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The mediating role of perceived risks and benefits when self-disclosing: A study of social media trust and FoMO

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Abstract

Self-disclosure as influenced by perceived risks and benefits plays an important role within the context of social media use and the associated privacy risk. Some social media platforms, like Facebook (now part of Meta Platforms Inc.), provide users with elaborate means to control privacy risk. Conversely, Instagram (also part of Meta) provides users with fewer such mechanisms as a function of self-disclosure. Therefore, self-disclosure as a product of risk and benefit assessment may differ considerably as a function of the technological affordances that control such disclosure. This is particularly the case considering that such a benefit and risk assessment is further influenced by a user's trust in that provider, not to mention their proclivity for disclosing without any rational risk and benefit assessments, as is the case when disclosing as a function of fear of missing out (FoMO). Given the influence that provider trust and FoMO might have when assessing risks and benefits, this study evaluated the extent to which perceived risks and benefits mediate self-disclosure on Facebook and Instagram, in particular within the context of provider trust and FoMO. Based on an adapted version of *privacy calculus,* we evaluated our research model by analyzing 720 survey responses using partial least squares path modeling. Our results indicate that *perceived benefits* mediate the relationship between *FoMO* and *intention to self-disclose* when using Instagram, but not when using Facebook. Additionally, we found *perceived benefits* and *perceived risks* to mediate the relationship between *trust in provider* and *intention to self-disclose* for Facebook and Instagram. Surprisingly, we found no evidence to suggest that the relationship between *FoMO* and *intention to self-disclose* is mediated by *perceived risks* when using Facebook, with the converse being true when using Instagram. We conclude that the transitory (ephemeral) nature of some methods of self-disclosure on Instagram are used as a means to mitigate privacy risks.

Keywords: *trust, ephemerality, privacy risk, FoMO, self-disclosure, privacy calculus, Meta, Facebook, Instagram*

Introduction

The sheer impact of social media has been (and still is) profound. As of 2021 there were over 2.9 billion Facebook (now part of Meta Platforms Inc.) users and about 1 billion Instagram users worldwide (Statista 2021). It therefore comes as no surprise that these two platforms (and others like Tiktok) dominate social media use. More importantly, and despite their similarities, they enable users to disclose information differently. This is an important distinction within this context, which we argue influences users' disclosing behavior. For example, if users wish to disclose very personal information only to a select few, such forms of self-disclosure are better suited to Facebook owing to platform-specific technological affordances such as elaborate privacy settings. The audience selector (a component of the Facebook privacy settings) is but one example of such a technological affordance which enables users to be very specific about who can see the information being disclosed. Instagram, on the other hand, does not have a direct equivalent in terms of the audience selector. As such, any information disclosed is available publicly which has privacy implications. The most comparable Instagram feature is that of Instagram Stories, which can be viewed publicly for up to 24 hours (Facebook 2022). Instagram (specifically Meta for Business) hints at the fact that Stories enables businesses (and users) to create a sense of urgency in that one may miss out on a sale or interesting information as disclosed by the business owner or user in question. Although Facebook enables users to create a similar sense of urgency by setting schedules, the use of these is intricate and may take more time to configure than simply creating a quick and less formal Instagram Story.

Arguably, both platforms provide users with several ways to disclose information (modeled as *intention to self-disclose* here), but it is not apparent how this may influence privacy behavior and platform engagement within the context of our research model (i.e., including provider trust and FoMO). Instead, we situate (and thus conceptualize) our study as a holistic evaluation within a privacy context where we make use of *privacy calculus*, in particular by exploring the influence of *perceived risks* and *perceived benefits* on intended self-disclosure. Notably, we adapt *privacy calculus* by also modeling the influence of provider trust (modeled as *trust in provider*) and fear of missing out (modeled as *FoMO*) as antecedents of *perceived risks, perceived benefits*, and *intention to self-disclose*. Our inclusion of provider trust and FoMO is motivated by the fact that although recent research has found significant relationships between provider trust (Fianu et al. 2019; Liu et al. 2019; Kim and Kim 2020; Vimalkumar et al. 2021) and FoMO (Beyens et al. 2016; Moore and Craciun 2021; Sultan 2021b, 2021a) as antecedents of self-disclosure, none has taken the time to also argue to what extent users' perceptions of the risks and benefits of said forms of self-disclosure may mediate, and thus further explain, the extent to which these influence self-disclosure, especially within the context of a comparative study which makes use of *privacy calculus*.

The inclusion of provider trust and FoMO are important within this context, as this study builds on the premise that Facebook and Instagram users do not always weigh up the benefits and risks when disclosing as a

function of provider trust and FoMO. For example, Instagram users may forgo assessing the risks and the benefits of disclosing content in an effort to respond quickly to others' posts so as not to "miss out." In the effort not to miss out they may respond quickly in a manner that enables at least some control over the privacy of the disclosed information (via a Story, for example). Because Instagram Stories expire in 24 hours, this eliminates the need for the users to fully assess the associated benefits and risks of self-disclosure. This may not necessarily be the case for Facebook users who have to use several settings to disclose content that expires in a similar manner to Instagram Stories. Such additional configuration (e.g., via the additional expiry settings) may lead Facebook users to avoid FoMO-based self-disclosure simply because there is no quick means of ensuring that the information will not persist. A similar avoidance strategy may be employed by Facebook and Instagram users when disclosing information based on provider trust. For instance, users may disclose information based solely on the fact that they trust the provider; in other words, without there first being a need to assess the risks and benefits associated with disclosing.

Such avoidance strategies are problematic and their severity and impact likely varies depending on the platform in use. First, they ease self-disclosure to such an extent that users may inadvertently share content they would otherwise not share at all. This is especially applicable when disclosing via Instagram where users are able to share personal content quickly (via Stories, for example) because they feel that they are missing out. There are numerous recent studies that attest to the negative influence of FoMO-induced self-disclosure (Fioravanti et al. 2021; Kırık et al. 2021; Sultan 2021a; van der Schyff et al. 2022). To better understand this, our study explores the extent to which the risks and benefits users perceive when using Facebook and Instagram influence FoMO-based self-disclosure. Like FoMO-based self-disclosure, users may also disclose personal information without considering the consequences based solely on their level of trust in the social media platform. This likely circumvents the need to perform a proper risk and benefit assessment before sharing such information. Together, these problems have the potential to negatively influence reputations, relationships and overall well-being. It also maximizes the harvesting of personal information, which, based on recent privacy scandals, could be used for nefarious purposes beyond what was originally intended. Based on our problematization as argued above we formalize our research question as follows:

To what extent does the mediatory role of perceived risks and benefits differ when disclosing information on Facebook as opposed to disclosing information on Instagram, specifically when users disclose information based on their level of provider trust and the fear of missing out on what others are disclosing on these providers' platforms?

Such a comparative study contributes theoretically, given our use of an adapted version of *privacy calculus* and recent calls for research in this area (Rehman et al. 2020), not to mention the comparative insights obtained when conducting similar research across Facebook and Instagram. As stated, few studies argue perceived risks in this

manner, and those that do exclude the concept of trust (Huifeng and Ha 2021; Martínez-López et al. 2021) or evaluate it within a different context.

Our study is structured as follows: We first present the theoretical foundation, motivating the suitability of privacy calculus within this context. Next, we formally develop our hypotheses, which is followed by an outline of the methodological approach of the study. The results are then reported, with a focus on the assessment of the measurement and structural models. We conclude with a discussion centered on several recommendations, limitations and opportunities for future research.

Theoretical framework used

In this study, we made use of *privacy calculus. Privacy calculus* is defined as a privacy-based process used to aid decision-making (Hassandoust et al. 2021). Based on social exchange and expectancy theory, *privacy calculus* theorizes an individual's assessment of the benefits and risks when deciding to engage in specific social interactions (Homans 1958)—self-disclosure within the context of this study. *Privacy calculus* also argues that what is expected will enhance the anticipated positive outcomes—more so than the negative ones (Keith et al. 2013). It is important to note that *calculus* does not refer to a definite cognitive analysis but rather one constrained by situational aspects. In the current study, such situational aspects take the form of perceived benefits and risks when self-disclosing. Laufer and Wolfe (1977) conceptualize this as a mental calculus where individuals often perceive the benefits to outweigh the associated risks. Consequently, individuals perceive a loss of privacy as the price to pay for the benefits acquired when disclosing personal information on social media (Hui et al. 2006). Given its applicability within the context of behavioral studies, *privacy calculus* has been adapted in a variety of contexts, including e-commerce (Culnan and Armstrong 1999), privacy concerns and trust (Dinev and Hart 2006), virtual health communities (Kordzadeh et al. 2016), mobile apps (Wang et al. 2016), continued use, and IoT services (Kim et al. 2019).

Notably, *privacy calculus* has been a popular choice among social media researchers (Krasnova et al. 2010, 2012; Min and Kim 2015; Dienlin and Metzger 2016), many of whom theorize the behavioral influence of social media using adapted versions. Some studies have, for example, adapted privacy calculus to investigate the influence of culture (Krasnova and Veltri 2011; Krasnova et al. 2012; Trepte et al. 2017). Dienlin and Metzger (2016) adapted *privacy calculus* to model the influence of self-withdrawal and privacy self-efficacy. Chen (2018) similarly adapted *privacy calculus*, finding significant indirect effects between privacy self-efficacy and disclosure. The influence of resignation has also been modeled using *privacy calculus*, where it was found to positively influence perceived benefits and negatively influence perceived risks (Wirth et al. 2018). To our knowledge, the combination of latent variables in our research model is unique and therefore contributes theoretically.

Hypothesis and theory development

As stated, our study employs a twofold approach by modeling the influence of *trust in provider* and *FoMO*, first, as direct antecedents of intended self-disclosure (on Facebook and Instagram), and second, as part of a causal chain where both *perceived risks* and *perceived benefits* are modeled as mediators of the latter antecedents and *intention to self-disclose* (see Figure 1 for a conceptual overview of our model). Given that *privacy calculus* has been tested within the context of self-disclosure, we do not formally develop hypotheses for the relationships between *perceived benefits*, *perceived risks* and *intention to self-disclose*. Given our use of abbreviations in the research models (and analyses) that follow, we refer readers to the glossary of abbreviations in Table A.8 (see the appendix).

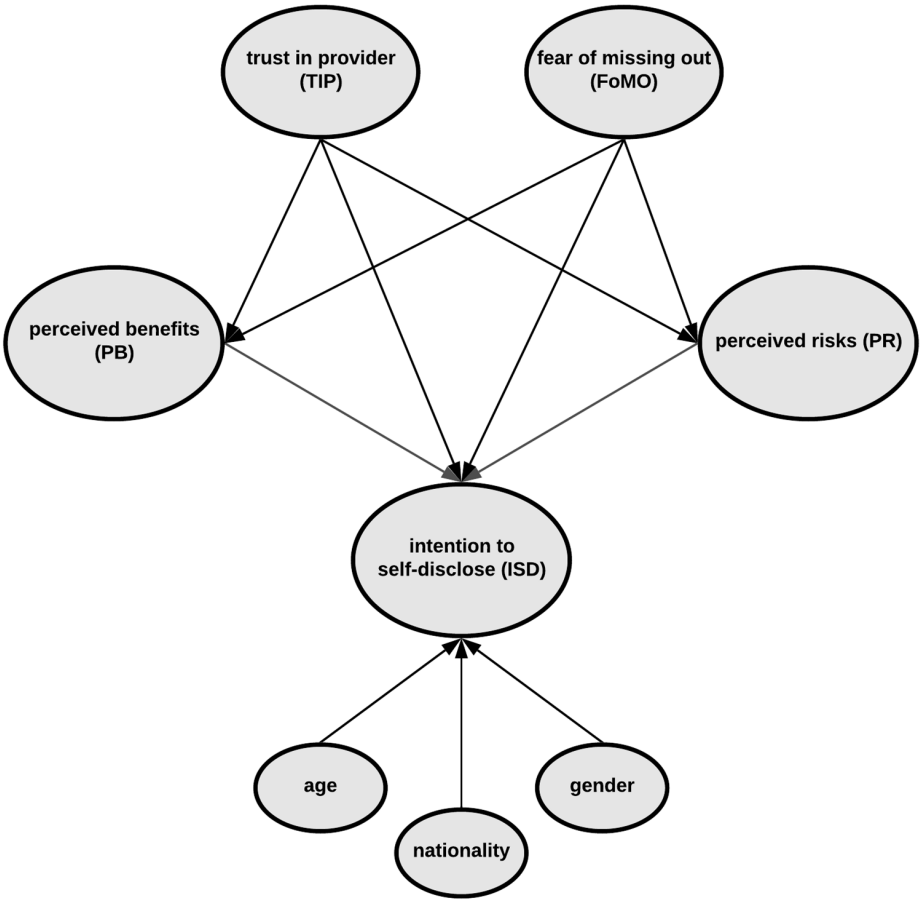

Figure 1. Research model (a conceptual overview)

Perceived risks as a mediator

Perceived risks (within this context) refers to users' calculations as to the risk they face when self-disclosing on

Facebook and Instagram. Several studies have theorized its mediatory role; for example, related studies have found perceived risks to act as a mediator within the context of perceived ethicality (Jung and Heo 2021; Majeed et al. 2021), use of location-based advertising (Jung and Heo 2021), health advertising (Kees 2012), perceived value (Agarwal and Teas 2001), fear-based news (Paek et al. 2016), and product purchasing in emerging economies (Wang et al. 2018). Perceived risk has also been found to directly influence behavior negatively—specifically within the context of self-disclosure (Cheng et al. 2021; Sharif et al. 2021), a core component of our central argument. In addition to the direct effect of perceived risk, Ortega-Egea and García-de-Frutos (2021) found perceived risk to influence foreign product ownership negatively. Similarly, Pahlevan Sharif et al. (2019) found perceived travel risk to influence intended travel negatively. The literature also abounds with technology-related examples of the behavioral influence of perceived risk. In this regard, Crespo et al. (2009) and Glover and Benbasat (2014) found perceived risk to negatively influence shopping behavior within an e-commerce context. Despite the popularity of social media (and increased use), prior social media research reports similar results within the context of continued use of Facebook and LinkedIn (Chang et al. 2017), users' willingness to share information (Li et al. 2020), and users' attitudes towards location-based sharing (Chen and Ha 2019).

Given that our items (measuring *trust in provider*) are based on perceptions seated in actual use, we need to argue similarly. For example, it has been proven that endorsements from trusted social media influencers reduce the risks users perceive. However, this only takes place after the use of the products has been endorsed (Leite and Baptista 2021). Given that our respondents are active Facebook and Instagram users, it is likely that trust only influences risk-based self-disclosure once actual use has taken place. The more uncertainty, fear, and unintended consequences users perceive, the less likely they will be to trust that provider (Seo and Lee 2021).

Conversely, the more users trust a provider, the fewer the risks that are perceived, and those that do exist do not increase user concern (Martínez et al. 2020). We therefore argue that trust reduces the risks users perceive when self-disclosing (Chen and Ha 2019). Similarly, it has been argued that users who trust themselves in their use of social media are more likely to avoid disclosing personal information but only after first understanding the associated risks (Ahadzadeh et al. 2021). Importantly, we argue that this influences self-disclosure similarly across both platforms, mainly because they are subject to similar privacy scandals and actively advertise (and harvest) personal information. Having said this, Facebook users can do more than just post images and stories and place comments, which is typically what Instagram offers its users. Although we did not ask respondents which platform they primarily use, it is likely that users' risk perceptions may differ based on the platform they use most.

Given its prominence in research focused on social media-based self-disclosure (Tandon et al. 2021), we also argue the behavioral influence of FoMO. The fear of missing out (FoMO) is a trait defined by impulsive behavior in terms of which users have an overwhelming desire to stay up to date with what others are doing. This is often done without first evaluating the consequences or "cost" of engaging in FoMO-based behavior (e.g., self-disclosure). Instead, users act impulsively and participate (but also disclose) regardless of risk, which often results in problematic forms of use (i.e., dependencies). The literature is replete with evidence to suggest that FoMO is

significantly related to social media use, even if it is to the detriment of the user (Casale and Fioravanti 2015). Evidence of such detrimental use is reported in studies focused on general social media use, self-disclosure (Sultan 2021b), work productivity (Rozgonjuk et al. 2020), problematic smartphone use (Tugtekin et al. 2020), as well as ruminating, and social anxiety (Dempsey et al. 2019). Therefore, based on the evidence presented, we argue that it is plausible that Instagram and/or Facebook users avoid first assessing the risks they perceive given the influence of FoMO. This despite the fact that FoMO-induced self-disclosure may result in some form of negative consequence. Given the discussion thus far, we hypothesize as follows:

Hypothesis 1. *Perceived risks (PR) will mediate the relationship between trust in provider (TIP) and intention to self-disclose (ISD) when using* ***(a)*** *Facebook and* ***(b)*** *Instagram.*

Hypothesis 2. *Perceived risks (PR) will not mediate the relationship between fear of missing out (FoMO) and intention to self-disclose (ISD) when using* ***(a)*** *Facebook and* ***(b)*** *Instagram.*

Perceived benefits as a mediator

Within this context, perceived benefits refer to the hedonic gratification (or value) a social media user perceives concerning self-disclosing on Facebook and Instagram. In other words, affective and emotional benefits are gained when disclosing personal information in exchange for "free" services (e.g., social media participation) (Fernandes and Pereira 2021). Notably, perceived benefits have been found to mediate certain relationships. Such forms of mediation have been investigated by studies focused on mHealth-based disclosure (Zhu et al. 2021), Facebook customer engagement (Gummerus et al. 2012) and principal–agent analyses of social media platforms (Chang and Chen 2014), to name but a few.

Unlike perceived risks, recent research has found perceived benefits to exert a direct positive influence on the disclosure of personal information (Yang et al. 2020; Fernandes and Pereira 2021; Sharif et al. 2021; Yuchao et al. 2021) which is also evident within the context of social media-based studies. For example, Hayes et al. (2021) found perceived benefits to significantly influence perceived value when disclosing personal information within the context of Facebook commerce, and Cheung et al. (2015) found perceived benefits to significantly influence Facebook self-disclosure in general. Similarly, Chen, Nguyen et al. (2020a) found perceived benefits to positively influence individuals' decisions to disclose their location information via Facebook. Using an extended version of *privacy calculus*, Dienlin and Metzger (2016) found Facebook benefits to positively influence individuals' intention to self-disclose.

To support our argument in favor of mediation, we have to theorize to what extent perceived benefits regulate the relationship between provider trust and self-disclosure. In other words, do the benefits a Facebook and Instagram user perceive significantly increase or decrease their level of provider trust. For example, Chen, Yuan et al. (2020b) found perceived benefits to mediate the relationship between trust (also distrust) and the use of online dating services. The benefits derived from purchase intentions have also been found to mediate the

relationship between system trust and intention to interact with fake news (Kumar et al. 2021). Within the context of Covid-19 recommendations, Ahluwalia et al. (2021) found perceived benefits to mediate the relationship between trust in experts and the number of recommendations actioned. Therefore, it is likely that based on active Facebook and Instagram use, users' perceptions of benefits increase, which in turn increases their level of trust in that platform. The more benefits that are perceived, the more that provider is trusted, with the direct relationship taking on a non-significant or less significant role. In other words, provider trust alone is not enough to fully explain disclosure behavior; users first need to perceive some associated benefits of said disclosure. This is a logical consequence and follows *privacy calculus* theory.

Recent literature is replete with examples pertaining to the direct influence of FoMO and self-disclosure when using Facebook and Instagram (Fumagalli et al. 2021; Moore and Craciun 2021; Sultan 2021a, 2021b). We argue that this direct influence is a logical consequence given the impulsive nature of FoMO, which furthers the overarching argument that FoMO-based self-disclosure is likely to occur without first evaluating the extent to which this self-disclosure may benefit users or not. Users, therefore, self-disclose out of a need to stay informed and updated on what others are sharing online. Based on the discussion thus far, we hypothesize that:

Hypothesis 3. *Perceived benefits (PB) will mediate the relationship between trust in provider (TIP) and intention to self-disclose (ISD) when using* ***(a)*** *Facebook and* ***(b)*** *Instagram.*

Hypothesis 4. *Perceived benefits (PB) will not mediate the relationship between fear of missing out (FoMO) and intention to self-disclose (ISD) when using* ***(a)*** *Facebook and* ***(b)*** *Instagram*.

Methodological approach

Measures used

We performed a literature review to identify measures related to the constructs in our research model. All the constructs were classified as reflective and latent, primarily because they could not be measured directly. As such, we used several (established) measurement items to conceptualize these constructs:

- Provider trust, conceptualized as *trust in provider (TIP)*, was evaluated by adapting items from Krasnova et al. (2010). We used a five-point Likert scale with response anchors ranging from 1 = *Strongly agree* to 5 = *Strongly disagree*. A social media-specific view of trust was embraced as it relates to the needs and wellbeing of users. Notably, respondents were asked whether Facebook and Instagram are trustworthy.
- Perceived benefits, conceptualized as *perceived benefits (PB)*, was evaluated by adapting items from Krasnova et al. (2010). In addition to the latter items, we developed two new items, all of which used five-point Likert scale response anchors (1 = *Strongly agree* to 5 = *Strongly disagree*). We were specifically interested in evaluating respondents' perceptions of the benefits (updating friends, joyful sharing,

relaxation, and entertainment value) available to them when disclosing information on Facebook and Instagram. These benefit perceptions were explicitly evaluated in one of the items where respondents were asked whether they would disclose because of such (and other) perceived benefits; in other words, whatever other benefits respondents could think of when self-disclosing.

- Perceived risk, conceptualized at *perceived risk (PR)*, was evaluated by using selected items from scales developed by Krasnova et al. (2010), Li et al. (2020) and Lin et al.(Lin et al. 2017). We used a five-point Likert scale with the same response anchors as those for perceived benefits. Here, we focused on unpleasantness, worry, and fear as determinants of privacy risk. One of the items posed a direct question as to whether respondents perceived the use of Facebook and Instagram to be risky.
- Self-disclosure, conceptualized as *intention to self-disclose (ISD)*, was also evaluated by adapting selected items from various established scales (Spiekermann et al. 2012; Min and Kim 2015; Zlatolas et al. 2015). We used the same Likert scale response anchors as with perceived risks and benefits. Notably, all these items related to how much and what type of information respondents reveal on Facebook and Instagram. We specifically asked respondents if they intended to continue their use of these two platforms.
- Respondents' level of FoMO, conceptualized as *fear of missing out (FoMO)*, was evaluated by adapting certain items from the scale developed by Przybylski et al. (2013). This scale makes use of five-point Likert scale response anchors (1 = *Not at all true of me* and 5 = *Extremely true of me*) as used in similar recent research (Elhai et al. 2020; Fabris et al. 2020; Laato et al. 2020).

Given the importance of demographic aspects in IS research (Lee et al. 2021), we also controlled for respondents' age, gender, and nationality. See Table A.1 for a complete outline of the descriptive statistics for the questionnaire.

Respondents and data collection

First, a qualitative pilot study was conducted with fourteen participants to verify the relationships between (and the content validity of) the constructs of our research model. We argue this to be an appropriate number of participants, given that similar qualitative studies have used between eight and twenty participants (Krasnova et al. 2010; Lee et al. 2013; van der Velden and El Emam 2013). Several revisions were made after conducting the pilot study. These revisions were restricted to the items that measure *FoMO* and *intention to self-disclose*. Following this, we developed a SurveyMonkey questionnaire by using matrix-style questions. The use of matrix-style questions enabled us to capture respondent views for Facebook and Instagram across all the constructs that comprised our research model. It also enabled us to reduce the time taken to complete the questionnaire. We then defined a study on Prolific (a survey panel) that redirected respondents to the questionnaire. To qualify for this study, each respondent had to fulfill the following criteria:

- Respondents had to be at least 18 years of age.

- They had to be active Facebook and Instagram users.
- They had to be citizens of either the United States of America or the United Kingdom. Our decision to focus on these two countries was twofold. First, both countries' citizens are, for the most part, native English speaking. Second, these countries' citizens make extensive use of both Facebook and Instagram.

Using the qualification criteria, we collected 754 responses during December 2020. Our sample size exceeded the required threshold to be able to identify significant relationships ($p < 0.05$), given the R^2 values observed and the number of model predictors (Benitez et al. 2020). To clean the data, we first checked for incomplete responses (22) and then eliminated additional responses (12) which either showed signs of "speeding" (i.e., respondents who completed the questionnaire within too short a period) (Zhang and Conrad 2014) or contained incorrect answers to our attention trap questions. We included two attention trap questions to ascertain which respondents were appropriately engaged (i.e., correctly answering these questions)—an apt approach for improving data quality in IS research (Lowry et al. 2016; James et al. 2019; Mirkovski et al. 2019). Note that we did not analyze our sample for non-response bias. After cleaning the data as described, we were able to use 720 responses in our multivariate analysis. See Table 1 for a complete outline of the demographic distribution in this study.

Table 1. Demographic distribution of our sample (*n* = 720)

Gender	No.	Percentage
Male	329	45.7
Female	391	54.3
Age		
18–24	256	35.6
25–34	241	33.5
35–44	119	16.5
45–54	70	9.7
55–64	33	4.6
65 or older	1	< 1
Nationality		
United Kingdom	406	56.4
United States of America	314	43.6

Statistical analysis and results

We proceeded by analyzing the data using the partial least squares (PLS) algorithm in SmartPLS v3 (Ringle et al. 2015). Readers interested in the formulas, and additional theoretical detail accompany the analysis, are referred to the PLS guidelines published by Hair et al. (2017). The guidelines that apply to reflective models (stage 5A and 6 in the latter publication by Hair et al.) are particularly important within this context. In short, we argue the use of PLS to be suitable in this context, given:

- the widespread use of PLS as a variance-based form of estimating structural equation models across various disciplines, especially in recent IS research published within the senior scholars' basket of journals (Al-Natour et al. 2020; Sarkar et al. 2020; Jaeger and Eckhardt 2021; Lee et al. 2021), specifically those focused on using PLS to evaluate the role of information disclosure (Belanger and Crossler 2019; Liu et al. 2019)
- its applicability within the context of a wide range of study types, including confirmatory ones (Lowry and Gaskin 2014). In this context we are evaluating to what extent provider trust and FoMO influence an established theoretical model (*privacy calculus*). Hence, our confirmatory stance in this regard.
- that PLS is not required to assume that the exogenous variables of a model conform to distributional assumptions
- that PLS largely avoids factor indeterminacy making it suitable to both exploratory and confirmatory studies (Lowry and Gaskin 2014).

Evaluation of the measurement models

Owing to the comparative nature of this study, we had to assess two measurement models, which required assessing the validity of the latent variables in our models – specifically convergent and discriminant validity. To assess convergent validity, we used two criteria. First, we inspected the average variance extracted (AVE) values of all the latent variables for the Facebook and Instagram models. Attaining an AVE value above 0.5 enables researchers to eliminate significant variance related to measurement error (Hair et al. 2017). The latent variables of both models exceeded the accepted threshold of 0.5. Second, we assessed the significance and magnitude of the outer loadings of the questionnaire items. All the items exhibited significant (i.e., t-values > 1.96) outer loadings above the accepted threshold of 0.7 (Chin et al. 2003; Henseler et al. 2016). We found this to be the case for both models (i.e., Facebook and Instagram) and therefore concluded that our measurement models fulfilled all the criteria for convergent validity.

To assess our models for discriminant validity, we used three criteria. First, using the Fornell-Larcker criterion, we inspected the square root of the AVE value of each latent variable (indicated in bold on the diagonal in Tables 2 and 3), subsequently finding the square root values to be greater than the associated latent variable correlations (Fornell and Larcker 1981; Henseler et al. 2014). Second, we inspected the outer loading values for the items associated with each latent variable, which had to be greater than any relevant cross-loadings (see Tables A.6 and A.7). Third, we assessed the heterotrait-monotrait (HTMT) ratio values for both models. If the latent variables of a research model are conceptually similar, the accepted threshold is 0.9, as opposed to 0.85 for latent variables that are conceptually dissimilar. The HTMT ratio values for both models were below the most conservative threshold of 0.85. Accordingly, we concluded that both the measurement models (as per Tables 2 and 3) satisfied all the criteria for assuming discriminant validity (Hair et al. 2019).

We also assessed the reliability of our latent variables using two criteria, namely, Cronbach's alpha (CA) and composite reliability (CR). Typically, the CA and CR values of a latent variable must exceed the accepted threshold of 0.7 (Tavakol and Dennick 2011; Peterson and Kim 2013), which was the case for both models, enabling us to assume the reliability of the associated measurement models. As a final assessment of our measurement models, we checked for multicollinearity and common method bias. To eliminate measurement error (resulting from multicollinearity), we inspected the variance inflation factor (VIF) values of all the latent variables in both models. These were all lower than 5 (García et al. 2015; Hair et al. 2017), enabling us to eliminate issues related to multicollinearity (see Table A.1 for these VIF values). To eliminate common method bias, we used two criteria. First, we ran the PLS algorithm five times for both models, whereby each latent variable assumes an endogenous state. In other words, every latent variable is connected to only one other latent variable (thereby assuming an endogenous state). After each time the PLS algorithm is run, the VIF value for the latent variable (that has assumed an endogenous state) is compared to the accepted threshold of 3.3 (Kock 2015, 2017; Guhr et al. 2019). None of the VIF values of the latent variables exceeded this threshold (see Tables A.4 and A.5 in this regard). Second, we inspected the correlation matrix for any evidence of correlations above 0.9 (Pavlou et al. 2007). Again, none of the correlations exceeded this threshold. Together, these criteria enabled us to eliminate common method bias. See Tables 2, 3 and A.1 for a complete outline of our measurement model evaluation.

Table 2. Measurement model statistics (for Facebook)

	FOMO	ISD	PB	PR	TIP
FOMO	***0,844***				
ISD	0,181	***0,811***			
PB	0,102	0,613	***0,774***		
PR	-0,007	-0,356	-0,343	***0,837***	
TIP	0,117	0,424	0,548	-0,453	***0,864***

Table 3. Measurement model statistics (for Instagram)

	FOMO	ISD	PB	PR	TIP
FOMO	***0,849***				
ISD	0,220	***0,819***			
PB	0,180	0,556	***0,773***		
PR	0,011	-0,269	-0,265	***0,799***	
TIP	0,089	0,295	0,449	-0,342	***0,874***

Structural model evaluation and mediation testing

For our structural evaluation, we calculated several values according to the guidelines published by Hair et al. (2019), some of which used the bootstrap resampling approach (5000 sub-samples). In addition to the path coefficients (and their significance), we also calculated the explanatory power (R^2), out-of-sample predictive power or accuracy (Q^2), and the PLSpredict ($Q^2_{PREDICT}$) values of our models in relation to their primary endogenous variable (i.e., *intention to self-disclose*). We also calculated the total effects (f^2) for certain model relationships. For example, and as illustrated in Figure 1, the Facebook model explained 41.8% of the variance in respondents' *intention to self-disclose*, 30.1% of the variance in *perceived benefits*, and 20.8% of the variance in *perceived risks*.

Overall, we found the Instagram model to be less predictive, exhibiting R^2 values below those of the Facebook model. Most notably, we found the explained variance related to *intention to self-disclose* to equal 34.2%. With regard to Q^2 (for Facebook), we found *intention to self-disclose* to be of medium predictive relevance (26.2%) and *perceived benefits* as well as *perceived risk* to equal 17.7% and 14.1%, respectively. Interestingly, we found the Q^2 value of *intention to self-disclose* in the Instagram model to be slightly smaller (24.3%) than its value in the Facebook model. The Q^2 values for the *perceived benefits* and *perceived risks* of the Instagram model equaled 17.1% and 7.5%, respectively. Accordingly, this indicates that our models have more than adequate predictive power and are therefore structurally sound. See Figure 2 for a summary of our research model.

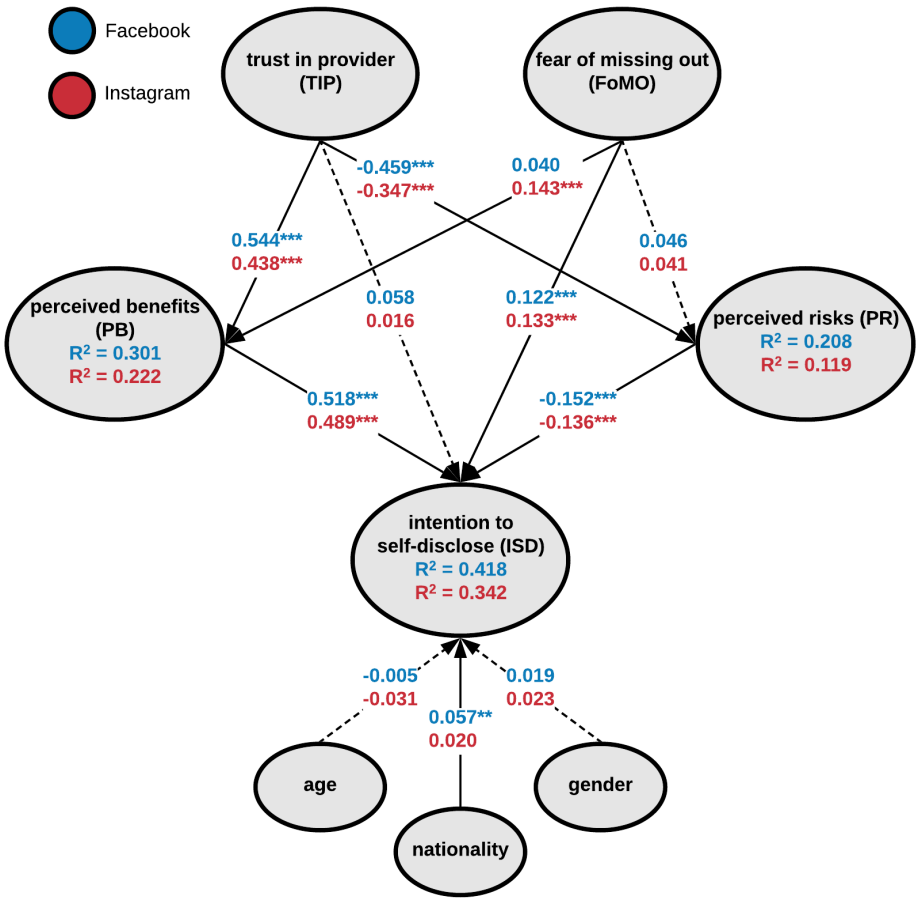

Figure 2. Final research model (for Facebook and Instagram)

To test for mediating effects, we used the guidelines prescribed by Hair et al. (2017). Theory dictates that mediation occurs when a mediator controls the underlying process that influences the relationship between an exogenous and an endogenous latent variable. In this study, *perceived risks* and *perceived benefits* take on the form of such mediatory variables. Unlike the approach advocated by Baron and Kenny (1986), we used bias-corrected confidence intervals to assess the significance of the direct and indirect effects. Confidence intervals

that included a zero were deemed nonsignificant, whereas those which excluded a zero were deemed statistically significant. Interpreting the significance of these effects is essential in determining the type of mediation. For example, if a direct effect is nonsignificant but the indirect effect is, the mediation type is classified as indirect only. Within the context of the Facebook model, we did not find any evidence to suggest that *perceived benefits (PB)* and *perceived risks (PR)* mediate the relationship between *FoMO* and *intention to self-disclose (ISD)*. We found only the direct effect between *FoMO* and *ISD* to be significant. Given that the hypothesized mediatory effects are nonsignificant, we conclude that FoMO-based self-disclosure in Facebook takes place without assessing perceived benefits or risks. Conversely, we found the direct effect between *trust in provider (TIP)* and *ISD* to be nonsignificant, whereas both mediatory effects were significant. Therefore, Facebook users' intention to self-disclose is not directly determined by their level of trust in the platform. Instead, users' assessment of the risks and benefits regulates the extent to which provider trust influences their intention to self-disclose.

Within the context of Instagram, we found *PB* to mediate the relationship between *FoMO* and *ISD*. Interestingly, and unlike Facebook, the intention to self-disclose on Instagram is also directly influenced by *FoMO*. However, the effect of FoMO-based self-disclosure is strengthened when users consider the associated benefits. We found no mediatory effects for the path *FoMO → PR → ISD.* For both Facebook and Instagram, risk perception does not influence users' intention to disclose as a function of FoMO.

We also evaluated the mediating effects of *PB* and *PR* within the context of provider trust. Results indicate that provider trust influences *ISD* when users consider the risks and benefits associated with self-disclosure. In other words, *PB* and *PR* mediate the relationship between *TIP* and *ISD*. Therefore, provider trust only comes into play once users have weighed up the benefits versus the risks, which, based on our items, usually takes place while using these platforms (as per *privacy calculus*). The previous statement is significant within the context of perceived benefits. For example, within the context of Facebook, the total effect (0.281) of the path *TIP → PB → ISD* is larger than the total effect (0.070) of the path *TIP → PR → ISD*. Similarly, the total effect (0.214) of the path *TIP → PB → ISD* is larger than the total effect (0.047) of the path *TIP → PR → ISD* for Instagram.

Table 4. Summary of mediation testing for the Facebook model

Direct effects	**Coefficient**	**Bias-corrected CI**		**Non-zero**		
		2.5 %	**97.5 %**			
PB → ISD	0.518***	0.448	0.583	Yes		
TIP → ISD	0.058	-0.024	0.133	No		
FoMO → ISD	0.122***	0.062	0.176	Yes		
PR → ISD	-0.152***	-0.225	-0.082	Yes		
Indirect effects					**Mediation type**	**Supported**
TIP → PR → ISD	0.070	0.037	0.108	Yes	Indirect only	Yes (H1a)
FoMO → PR → ISD	-0.007	-0.020	0.003	No	Direct only	Yes (H2a)
TIP → PB → ISD	0.281	0.236	0.331	Yes	Indirect only	Yes (H3a)
FoMO → PB →ISD	0.021	-0.011	0.048	No	Direct only	Yes (H4a)

Table 5. Summary of mediation testing for the Instagram model

Direct effects	Coefficient	Bias-corrected CI		Non-zero		
		2.5 %	97.5 %			
PB → ISD	0.489***	0.442	0.551	Yes		
TIP → ISD	0.016	-0.054	0.093	No		
FoMO → ISD	0.133***	0.069	0.194	Yes		
PR → ISD	-0.136***	-0.203	-0.062	Yes		
Indirect effects					**Mediation type**	**Supported**
TIP → PR → ISD	0.047	0.021	0.075	Yes	Indirect only	Yes (H1b)
FoMO → PR → ISD	-0.006	-0.019	0.005	No	Direct only	Yes (H2b)
TIP → PB → ISD	0.214	0.170	0.260	Yes	Indirect only	Yes (H3b)
FoMO → PB →ISD	0.070	0.039	0.100	Yes	Complementary	No (H4b)

We therefore argue that trust-based self-disclosure depends heavily on the benefits users perceive. The more benefits users perceive, the more likely users are to self-disclose as a function of their trust in that platform. Conversely, the more users trust a platform, the fewer the risks that are perceived. Having said this, risk perception does play a much smaller role when determining users' intention to self-disclose as a function of their level of provider trust. See Tables 4 and 5 for a complete outline of the results related to our mediation testing.

Discussion and recommendations

Facebook and Instagram are both popular choices when engaging with social media. These platforms also tend to cater for specific use cases. For example, Instagram favors those who share visual and story-driven content with the intention to receive as many likes and comments (engagement metrics) as possible; in other words, without much regard for privacy. Although Facebook is used in a similar manner, with similar engagement metrics, users often post content they only want a select audience to see. For this reason, Facebook provides users with a plethora of mechanisms to reduce privacy risk. These mechanisms include the audience selector, privacy shortcuts, the privacy check-up tool, and the privacy shield for data transfer between legal jurisdictions. This fundamental difference makes a privacy-centric platform comparison particularly interesting, specifically because this study evaluated the extent to which *perceived benefits* and *perceived risks* mediate the relationships that *FoMO* and *trust in provider* have with intended self-disclosure across Facebook and Instagram.

Our results indicate that *perceived risks* mediate the relationship between *trust in provider* and *intention to self-disclose* when using Facebook and Instagram. This implies that *perceived risks* act as a causal result of *trust in provider*. In other words, the risks perceived are a result of a user's level of trust in a social media provider.

It also implies that perceived risks act as a causal antecedent of intended self-disclosure, which is consistent with what is argued by *privacy calculus*. Having said this, we do concede that the indirect effect for the path *TIP* → *PR* → *ISD* is small for both Facebook and Instagram. This may suggest that intended self-disclosure (as a function of the risk perceived) is not a good indicator of actual disclosure when considering the mediated influence of provider trust. This, in turn, indicates that trust only plays a role in self-disclosure once the risks have been assessed; this is notably the case for Facebook and Instagram. To our knowledge a comparative study such as ours has not been attempted and thus our study furthers our understanding as to what extent provider trust acts as an antecedent of perceived benefits and perceived risks. We did not, however, find *perceived risks* to mediate the relationship between *FoMO* and *intention to self-disclose*. We therefore conclude that Facebook and Instagram users impulsively self-disclose without first cognitively assessing the associated risks.

In line with recent *privacy calculus* research within a social media context (Fernandes and Pereira 2021; Hayes et al. 2021; Nguyen 2021), we found *perceived benefits* to significantly influence users' intentions to self-disclose (for Facebook and Instagram), especially within the context of *provider trust* rather than *FoMO*. For example, our results indicate no mediatory effect for the path *FoMO* → *PB* → *ISD* within the Facebook context. Conversely, our results indicate that *perceived benefits* mediate the relationship between *FoMO* and *intention to self-disclose* within the context of Instagram use. In other words, Instagram users may assess the benefits of FoMO-based self-disclosure before self-disclosing. Therefore, our results indicate that *perceived benefits* act as a causal antecedent of FoMO-based self-disclosure within the context of Instagram use. This is an interesting finding as one would expect impulsivity to also be present in the use of Instagram. There is, however, one additional difference between Facebook and Instagram that may further explain this key difference. We argue that this difference may be related to the ephemeral nature of that which is self-disclosed. Ephemeral content has a shorter life span and permeates users' interactions on platforms like Instagram—especially when using Stories, which do not persist like Instagram posts. Such technological affordances are useful avenues for self-disclosure—especially where users wish to strike a balance between the security of the information disclosed and how the ephemerality thereof could act as a form of privacy protection; in other words, how they weigh up the benefits of self-disclosure against the privacy risks thereof. Similar results are reported within the context of WeChat Moments (Ma et al. 2021), which shares its ephemeral nature with Instagram Stories. Consequently, and unlike Facebook users, Instagram users seemingly employ a dual process (with regard to privacy) when deciding to disclose because of missing out. We concede that there is a direct effect, which implies some impulsivity (as is the case with Facebook), but there is also an indirect effect which implies that some Instagram users may first assess the benefits even in the presence of FoMO-based stimuli.

Although it is reassuring to find that Facebook and Instagram users do not simply trust providers without first assessing the benefits and the risks, *we wish to encourage these platforms to conduct privacy and security awareness campaigns.* These campaigns should emphasize how and to what extent content sharing may expose users to privacy risks; specifically, how the use of certain forms of sharing (e.g., Stories vs. posts) affects the

privacy of their personal information—an under-researched area when assessing privacy within the context of specific technological affordances (Kokolakis 2017). This is particularly important given that our results indicate *perceived risks* to exert a small effect on intended self-disclosure and they are therefore often overlooked by users. Demography also plays a role. For example, Algarni et al. (2017) found users' gender to significantly influence their susceptibility to Facebook-based social engineering. Similar results are reported for younger and less educated individuals. Although it is difficult to infer an individual's level of education, it is not so difficult to ascertain their age and gender, given that these attributes are mandatory when creating a Facebook or Instagram account. Such demographic information enables Facebook and Instagram to develop privacy and security awareness messages for select audiences. Recent research has proven the effectiveness of such privacy awareness messages as part of an automated monitoring system (Guarino et al. 2022). Such machine learning-based approaches offer social media platforms the ability to assist users in the privacy decision-making process on a permanent basis. This could prove to be particularly useful when combined with additional mechanisms, beyond those of the built-in privacy settings, that enable a social media user to control the information being disclosed. Although it may be controversial, we argue that the permanent use of such privacy awareness messages would, over time, assist in the development of a social media culture that is, at the very least, more aware of the privacy implications related to blindly disclosing information.

We also recommend that Facebook and Instagram users do not make assumptions about the privacy risks based solely on platform trust. Our results provide empirical proof of this, indicating that Facebook and Instagram users perceive risk as a causal result of their level of trust; the more they trust the fewer the risks perceived. Although this is a natural conclusion, we argue that there is always a level of risk to be considered and find it concerning that the mediatory effect of perceived risks is so much smaller than that of perceived benefits. We agree that it would be counterproductive for platforms to knowingly list the benefits and the risks side by side, but also argue that a somewhat skeptical mindset could address the lower effect of perceived risks. Lack of such skepticism, viewed against the increasing use of social media (including Facebook and Instagram), is particularly concerning in the wake of highly publicized privacy scandals (e.g., Cambridge Analytica). Having said this, those users who have experienced the effects of not adequately assessing privacy risks are much more cautious about what they self-disclose. In tandem with the privacy and security awareness campaigns, Facebook and Instagram could, for example, provide users with likely outcomes of their chosen privacy behavior as a function of the risks perceived.

Given the availability of ephemeral means of sharing on Instagram (i.e., Stories), *we recommend that ephemeral forms of sharing be made the default.* Therefore, even users who are not aware of the privacy implications, when sharing Instagram content, would then, at the very least, only share content with a select audience. Those who are aware of the privacy risks, and wish to share more polished (and essentially permanent content), could then consciously select to post content instead of creating a story that features the content. *We recommend that Instagram complement stories and posts with some of the privacy mechanisms offered in*

Facebook. For example, Facebook privacy settings allow users to stop data collection by third parties and disable location tracking. These settings do not currently exist on Instagram and so users are subject to the above. This appeal to a platform's ephemerality does not necessarily apply to Facebook whose posts and blogs persist for some time even after accounts are removed (Dreyfuss 2019). *We therefore recommend that Facebook also implement ephemeral means of content sharing.* This should make users aware of which (current) forms of sharing are more persistent than others and may thus have an impact on the privacy of the information shared. An ephemeral comparison, which clearly ranks different forms of sharing, would be a useful addition to the current set of Facebook privacy mechanisms.

Limitations and future research

Our empirical evaluation of a parsimonious theoretical framework (i.e., *privacy calculus*) has highlighted several limitations, all of which point to exciting areas for future research. First, because privacy is dependent on context (Acquisti et al. 2015; Nissenbaum 2011, 2018, 2020; Solove 2008, 2021), our results are likely to be somewhat situation-specific and emotionally influenced (Masur 2018), specifically with regard to how respondents evaluated perceived risks and perceived benefits. Future research should therefore incorporate situation-specific scenarios to provide a consistent measurement baseline. For example, some respondents may impulsively imagine unlikely scenarios, as research suggests that users seldom approach cost-benefit analyses in a calculative manner (Wilson and Valacich 2012). This is possibly due to misguided risk (or benefit) perceptions (Acquisti et al. 2015). As a result, it can be assumed that a user's perception of the risks and benefits will fluctuate and result in different behaviors as dictated by the situation at hand.

Additionally, users may lack the ability and information required to accurately assess the risks and benefits related to self-disclosure (Kokolakis 2017). Having said this, some have found neither perceived risks nor perceived benefits to significantly influence social media-based self-disclosure. The preceding discussion suggests that privacy decision-making is more than just a rational evaluation and thus more complicated than anticipated. We therefore argue that other (more social) factors also influence self-disclosure (Knijnenburg et al. 2018) and advocate that future research integrate any of the following theories with privacy calculus: *theory of planned behavior, theory of reasoned action, technology acceptance model* or the *unified theory of acceptance and use of technology* (Ajzen, 1991; Venkatesh et al., 2003; Dwivedi et al., 2019). Specifically to evaluate the behavioral influence of social pressure and attitudes within the context of privacy decision-making (Dienlin and Metzger 2016).

Second, our items evaluated perceived risks and benefits without reference to specific social or psychological aspects. Respondents likely draw on previous experience when assessing risk and benefits, which influences whether the platform should be trusted enough to warrant self-disclosure. As discussed above, scenarios could assist in this regard. Some authors take this further and advocate for experimentation where privacy forms

an integral part of the design of a system. Embedding choice architecture manipulations within such a design enables the experimentation process to capture actual behavior and assess the effectiveness of nudges to enhance privacy decision-making (Wisniewski et al. 2017). Given the focus of nudging on use context within the scope of specific technological affordances (Wu et al. 2020), we argue that future trust-based research on social media may wish to take such an experimental approach. This could possibly be done by conducting a multigroup analysis to evaluate whether significant statistical differences exist between those who were exposed to nudges as opposed to those who were not. It would be particularly interesting if these experiments were to include scenarios aligned to the use of specific choice architecture manipulations (i.e., interventions). Asking respondents the same set of questions for each scenario would enable researchers to perform interesting comparisons as to the interaction between provider trust and architecture manipulations or interventions. Having said this, it would be vital to explain how they conceptualize trust. For example, the influence of trust on perceived benefits and risks within the context of self-disclosure is likely only to play a role once a user is already using the platform. In other words, they can see what is on offer and form their risk assessment accordingly. If, however, one wishes to evaluate the influence of trust before even using a social media platform, we advocate that researchers incorporate multi-modal or persuasive design aspects into their studies, enabling them to find significant results when focusing only on the direct relationship between trust and self-disclosure. Given that a recent meta-analysis (Ioannou et al. 2021) found only one study to include trust within the context of privacy self-disclosure nudging, we argue such research to be particularly compelling, mainly because this study (Aiken and Boush 2006) predates much of how self-disclosure (and the technical affordances) has evolved on Facebook and Instagram.

A third limitation of our study is its cross-sectional nature. Frequent privacy scandals and associated media campaigns have the potential to influence user perceptions. Regarding perceived risk, we specifically advise that future research take a more strategic approach whereby similar studies are not simply conducted without first considering relevant privacy issues or scandals. For example, if researchers were to conduct the same study yearly, and there were no significant privacy issues (or scandals) during that time, the results would likely be the same. However, conducting the same research after successive and widely publicized privacy scandals (i.e., thus longitudinal) may yield interesting comparative results, especially in combination with situation-specific scenarios.

Although the influence of FoMO has yielded interesting results concerning perceived benefits, we advocate that future research incorporate other behavioral traits. For example, recent research has investigated the influence of three forms of impulsivity within the context of self-disclosure (Aivazpour and Rao 2020). Future risk-centric studies could, for example, replace FoMO with impulsivity, specifically attentional and motor impulsivity. Motor impulsivity may yield interesting comparative results as it is typified by a lack of inhibitory controls in the presence of specific stimuli. The same holds for attentional impulsivity. For example, Facebook may provide stimuli that require more attention and cognitive thought. Conversely, Instagram is focused on sharing visual content, which aligns with motor impulsivity. Together, these may prove helpful in understanding

self-disclosure within the context of risk perception.

Given the focus of this study on *privacy calculus* across two different social media platforms, it may prove helpful to conduct a follow-up qualitative study to understand better the effects specific latent variables exhibit concerning self-disclosure. The initial qualitative study was not able to theorize the relative importance, predictive power, and effect sizes within the context of our research model. Targeted questions focused on such values could ascertain why they differ when comparing risk and benefit perceptions across Instagram and Facebook.

Conclusion

The objective of this study was to evaluate privacy risk when self-disclosing on Facebook and Instagram, in particular investigating the mediating influence of perceived benefits and perceived risks within the context of self-disclosure on Facebook and Instagram. As part of our investigation, we used an adapted version of *privacy calculus.* We evaluated to what extent the latter variables mediate the relationship between *trust in provider* and *intention to self-disclose* as well as *FoMO* and *intention to self-disclose*. Our empirical situation is centered on data we collected from Facebook and Instagram users; enabling us to theorize platform differences which were discussed by way of several recommendations. Interestingly, we found no evidence to suggest that the relationship between *FoMO* and *intention to self-disclose* is mediated by *perceived risks* within the context of Facebook use, with the converse being true when using Instagram. Based on these results, we conclude that the transitory (i.e., ephemeral) nature of some forms of self-disclosure on Instagram (e.g., Stories) is used as a means to mitigate privacy risks. For example, Instagram users may use Stories to impulsively disclose ephemeral content without paying much attention to privacy risks because the content automatically expires in 24 hours. Although Facebook enables users to set expiry dates on a variety of content they disclose (e.g., posts and videos), these require more effort and planning and may thus not be viewed as easy a means to mitigate privacy risk as is the case with Instagram Stories. We also found *perceived benefits* to fully mediate the relationship between *trust in provider* and *intention to self-disclose*. Similarly, our results indicate that *perceived risks* mediate the relationship between *trust in provider* and *intention to self-disclose* for both Facebook and Instagram. Together, we argue this to indicate that users do not blindly trust Facebook or Instagram. Instead, provider trust only plays a role when the perceived risks and benefits are first assessed, in line with *privacy calculus*.

Declaration of Conflicting Interests

The author(s) declare(s) that there is no conflict of interest.

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Appendix

Table A.1. Questionnaire descriptive statistics

Latent variables (and associated items)									
Items			**CA**	**CR**	**AVE**	**Outer Loading**	**t-value**	**VIF**	**Reference**
trust in provider (TIP)	**In my opinion Facebook:**								
	TIPF1	Is open and receptive to the needs of its members.	0.932	0.947	0.747	0.835	56.208	2.464	adapted from Krasnova et al. (2010)
	TIPF2	Makes good-faith efforts to address most member concerns.				0.866	76.671	2.966	
	TIPF3	Is interested in the wellbeing of its members, not just its own.				0.868	80.132	2.980	
	TIPF4	Is honest in its dealings with me.				0.858	75.719	2.829	
	TIPF5	Keeps its commitments to its members.				0.885	92.075	3.281	
	TIPF6	Is trustworthy.				0.873	92.154	2.884	
	In my opinion Instagram:								
	TIPI1	Is open and receptive to the needs of its members.	0.938	0.951	0.763	0.852	58.912	3.160	
	TIPI2	Makes good-faith efforts to address most member concerns.				0.874	72.403	3.789	
	TIPI3	Is interested in the wellbeing of its members, not just its own.				0.873	83.295	3.260	
	TIPI4	Is honest in its dealings with me.				0.877	88.313	3.233	
	TIPI5	Keeps its commitments to its members.				0.893	91.960	3.605	
	TIPI6	Is trustworthy.				0.871	80.585	2.889	
e	**Facebook**								

	PBF1	Using Facebook is convenient to inform all my friends about my ongoing activities.	0.865	0.899	0.599	0.708	29.846	1.617	adapted from Krasnova et al. (2010)
	PBF2	I believe sharing information on Facebook is positive and has many benefits.				0.803	55.120	1.982	new item
	PBF3	I get to know new people by using Facebook.				0.700	31.401	1.534	adapted from Krasnova et al. (2010)
	PBF4	I find Facebook entertaining.				0.805	49.507	2.456	
	PBF5	I am willing to disclose personal information on Facebook because of the benefits I enjoy when using this platform.				0.753	44.549	1.665	new item
	PBF6	I spend enjoyable and relaxing time on Facebook.				0.861	76.601	2.910	adapted from Krasnova et al. (2010)
	Instagram								
	PBI1	Using Instagram is convenient to inform all my friends about my ongoing activities.	0.865	0.899	0.597	0.767	38.193	1.868	adapted from Krasnova et al. (2010)
	PBI2	I believe sharing information on Instagram is positive and has many benefits.				0.805	53.995	2.033	new item
	PBI3	I get to know new people by using Instagram.				0.756	39.511	1.743	adapted from Krasnova et al. (2010)
	PBI4	I find Instagram entertaining.				0.755	35.989	2.379	
	PBI5	I am willing to disclose personal information on Instagram because of the benefits I enjoy when using this platform.				0.737	41.646	1.591	new item
	PBI6	Using Instagram is convenient to inform all my friends about my ongoing activities.				0.812	48.697	2.599	adapted from Krasnova et al. (2010)

perceived risk (PR)	**Answer the following in relation to the use of Facebook**								
	PRF1	Overall, I see no real risk to my privacy due to my presence on Facebook.	0.858	0.903	0.700	dropped			
	PRF2	I fear that something unpleasant can happen to me due to my presence on Facebook.				0.833	56.343	2.037	adapted from Krasnova et al. (2010)
	PRF3	It is dangerous to disclose my personal information on Facebook.				0.820	49.698	1.885	adapted from Li et al. (2020)
	PRF4	In general, I feel that using Facebook is risky.				0.865	68.808	2.068	
	PRF5	I am worried that unknown third parties will access my personal information on Facebook.				0.829	52.666	1.928	adapted from Lin et al. (2017)
	Answer the following in relation to the use of Instagram								
	PRI1	Overall, I see no real risk to my privacy due to my presence on Instagram.	0.814	0.875	0.638	dropped			
	PRI2	I fear that something unpleasant can happen to me due to my presence on Instagram.				0.754	24.045	1.800	adapted from Krasnova et al. (2010)
	PRI3	It is dangerous to disclose my personal information on Instagram.				0.786	38.657	1.512	adapted from Li et al. (2020)
	PRI4	In general, I feel that using Instagram is risky.				0.823	46.287	1.874	
	PRI5	I am worried that unknown third parties will access my personal information on Instagram.				0.827	57.725	1.744	adapted from Lin et al. (2017)
i n	**Facebook**								

	ISDF1	Overall, I am willing to reveal my personal information such as name, affiliation, job, educational background on Facebook.	0.825	0.884	0.658	0.764	41.026	1.546	adapted from Min and Kim (2015)
	ISDF2	My Facebook profile reveals a lot of information about me.				0.828	48.530	2.501	adapted from Zlatolas et al. (2015)
	ISDF3	I reveal a lot of information about myself on Facebook.				0.885	88.961	2.918	
	ISDF4	I intend to continue using Facebook rather than discontinue its use.				dropped			adapted from Min and Kim (2015)
	ISDF5	When I have to say something, I share it on Facebook.				0.759	41.989	1.480	adapted from Spiekermann and Korunovska (2012)
	Instagram								
	ISDI1	Overall, I am willing to reveal my personal information such as name, affiliation, job, educational background on Facebook and Instagram.	0.834	0.890	0.670	0.762	39.092	1.503	adapted from Min and Kim (2015)
	ISDI2	My Facebook and Instagram profiles reveal a lot of information about me.				0.848	44.389	3.109	adapted from Zlatolas et al. (2015)
	ISDI3	I reveal a lot of information about myself on Facebook and Instagram.				0.896	89.200	3.646	
	ISDI4	I intend to continue using Facebook rather than discontinue its use.				dropped			adapted from Min and Kim (2015)
	ISDI5	When I have to say something, I share it on Instagram.				0.759	39.243	1.497	adapted from Spiekermann and Korunovska (2012)
ear-of-	**FOMO (as part of the Facebook model)**								some items adapted from
	FOMOF1	I fear others have more rewarding experiences than me.	0.870	0.906	0.708	dropped			

	FOMOF2	I fear my friends have more rewarding experiences than me.				dropped			Przybylski et al. (2013)
	FOMOF3	I get worried when I find out my friends are having fun without me.				0.818	21.317	2.868	
	FOMOF4	I get anxious when I don't know what my friends are up to.				0.843	30.649	1.827	
	FOMOF5	When I have a good time, it is important for me to share the details online (e.g. updating status).				dropped			
	FOMOF6	When I miss out on a planned get-together it bothers me.				0.826	26.350	1.750	
	FOMOF7	I post regularly on Facebook to keep up with my friends.				dropped			New item
	FOMOF8	I get worried when I find out my friends are having fun without me.				0.875	32.599	3.365	adapted from Przybylski et al. (2013)
	FOMO (as part of the Instagram model)								
	FOMOI1	I fear others have more rewarding experiences than me.	0.871	0.911	0.720	dropped			adapted from Przybylski et al. (2013)
	FOMOI2	I fear my friends have more rewarding experiences than me.				dropped			
	FOMOI3	I get worried when I find out my friends are having fun without me.				0.855	42.741	2.868	
	FOMOI4	I get anxious when I don't know what my friends are up to.				0.829	38.171	1.827	
	FOMOI5	When I have a good time, it is important for me to share the details online (e.g. updating status).				dropped			
	FOMOI6	When I miss out on a planned get-together it bothers me.				0.809	37.402	1.750	
	FOMOI7	I post regularly on Instagram to keep up with my friends.				dropped			New item

	FOMOI8	I get worried when I find out my friends are having fun without me.				0.897	73.185	3.365	adapted from Przybylski et al. (2013)
dropped = items were excluded from the analysis to improve convergent validity.									

Table A.2. Heterotrait-monotrait (HTMT) ratio values for the Facebook model

	FOMO	**ISD**	**PB**	**PR**	**TIP**
FOMO					
ISD	0.200				
PB	0.105	0.714			
PR	0.043	0.415	0.387		
TIP	0.120	0.475	0.603	0.499	

Table A.3. Heterotrait-monotrait (HTMT) ratio values for the Instagram model

	FOMO	**ISD**	**PB**	**PR**	**TIP**
FOMO					
ISD	0.254				
PB	0.204	0.632			
PR	0.050	0.301	0.293		
TIP	0.095	0.319	0.489	0.383	

Table A.4. Results of common method bias checking for the Facebook model

	FOMO	**ISD**	**PB**	**PR**	**TIP**
FOMO		1.018	1.046	1.022	1.037
ISD	1.573		1.303	1.632	1.699
PB	1.870	1.448		1.900	1.637
PR	1.067	1.278	1.319		1.183
TIP	1.442	1.609	1.404	1.466	

Table A.5. Results of common method bias checking for the Instagram model

	FOMO	**ISD**	**PB**	**PR**	**TIP**
FOMO		1.038	1.057	1.041	1.066
ISD	1.429		1.183	1.476	1.512
PB	1.604	1.319		1.668	1.487
PR	1.085	1.148	1.179		1.101
TIP	1.307	1.332	1.195	1.273	

Table A.6. Crossloading values for the Facebook model

	FOMO	ISD	PB	PR	TIP
FOMOF3	0.821	0.090	0.027	0.017	0.055
FOMOF4	0.846	0.179	0.110	-0.026	0.133
FOMOF6	0.828	0.172	0.104	0.010	0.095
FOMOF8	0.878	0.127	0.062	-0.014	0.081
ISDF1	0.121	0.765	0.438	-0.386	0.351
ISDF2	0.173	0.828	0.442	-0.196	0.279
ISDF3	0.195	0.885	0.491	-0.282	0.343
ISDF5	0.104	0.759	0.591	-0.275	0.381
PBF1	-0.003	0.457	0.709	-0.206	0.305
PBF2	0.075	0.501	0.803	-0.303	0.470
PBF3	0.067	0.391	0.701	-0.195	0.412
PBF4	0.045	0.445	0.805	-0.220	0.399
PBF5	0.164	0.548	0.753	-0.330	0.411
PBF6	0.099	0.492	0.861	-0.312	0.519
PRF2	0.031	-0.245	-0.244	0.833	-0.361
PRF3	-0.043	-0.336	-0.282	0.820	-0.313
PRF4	0.019	-0.325	-0.345	0.865	-0.458
PRF5	-0.035	-0.282	-0.265	0.829	-0.369
TIPF1	0.084	0.339	0.478	-0.362	0.835
TIPF2	0.150	0.359	0.444	-0.389	0.866
TIPF3	0.090	0.347	0.455	-0.371	0.868
TIPF4	0.090	0.359	0.448	-0.386	0.858
TIPF5	0.121	0.366	0.493	-0.378	0.885
TIPF6	0.076	0.419	0.514	-0.455	0.873

Table A.7. Crossloading values for the Instagram model

	FOMO	ISD	PB	PR	TIP
FOMOI3	0.856	0.139	0.140	-0.007	0.037
FOMOI4	0.829	0.220	0.152	0.043	0.084
FOMOI6	0.809	0.197	0.162	-0.002	0.100
FOMOI8	0.898	0.176	0.153	-0.003	0.070
ISDI1	0.154	0.763	0.437	-0.336	0.276
ISDI2	0.202	0.849	0.390	-0.143	0.163
ISDI3	0.224	0.896	0.440	-0.197	0.223
ISDI5	0.144	0.759	0.525	-0.180	0.276
PBI1	0.186	0.413	0.768	-0.083	0.287
PBI2	0.062	0.454	0.806	-0.261	0.419
PBI3	0.113	0.413	0.758	-0.128	0.325
PBI4	0.127	0.331	0.756	-0.145	0.289
PBI5	0.212	0.542	0.737	-0.292	0.346
PBI6	0.128	0.379	0.812	-0.276	0.396
PRI2	0.047	-0.066	-0.126	0.755	-0.232
PRI3	-0.036	-0.347	-0.225	0.787	-0.211
PRI4	0.020	-0.187	-0.267	0.824	-0.320
PRI5	0.020	-0.200	-0.199	0.827	-0.320
TIPI1	0.081	0.201	0.368	-0.271	0.852
TIPI2	0.069	0.216	0.361	-0.264	0.874
TIPI3	0.105	0.255	0.381	-0.265	0.873
TIPI4	0.087	0.270	0.399	-0.318	0.877
TIPI5	0.051	0.241	0.382	-0.314	0.894
TIPI6	0.073	0.336	0.448	-0.343	0.870

Table A.8. Glossary of Abbreviations

Abbreviation	Meaning	Page
FoMO	fear of missing out	1
TIP	trust in provider	5
PB	perceived benefits	5
PR	perceived risks	5
ISD	intention to self-disclose	5
IS	information systems	9
PLS	partial least squares	10
AVE	average variance extracted	11
HTMT	heterotrait-monotrait (ratios)	11
CA	Cronbach's alpha	11
CR	composite reliability	11
VIF	variance inflation factor (values)	12
R^2	explanatory power	12
Q^2	out-of-sample predictive power or accuracy	12
f^2	effect size	12
CI	confidence interval	14