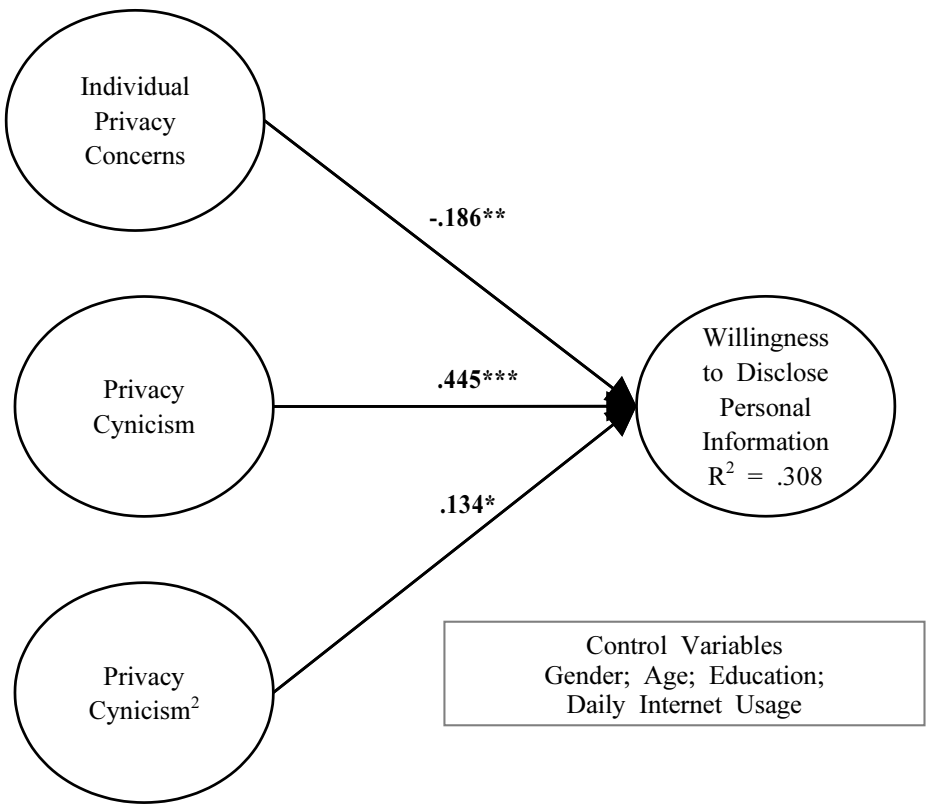
$$\varepsilon_{x:x} = 4\lambda_{x:x}\mathrm{Var}(X)\theta_x + 2\theta_x^2, \text{ where } \theta_x = (\Sigma\varepsilon_{xi}) \quad (2)$$

The model fit indices exceeded their respective acceptable levels (<Table 5>): χ^2/degree of freedom = 2.665; GFI = .901; RMSEA = .078; CFI = .906; NFI = .859; PCFI = .759; PNFI = .720. <Figure 2> illustrates the results of the unstandardized coefficients. Overall, the control variables were not significant predictors for the outcome variable (<Table 6>). In consistent with the results of previous studies, it was found that individual privacy concerns had a negative impact on the willingness to disclose personal information (-.186, t = -2.660). Privacy cynicism had a statistically significant positive effect on disclosure intention with a p-value of .001 (.445, t = 6.327). This result indicated that privacy cynicism has a significant role in increasing users' behavioral intention to disclose personal information. It is noteworthy that privacy cynicism had a positive quadratic effect on disclosure intention (.134, t = 2.303). The independent variables have explained 30.8% of the variance in disclosure intention. The turning point was

<Table 6> Results of Path Analysis

	Willingness to Disclose Personal Information			
	Constrained Model		Unconstrained Model	
	β	S.E.	β	S.E.
Gender	.078	.088	.040	.094
Age	.003	.004	.000	.004
Education	-.039	.051	-.040	.054
Daily Internet Usage	.000	.000	.000	.000
Individual Privacy Concerns	-.186**	.070	-.278***	.080
Privacy Cynicism	.445***	.070	.479***	.075
Privacy Cynicism^2	.134*	.058	.121*	.050
R^2	.308		.307	

Note: * $p < .05$; ** $p < .01$; *** $p < .001$



<Figure 2> Results of Path Analysis

calculated to determine the shape of the relationship between the quadratic term and the outcome variable (Haans et al., 2016). The turning point was obtained by calculating $-\beta_1/2\beta_2$, where β_1 and β_2 are the estimated coefficients of the linear and quadratic terms. The original point achieved by de-normalizing the

coefficient values was located at the left side of the scale range, indicating that privacy cynicism has an increasing incremental effect on the willingness to disclose personal information. In order for testing the robustness of the findings, we again conducted a path analysis using an unconstrained product indicator approach proposed by Marsh et al. (2013) in which factor loadings and error variances are allowed to be freely estimated. The three indicators of privacy cynicism were squared to create the quadratic term, following the double-mean-centering strategy (Lin et al., 2010). As shown in <Table 6>, it was found that privacy cynicism had a positive linear effect (.479, t = 6.406) and a positive quadratic effect (.121, t = 2.434) on the willingness to disclose personal information. In accord with the preceding results, there was a negative impact of individual privacy concerns on disclosure intention (-.278, t = -3.458).

4.3. Moderation Analysis

A multi-group analysis was conducted to examine whether privacy cynicism moderates the relationship between privacy concerns and disclosure intention. Using a median split based on privacy cynicism scores, participants were divided into two groups: high privacy cynicism (n = 110) and low privacy cynicism (n = 117). A measurement invariance test was first conducted across two different groups. All factor loadings were constrained to be equal across subgroups to test for full metric invariance (Byrne, 2010). The full metric invariance across two groups was achieved by comparing the χ^2 statistics for the unconstrained and constrained models ($\Delta\chi^2$ = 3.735 with 5 degrees of freedom, p = .588). It was thus evident that the latent variables are invariant in both groups. Next, we tested the moderating role of privacy cynicism on online privacy behaviors by assessing the structural invariance across groups. The model fit indices for the multi-group analysis were within the satisfactory ranges: χ^2/degree of freedom = 1.896; GFI = .891; RMSEA = .063; CFI = .918; NFI = .845; PCFI = .718; PNFI = .661. The χ^2 difference was found to be significant, confirming that there is a significant difference between high and low cynicism groups on the path from individual privacy concerns and disclosure intention ($\Delta\chi^2$ = 4.479 with 1 degree of freedom, $p < .05$). The path coefficient was found to be not significant in the high privacy cynicism group (-.017, t = -.147), whereas the structural path estimate turned out to be negatively significant in the low privacy cynicism group (-.397, t = 3.261).

Ⅴ. Discussion

5.1. Key Findings

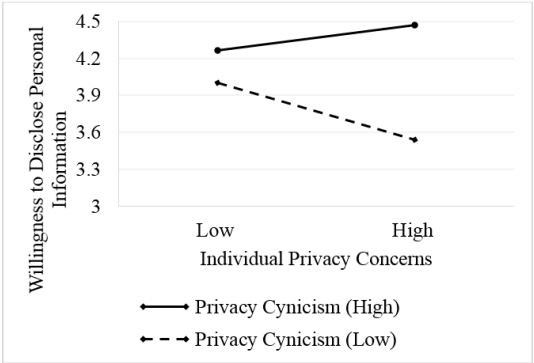
This study aimed to examine the potential role

<Table 7> Multi-group Analysis: Moderation Results

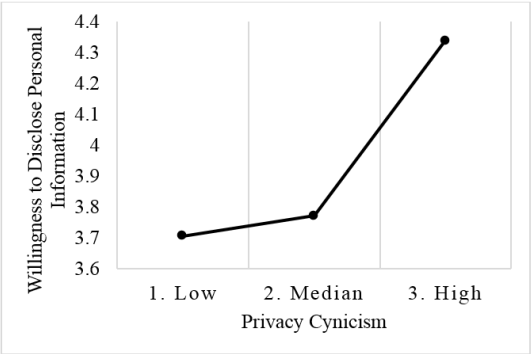
	Privacy Cynicism			
	High (n = 110)	t-Value	Low (n = 117)	t-Value
Individual Privacy Concerns → Willingness to Disclose Personal Information	-.017$^{n.s.}$	-.147	-.397**	3.261
R^2	.014		.108	

Note: Fifty-four participants who scored on the median were removed from the moderation analysis

of privacy cynicism in online privacy behaviors. The results showed that privacy cynicism had striking effects on the willingness to disclose personal information. The finding implies that highly cynical individuals are more likely to disclose their private information without forethought, distancing themselves from the privacy management challenges. Specifically, our results indicated that privacy cynicism had more marked effects on information disclosure intention than individual privacy concerns. This study has added to the existing knowledge on privacy issues by elucidating the concept of privacy cynicism and by investigating its role in individuals' willingness to divulge private information. Our findings also revealed that privacy cynicism played a significant role as a moderator between individual privacy concerns and disclosure intention as well as an antecedent to disclosure intention. In the multi-group analysis, the negative relationship between privacy concerns and disclosure intention was statistically significant only for those who had been still interested in privacy issues (i.e., low privacy cynicism group). In other words, individuals with high levels of privacy concerns had less tendency to disclose their information only if they had low levels of privacy cynicism. On the other hand, for those with high privacy cynicism who had become less enthusiastic in protecting their privacy rights, disclosure intention did not significantly vary depending on the level of privacy concerns. The results showed that individuals with a greater sense of privacy cynicism exhibited a high degree of disclosure intention regardless of the level of privacy concerns, not intending to reduce potential privacy risks. This is in line with the theoretical reasoning that cynical individuals no longer devote their efforts to achieve previous goals that were once important (Andersson, 1996). The results do serve to explicate the gap between privacy concerns and disclosure practices in the digital environment. Furthermore, the results confirmed that privacy cynicism had an increasingly positive effect on information disclosure intention. This finding is important in that it supports the argument that the cynical attitudes of users may subsequently lead to dysfunctional response patterns of privacy management.



<Figure 3> The Moderating Effects of Privacy Cynicism



<Figure 4> The Effects of Privacy Cynicism on Disclosure Intention

5.2. Theoretical Implications

The present study provides several theoretical implications regarding information privacy issues. First, the major contribution of this study is not only to

elaborate on the notion of privacy cynicism, but also to examine its role in Internet users' information privacy behaviors. Yet, to the best of our knowledge, there is scant research on the topic of privacy cynicism, and this work is the first to empirically examine the nonlinear effect of privacy cynicism. Only a few studies have developed a discourse on this issue. For example, some studies have focused on the notion of privacy apathy which indicates a sense of indifference towards information privacy (Sharma and Crossler, 2014; Yoo et al., 2012). Undertaking a different theoretical angle, this work has shed light on the changing attitudes of users towards privacy protection. By specifying the concept of privacy cynicism which has not yet been rigorously investigated, this study can extend the previous observations on the psychological attitudes of individuals towards online privacy. Second, the results of this study revealed a distinctive role of privacy cynicism in explaining information privacy behaviors. In particular, the moderating role of privacy cynicism was analyzed by conducting a multi-group analysis. The findings indicated that the level of privacy cynicism determines the relationship between individual privacy concerns and the willingness to disclose personal information. The current work thus extends the previous studies of privacy-protective responses by highlighting the decisive role of cynicism in regulating privacy decisions. Lastly, this study offers theoretical implications by expanding the applicability of the concept of privacy cynicism in understanding how individuals make decisions to divulge private information across various digital systems.

5.3. Practical Implications

This research also provides important practical implications for Internet service providers. Due to the nature of cynicism characterized by a sense of disillusionment, consumers with strong privacy cynicism may underestimate the value of online services that handle personal information. Especially, while personalized services provide advanced functionality to satisfy individual preferences, consumers with higher levels of privacy cynicism might not pay attention to the benefits derived from disclosing private information. Consequently, recognizing the gravity of the negative consequences of privacy cynicism, Internet service providers need to explore several strategies to improve customer satisfaction. The managers should keep in mind that individuals with certain levels of privacy cynicism exhibit different behavioral responses to personal information management, as shown in the results of this study. Armed with this knowledge, they can conduct consumer surveys for quantitatively measuring cynical attitudes toward privacy issues by using the scale developed in this study. Moreover, this study contributes to the policy debate concerning information privacy by addressing the issue of privacy cynicism prevalent among individuals. The results of this study stress the need to consider the changes in consumer perceptions in political practice. The findings suggest that a policy needs to be designed to decrease consumers' overwhelming feeling of powerlessness about privacy management. In this sense, this study provides a useful approach to policy research by presenting a new angle on the privacy-related phenomenon.

5.4. Limitations and Future Research

This study has a few limitations. Although the findings of this study present a significant role of privacy cynicism in online privacy, a more comprehensive model needs to be developed. In line with the privacy calculus theory, perceived benefits can

serve as a critical aspect of information disclosure behaviors (Culnan and Armstrong, 1999; Dinev and Hart, 2004; Xu et al., 2011). In particular, it has been suggested that perceived benefits, such as product attractiveness, may counterbalance privacy concerns on the disclosure behaviors (Li et al., 2010). In this sense, it would be better to simultaneously consider the trade-offs associated with information disclosure in future studies. Further studies could also explore the various antecedents and consequences of privacy cynicism among Internet users. Such an investigation is important in that it is helpful to better understand the critical role of privacy cynicism in online privacy behaviors by comparing it with other related concepts. For example, other variables, such as habit, loyalty, or reputation of a company, can serve a similar role as privacy cynicism in information disclosure practices. The previous study has shown that the habit increased information disclosure on personalized mobile sites for low-loyalty customers (Kang et al., 2016). It has been also found that the reputation of a firm had a positive influence on consumer behavior in voluntary information disclosure (Xie et al., 2006). Therefore, in order to advance the concept of privacy cynicism, it might be useful to take these variables into account for further investigation of information disclosure on the Internet. In addition, there also exist several types of online privacy behaviors such as negative word-of-mouth, misrepresentation or complaining (Son and Kim, 2008). It would be fruitful for future studies to investigate the relationship between privacy cynicism and other coping behaviors to deal with information privacy issues.

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<References>

[1] Abraham, R. (2000). Organizational cynicism: Bases and consequences. *Genetic, Social, and General Psychology Monographs, 126*(3), 269-292.

[2] Anderson, C. L., and Agarwal, R. (2011). The digitization of healthcare: Boundary risks, emotion, and consumer willingness to disclose personal health information. *Information Systems Research, 22*(3), 469-490.

[3] Anderson, J. C., and Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.

[4] Andersson, L. M. (1996). Employee cynicism: An examination using a contract violation framework. *Human Relations, 49*(11), 1395-1418.

[5] Ansari, S., and Gupta, S. (2018). To reveal or conceal? Understanding the notion of privacy among individuals. *Asia Pacific Journal of Information Systems, 28*(4), 258-273.

[6] 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), 138-150.

[7] Bateman, T. S., Sakano, T., and Fujita, M. (1992). Roger, me, and my attitude: Film propaganda and cynicism toward corporate leadership. *Journal of Applied Psychology, 77*(5), 768-771.

[8] Bélanger, F., and Crossler, R. E. (2011). Privacy in the digital age: A review of information privacy research in information systems. *MIS Quarterly, 35*(4), 1017-1042.

[9] Bhavnani, K. K. (1991). *Talking politics: A psychological framing of views from youth in Britain*. Cambridge: Cambridge University Press.

[10] Byrne, B. M. (2010). *Structural equation modeling with AMOS. Basic concepts, applications, and programming*. New York: Routledge.

[11] Chen, H. T., and Chen, W. (2015). Couldn't or wouldn't? The influence of privacy concerns and self-efficacy in privacy management on privacy protection. *Cyberpsychology, Behavior, and Social Networking, 18*(1), 13-19.

[12] Chiaburu, D. S., Peng, A. C., Oh, I. S., Banks, G. C., and Lomeli, L. C. (2013). Antecedents and consequences of employee organizational cynicism: A meta-analysis. *Journal of Vocational Behavior, 83*(2), 181-197.

[13] Choi, H., Park, J., and Jung, Y. (2018). The role of privacy fatigue in online privacy behavior. *Computers in Human Behavior, 81*, 42-51.

[14] Chylinski, M., and Chu, A. (2010). Consumer cynicism: Antecedents and consequences. *European Journal of Marketing, 44*(6), 796-837.

[15] Clarke, R. (2014). Persona missing, feared drowned: The digital persona concept, two decades later. *Information Technology & People, 27*(2), 182-207.

[16] Cohen, J., Cohen, P., West, S. G., and Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah: Lawrence Erlbaum & Associates.

[17] Computerweekly (2016). *412 million user accounts exposed in friendfinder networks hack*. Retrieved from http://www.computerweekly.com/news/450402859/412-million-user-accounts-exposed-in-FriendFinder-Networks-hack

[18] Culnan, M. J., and Armstrong, P. K. (1999). Information privacy concerns, procedural fairness, and impersonal trust: An empirical investigation. *Organization Science, 10*(1), 104-115.

[19] Dean Jr, J. W., Brandes, P., and Dharwadkar, R. (1998). Organizational cynicism. *Academy of Management Review, 23*(2), 341-352.

[20] Dinev, T., and Hart, P. (2004). Internet privacy concerns and their antecedents-measurement validity and a regression model. *Behaviour & Information Technology, 23*(6), 413-422.

[21] Dinev, T., and Hart, P. (2006). An extended privacy calculus model for e-commerce transactions. *Information Systems Research, 17*(1), 61-80.

[22] Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

[23] Garbarino, E., and Johnson, M. S. (2001). Effects of consumer goals on attribute weighting, overall satisfaction, and product usage. *Psychology & Marketing, 18*(9), 929-949.

[24] Goodhue, D., Lewis, W., and Thompson, R. (2007). Research note-Statistical power in analyzing interaction effects: Questioning the advantage of PLS with product indicators. *Information Systems Research, 18*(2), 211-227.

[25] Haans, R. F., Pieters, C., and He, Z. L. (2016). Thinking about U: Theorizing and testing U and inverted U shaped relationships in strategy research. *Strategic Management Journal, 37*(7), 1177-1195.

[26] Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1998). *Multivariate data analysis*. Englewood Cliffs: Printice Hall.

[27] Hallam, C., and Zanella, G. (2017). Online self-disclosure: The privacy paradox explained as a temporally discounted balance between concerns and rewards. *Computers in Human Behavior, 68*, 217-227.

[28] Hanisch, K. A., and Hulin, C. L. (1991). General attitudes and organizational withdrawal: An evaluation of a causal model. *Journal of Vocational Behavior, 39*(1), 110-128.

[29] Hanson, G., Haridakis, P. M., Cunningham, A. W., Sharma, R., and Ponder, J. D. (2010). The 2008 presidential campaign: Political cynicism in the age of Facebook, MySpace, and YouTube. *Mass Communication and Society, 13*(5), 584-607.

[30] Hargittai, E., and Marwick, A. (2016). "What can I really do?" Explaining the privacy paradox with

online apathy. *International Journal of Communication, 10*, 3737-3757.

[31] Harman, H. H. (1976). *Modern factor analysis*. Chicago: University of Chicago press.

[32] Hoffmann, C. P., Lutz, C., and Ranzini, G. (2016). Privacy cynicism: A new approach to the privacy paradox. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 10*(4), 7.

[33] Hooper, D., Coughlan, J., and Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods, 4*(1), 53-60.

[34] Hu, L. T., and Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.

[35] James, M. S. (2005). *Antecedents and consequences of cynicism in organizations: An examination of the potential positive and negative effects on school systems*. The Florida State University.

[36] 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), 579-595.

[37] Johnson, J. L., and O'Leary-Kelly, A. M. (2003). The effects of psychological contract breach and organizational cynicism: Not all social exchange violations are created equal. *Journal of Organizational Behavior, 24*(5), 627-647.

[38] Jung, W. J., and Lee, S. Y. T. (2015). What affects the value of information privacy on SNS? *Asia Pacific Journal of Information Systems, 25*(2), 289-305.

[39] Kang, H., Shin, W., and Tam, L. (2016). Differential responses of loyal versus habitual consumers towards mobile site personalization on privacy management. *Computers in Human Behavior, 56*, 281-288.

[40] Kanter, D. L., and Mirvis, P. H. (1989). *The cynical Americans: Living and working in an age of discontent and disillusion*. San Francisco: Jossey-Bass.

[41] Krathwohl, D. R. (2009). *Methods of educational and social science research: The logic of methods*. Long Grove: Waveland Press.

[42] Lee, R. T., and Ashforth, B. E. (1993). A longitudinal study of burnout among supervisors and managers: Comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) models. *Organizational Behavior and Human Decision Processes, 54*(3), 369-398.

[43] Li, H., Luo, X. R., Zhang, J., and Xu, H. (2017). Resolving the privacy paradox: Toward a cognitive appraisal and emotion approach to online privacy behaviors. *Information & Management, 54*(8), 1012-1022.

[44] Li, H., Sarathy, R., and Xu, H. (2010). Understanding situational online information disclosure as a privacy calculus. *Journal of Computer Information Systems, 51*(1), 62-71.

[45] Lin, G. C., Wen, Z., Marsh, H. W., and Lin, H. S. (2010). Structural equation models of latent interactions: Clarification of orthogonalizing and double-mean-centering strategies. *Structural Equation Modeling, 17*(3), 374-391.

[46] Liu, Y., Gummadi, K. P., Krishnamurthy, B., and Mislove, A. (2011). Analyzing Facebook privacy settings: User expectations vs. reality. *ACM SIGCOMM Conference on Internet Measurement Conference (ACM) Proceedings*, 61-70.

[47] Liu, Z., Wang, X., and Liu, J. (2019). How digital natives make their self-disclosure decisions: A cross-cultural comparison. *Information Technology & People, 32*(3), 538-558.

[48] Lwin, M., Wirtz, J., and Williams, J. D. (2007). Consumer online privacy concerns and responses: A power-responsibility equilibrium perspective. *Journal of the Academy of Marketing Science, 35*(4), 572-585.

[49] Malhotra, N. K., Kim, S. S., and Agarwal, J. (2004). Internet users' information privacy concerns (IUIPC): The construct, the scale, and a causal model. *Information Systems Research, 15*(4), 336-355.

[50] Marsh, H. W., Wen, Z., Hau, K., and Nagengast, B. (2013). Structural equation models of latent interaction and quadratic effects. In G. R. Hancock

and R. O. Mueller (eds.), *A second course in structural equation modeling* (pp. 267-308). Greenwich: Information Age.

[51] Maslach, C., Schaufeli, W. B., and Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*(1), 397-422.

[52] Morin, A. J., Vandenberghe, C., Turmel, M. J., Madore, I., and Maïano, C. (2013). Probing into commitment's nonlinear relationships to work outcomes. *Journal of Managerial Psychology, 28*(2), 202-223.

[53] Naus, F., Van Iterson, A., and Roe, R. (2007). Organizational cynicism: Extending the exit, voice, loyalty, and neglect model of employees' responses to adverse conditions in the workplace. *Human Relations, 60*(5), 683-718.

[54] Norberg, P. A., Horne, D. R., and Horne, D. A. (2007). The privacy paradox: Personal information disclosure intentions versus behaviors. *Journal of Consumer Affairs, 41*(1), 100-126.

[55] Nunnany, J. (1978). *Psychometric theory*. New York: McGraw Hill.

[56] Peterman, M. L. (1997). The effects of concrete and abstract consumer goals on information processing. *Psychology & Marketing, 14*(6), 561-583.

[57] Ping Jr, R. A. (1995). A parsimonious estimating technique for interaction and quadratic latent variables. *Journal of Marketing Research, 32*(3), 336-347.

[58] Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903.

[59] Reichers, A. E., Wanous, J. P., and Austin, J. T. (1997). Understanding and managing cynicism about organizational change. *Academy of Management Perspectives, 11*(1), 48-59.

[60] Rubino, C., Luksyte, A., Perry, S. J., and Volpone, S. D. (2009). How do stressors lead to burnout? The mediating role of motivation. *Journal of Occupational Health Psychology, 14*(3), 289-304.

[61] Schaufeli, W. B., Leiter, M. P., Maslach, C., and Jackson, S. E. (1996). The Maslach burnout inventory-general survey. In C. Maslach, S. E. Jackson and M. P. Leiter (eds.), *MBI manual* (pp. 191-218). Palo Alto: Consulting Psychologists Press.

[62] Schaufeli, W. B., and Taris, T. W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart. *Work & Stress, 19*(3), 256-262.

[63] Sharma, S., and Crossler, R. E. (2014). Disclosing too much? Situational factors affecting information disclosure in social commerce environment. *Electronic Commerce Research and Applications, 13*(5), 305-319.

[64] Smith, H. J., Dinev, T., and Xu, H. (2011). Information privacy research: An interdisciplinary review. *MIS Quarterly, 35*(4), 989-1016.

[65] Son, J. Y., and Kim, S. S. (2008). Internet users' information privacy-protective responses: A taxonomy and a nomological model. *MIS Quarterly, 32*(3), 503-529.

[66] Stivers, R. (1994). *The culture of cynicism: American morality in decline*. Cambridge: Blackwell Publishers.

[67] Taddicken, M. (2014). The 'privacy paradox' in the social web: The impact of privacy concerns, individual characteristics, and the perceived social relevance on different forms of self disclosure. *Journal of Computer Mediated Communication, 19*(2), 248-273.

[68] Van Slyke, C., Shim, J. T., Johnson, R., and Jiang, J. J. (2006). Concern for information privacy and online consumer purchasing. *Journal of the Association for Information Systems, 7*(6), 415-444.

[69] Verizon (2018). *2018 data breach investigations repor t*. Retrieved from https://enterprise.verizon.com/resources/reports/dbir

[70] Wanous, J. P., Reichers, A. E., and Austin, J. T. (1994). Organizational cynicism: An initial study. *Academy of Management Best Papers Proceedings*, 269-273.

[71] Wanous, J. P., Reichers, A. E., and Austin, J. T. (2000). Cynicism about organizational change: Measurement, antecedents, and correlates. *Group & Organization Management, 25*(2), 132-153.

[72] Westin, A. F. (1967). *Privacy and freedom*. New York: Atheneum.

[73] Xie, E., Teo, H. H., and Wan, W. (2006). Volunteering personal information on the Internet: Effects of reputation, privacy notices, and rewards on online consumer behavior. *Marketing Letters, 17*(1), 61-74.

[74] 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), 42-52.

[75] Xu, H., Teo, H. H., Tan, B. C., and Agarwal, R. (2009). The role of push-pull technology in privacy calculus: The case of location-based services. *Journal of Management Information Systems, 26*(3), 135-174.

[76] Yoo, C. W., Ahn, H. J., and Rao, H. R. (2012). An exploration of the impact of information privacy invasion. *International Conference on Information Systems (ICIS) Proceedings*, 1-18.

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