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**Does Privacy Really Matter? An Extended Perspective on Individual Information System Continuance Use (Research-in-Progress)**

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## ABSTRACT

Recent privacy breaches through Facebook demonstrate that these breaches do not always reduce the use of a social media website after a very public breach, in fact, some people use the social media website more. This behavior leads to the question of whether privacy violations influence people's continued use of Facebook. In this paper, we propose that people have privacy expectations when they use social media websites and when those privacy expectations are not disconfirmed they will be satisfied with the experience and continue using the website. Combining privacy expectations with the expectation disconfirmation theory, we provide a conceptual model to examine privacy-related factors that influence Facebook continuance use.

**Keywords:** IS continuance, expectation disconfirmation theory, privacy expectation

## INTRODUCTION

Recent happenings within the online environment suggest people will continue and even increase using products offered by online companies (Kahn and Ingram 2018) even when their personal information has been blatantly stolen and used to influence their own decisions, including how they vote (Granville 2018). For example, Cambridge Analytica, a U.K. based

political data analytics firm, illegally procured and gained access to personal information of more than 50 million Facebook users (Granville 2018). This information was used to create voter profiles and targeted advertisements to influence Facebook users' voting behaviors. Even though the breach of this information was very public and impacted something as personal as voting behaviors, individuals chose to continue using Facebook or even to use it more. According to a recent survey by Reuters, even though Facebook has a high potential of privacy risk, about half of Facebook's American users said they used Facebook as regularly as usual, and a further quarter said they use it more (Kahn and Ingram 2018).

This behavior leads to the question of whether privacy issues account for continued use of social media. Given that even in the midst of privacy breaches people continue using social media or use it more it is essential to understand what leads to these choices. In this paper, we draw on the expectation disconfirmation theory (EDT) and consider that people have privacy expectations with various social media websites and that when these privacy expectations are met that they are satisfied with using the social media website.

In this study, we focus on examining privacy-related factors that influence information system (IS) continuance use. Some IS researchers have considered the role of privacy in explaining the behaviors of individuals who continue to use IS products. For example, Zhou and Li (2014) examined the continuance phenomenon of mobile social networking services in China from the perspective of social impact and privacy protection. They investigated three different privacy-related factors: privacy concern, privacy risk, and trust. They found that individuals' concerns about privacy increased privacy risk and reduced their intention to continue using mobile social networking services. As a result, both privacy concerns and privacy risk decrease continuance intention. However, based on the results, trust can alleviate privacy risk (Zhou and

Li 2014). Prior research has investigated privacy-related factors such as perceived risk (Lin et al. 2017; Ofori et al. 2016), privacy concern (Zhou and Li 2014), and trust (Cao et al. 2018) within the IS continuance domain, however, none have considered the privacy expectations and confirmation in relation to IS continuance. In this paper, we can contribute to the privacy literature by: 1) investigating how users perceive privacy issues and introduce the role of privacy disconfirmation in the social network context; 2) extending and contextualizing the EDT theory and suggesting that EDT is predictive in understanding the IS continuance intention; and 3) providing insights for practitioners to develop appropriate updates to meet users' privacy needs in the social media industry.

This paper seeks to answer the following research question: *What impact do privacy disconfirmation have on decisions to continue using social media websites?*

## BACKGROUND AND RESEARCH MODEL

### EDT

The original EDT (see figure 1) was introduced by Oliver (1980) in the marketing field and used to investigate consumer satisfaction and repurchase intention by examining both expectation (pre-adoption) and perceptions of performance (post-adoption). EDT posits that satisfaction is a significant predictor of repurchase intention. Also, satisfaction is determined by three factors: expectation (pre-adoption factors), perceived performance, and disconfirmation (post-adoption factors). When a consumer's expectations are natively disconfirmed, then the perceived performance is less than expected. This will lead to dissatisfaction (Oliver and Bearden 1985). On the other hand, when one's expectations are exceeded, the perception of performance will be higher. Thus he or she will have a positive confirmation and then lead to satisfaction (Spreng et al. 1996).

The EDT is not only used to study consumer behaviors in the marketing discipline such as consumer satisfaction and repurchase behavior but is also used to investigate IS continuance behavior in the IS field. Based on EDT, the technology acceptance model (TAM), and agency theory, Bhattacherjee (2001a) examined the factors that contribute to consumers' intention to continue using business-to-consumer e-commerce services. Bhattacherjee (2001b) also established an IS continuance expectation-confirmation model, based on EDT and TAM, and found that satisfaction is the most significant factor that influences IS continuance intention. Drawing on EDT, McKinney et al. (2002) found that two types of disconfirmation (information level disconfirmation and system level disconfirmation) positively associate with online users' satisfaction. Previous studies have confirmed the robustness of the EDT as a foundation to examine IS continuance behavior (e.g.,  Hsu and Chiu 2004; Susanto et al. 2016; Zhao et al. 2012).
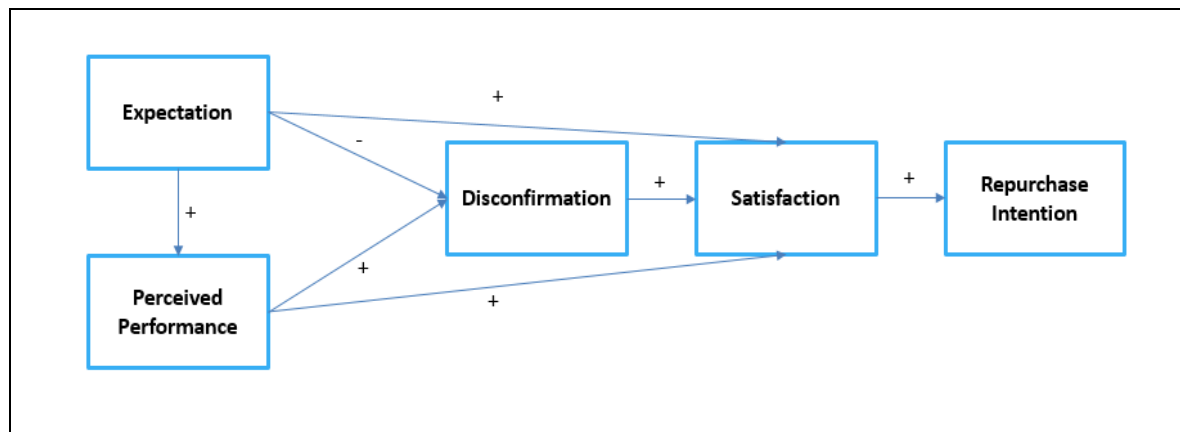


**Figure 1.** Original EDT by Oliver (1980)

## Privacy

Privacy research has regularly analyzed individuals' information disclosure behaviors (Smith et al. 2011). Willingness to disclose has been studied in a number of contexts including e-commerce (e.g., Awad and Krishnan 2006; Dinev and Hart 2006) and social networking (e.g., Krasnova and Veltri 2010; Krasnova et al. 2012). Information disclosure in the social media

context refers to the extent to which one allows access to personal information, rather than the more traditional sense of willingness to share personal information (McKnight et al. 2011). People use social media websites, such as Facebook, as they allow individuals to maintain their social ties easily and gain enjoyment (Krasnova and Veltri 2011). However, individuals face different privacy threats when they use social media. For example, Krasnova et al. (2009) found that privacy concerns have a significant negative influence on self-disclosure on social media.

Privacy historically has been shown to have an indirect effect on continuance intention through satisfaction (Lin et al. 2017; Ofori et al. 2016). For example, Ofori et al. (2016) argued that privacy concern influence perceived risk, satisfaction, and continuance intention. However, perceived risk and privacy concern did not have a direct effect on continuance intention (Ofori et al. 2016). Besides investigating the direct impact of privacy-related factors, some studies examined the moderating role of perceived privacy risk in IS continuance research. Yin et al. (2011) suggested that perceived privacy risk moderated the relationship between negative affect and continuance intention.

In this study, we expand EDT by including a parallel process to general disconfirmation, which we label privacy disconfirmation, as shown in Figure 2. McKinney et al. (2002) investigated the satisfaction of consumers based on EDT with two types of disconfirmation, information level disconfirmation, and system level disconfirmation. Similarly, in this study, we theorize the privacy level and general level disconfirmation.
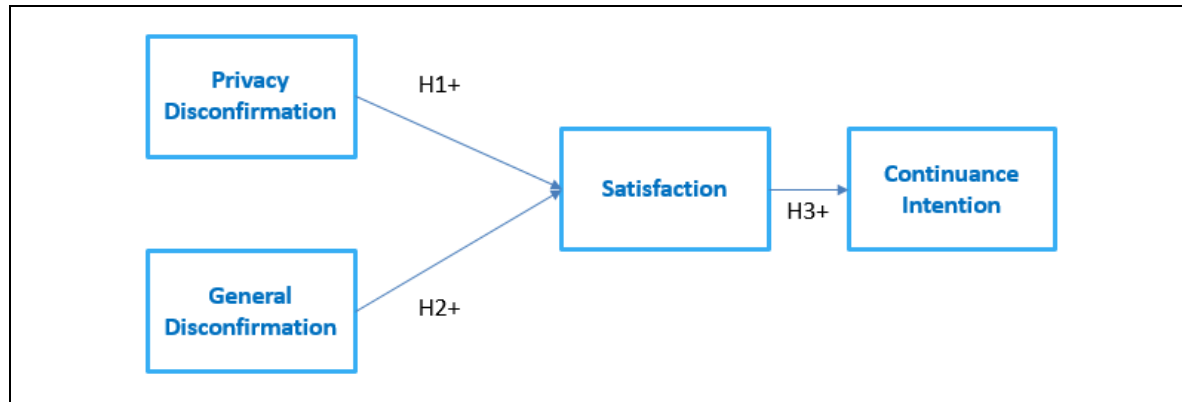
**Figure 2.** Research model

**Disconfirmation and Satisfaction**

The definition of disconfirmation is that individuals' make a judgment based on the comparison between their expectations and their perceptions of performance (McKinney et al. 2002). When their perceptions of performance meet or exceed their expectations, then their disconfirmation will be positive, and they will become satisfied with the product or service (Oliver 1993). On the other hand, individuals will become more dissatisfied if the perceptions of performance fall below their expectations, and their disconfirmation will be negative. Though established in the marketing domain, the construct of disconfirmation has been widely applied in the IS field (e.g., Bhattacherjee and Premkumar 2004; Lankton et al. 2014). Bhattacherjee and Premkumar (2004) proposed that disconfirmation positively leads to satisfaction in the end-user training and system development contexts. They conducted two longitudinal studies and found that disconfirmation positively influences satisfaction. They further pointed out the vital role of disconfirmation and satisfaction in driving the IS continuance behavior.

Similarly, other IS literature also found that the disconfirmation significantly affects users' satisfaction (e.g., Lin et al. 2005; McKinney et al. 2002; Venkatesh and Goyal 2010). For example, McKinney et al. (2002), classified disconfirmation into two parts: information quality disconfirmation and system quality disconfirmation and found both of these disconfirmations

lead to overall satisfaction. Venkatesh and Goyal (2010) developed a polynomial model of IS continuance and empirically confirmed that disconfirmation leads to satisfaction.

Based on Spreng et al. (1996) and Oliver (1980), in the context of social media websites, satisfaction can be defined as an emotional state that represents an emotional response to a social media experience. An individual's satisfaction with an IS product or service will reinforce his or her willingness to continue using this IS product or service. There is a significant positive causal link between satisfaction and IS continuance intention in different contexts, such as mobile services (e.g., Cao et al. 2018; Thong et al. 2006), online services (e.g., Chou et al. 2010; Kang and Lee 2010), and social network websites (e.g., Hur et al. 2017; Lin et al. 2017). For example, in the context of online banking, Bhattacherjee (2001b) found that confirmation was a strong predictor of satisfaction, and satisfaction was the most important construct that influenced IS continuance intention. Hsu and Chiu (2004) empirically confirmed that satisfaction was the most significant predictor of users' continuance intention in the context of e-service.

Therefore, based on the discussion above, the following hypotheses are proposed:

H1: Privacy disconfirmation has a positive effect on satisfaction.

H2: General disconfirmation has a positive effect on satisfaction.

H3: Social media users' satisfaction has a positive effect on IS continuance intention.

## METHODOLOGY

In this study, we will utilize a survey methodology to capture the beliefs and intentions related to Facebook usage. To ensure content validity, the selected survey items must represent the construct which generalizations are to be made. Therefore, the measurement scales of the constructs in our model were selected based on extensive literature review as illustrated in Appendix A. The measures of continuance intention are adapted based on the previous literature

of the user behavioral intention (Agarwal and Prasad 1999; Bhattacherjee 2001b). Items for the privacy and general disconfirmation constructs are adapted from the original instrument of (dis)confirmation developed by (Bhattacherjee 2001b) and McKinney et al. (2002). Satisfaction is measured by four items which adapted from Lee (2010) and Roca et al. (2006) to reflect the specific belief of users in the context of social media sites. All the items used in the survey are based on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The items are modified to be relevant within the context of social media websites.

The data will be collected using an online survey, distributed via Amazon Mechanical Turk (mTurk). We can easily obtain data from Facebook users with different education, income, and gender via mTurk (Steelman et al. 2014). The targeted population of our study for generalization is Facebook users. mTurk's subjects will be required to have Facebook experience.

## CONCLUSION

In order to extend and contextualize the EDT to investigate privacy issues in IS continuance research, we will empirically validate our research model using an online survey of Facebook users. We expect that privacy disconfirmation and general disconfirmation will be positively associated with satisfaction, which can lead to IS continuance intention. After confirming privacy disconfirmation works in this proposed model, we plan to expand the proposed model to examine other factors such as habit and fear of missing out that may affect IS continuance intention. We also plan to extend our study through two additional data collections. First, a two-stage longitudinal research will investigate individuals' actual continuance usage. Second, an experiment will be conducted where privacy and general confirmation of a fictitious social media website will be manipulated. Together, these studies will allow us to triangulate on

the impact of privacy expectation on social media use in the presence of other theoretical factors established in prior research.

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## APPENDIX A – MEASUREMENT TABLE

| Constructs | Items | Sources |
|---|---|---|
| Privacy Disconfirmation | 1. My experience of Facebook protecting my information is beyond my general expectation.<br>**2.** Facebook provides more protection of my information than expected.<br>**3.** Overall, most of my privacy expectations from using Facebook were confirmed. | Bhattacherjee (2001b) and McKinney et al. (2002) |
| General Disconfirmation | 1. My experience of using Facebook is beyond my general expectation.<br>2. Using the services provided by Facebook brings me more benefits than previously expected.<br>3. Overall, most of my expectations from using Facebook were confirmed. | Bhattacherjee (2001b) and McKinney et al. (2002) |
| Satisfaction | 1. I am pleased with the experience of using Facebook.<br>2. My decision to use Facebook was a wise one.<br>3. I have truly enjoyed using Facebook.<br>4. Overall, I am very satisfied with Facebook. | Lee (2010) and Roca et al. (2006) |
| IS Continuance Intention | 1. I intend to continue using Facebook.<br>**2.** My intentions are to continue using Facebook.<br>**3.** I intend to increase my use of Facebook in the future.<br>**4.** I will keep using Facebook as regularly as I do now. | Bhattacherjee, (2001b) and Agarwal & Prasad (1999) |