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Abstract

The "*like*" feature is popularly utilized by online social media users for different reasons, including socializing, giving feedback, and giving or seeking attention as well as for pure affection. The "*like*" function is a gamified element of social networking sites used billions of times per day. Despite its widespread use in the social media space, little is known about the different factors that influence Facebook users' "*like*" continuation intention or the game mechanics of "*like*." To address this relevant issue, a cross-sectional survey was administered with 728 adolescent Facebook users (12 to 18 years old). This study utilized the theory of planned behavior (TPB) to investigate the role of attitude (hedonic motivation, reciprocal benefit, social presence), subjective norms (primary influence and secondary influence), and perceived behavioral control (self-

efficacy, habit) in influencing the continuation intention of "*like*" as well as the influence of self-efficacy and habit on the game mechanics of "*like*." This investigation addresses the urgent need to understand better the post-adoption issues as well as the intentions to use specific features of social media. The results suggest that social presence, primary and secondary influence, self-efficacy, and habit significantly predicted Facebook "*like*" continuation intention. Furthermore, self-efficacy and habit significantly predicted the game mechanics of "*like*." Different theoretical and practical implications of the study are presented and discussed in light of prior information systems literature.

Keywords: Adolescent, continuation intentions, Facebook, game mechanics, like, theory of planned behavior, and social media

1.   Introduction

Adolescents are considered one of the largest and fastest growing communities of users of online social networking sites (SNS) (Kaur, 2016a; Kaur, 2016b). Adolescents tend to utilize different online SNS (e.g., Facebook, Twitter, Snapchat, WhatsApp, Line) for various reasons, including seeking and sharing information, communicating, and connecting as well as academic and leisure purposes (Dhir, Chen, & Chen, 2015; Dhir, 2016a; Dhir, 2016b). Scholars have argued that online SNS have well established themselves and even created a special place in the lives of adolescents (Baker & White, 2010). For example, SNS provide them with a newer social context for carrying out different social interactions with friends and peers (Baker & White, 2010). Similarly, SNS such as Facebook have emerged as a common favorite virtual destination for adolescents (Dhir, 2016a). They allow adolescents to build their own public or semi-public profiles, through which they can connect and communicate with their friends and peers (Boyd & Ellison, 2008). However,

despite the massive popularity of SNS among adolescents, only limited understanding of them exists in terms of what influences adolescents' engagement with SNS and what factors influence adolescents' decision-making related to frequent engagement with SNS (see Baker & White, 2010). A better understanding of the different factors influencing adolescents' engagement with SNS could potentially bring multi-faceted benefits, such as deeper insights into user engagement and participation in computer-mediated space, in addition to a better understanding of adolescents' SNS behavior. In other words, this line of investigation can potentially answer the questions of why adolescents are online on different SNS and what it means to be online on SNS.

Facebook provides different sets of features for enhancing users' engagement and participation. This includes the possibility to tag, share, like, comment on, and react to posted content (Dhir, 2016a). These different Facebook features address users' different uses and gratifications (U&G) (Dhir, 2016a; Dhir et al., 2015). The U&G of media refers to different motives and reasons behind the use of that given media or platform. Among these different features, the Facebook "*like*" has been recognized as the most popular and regularly utilized Facebook activity (Eftekhar, Fullwood, & Morris, 2014). According to one estimate, 26% of Facebook users "*like*" the content posted by others at least once per day (Hampton, Goulet, Rainie, & Purcell, 2011). Similarly, according to Friere (2016), 1.6 billion Facebook users click on the "*like*" button nearly 6 billion times daily, outnumbering the total number of Google searches per day. Facebook users use "*like*" to express their emotions, affection, and interest in a given Facebook post (Lee, Kim, & Ahn, 2014). Furthermore, clicking on "*like*" helps virtually connect the different forms of the content posted on the different Facebook profiles (Eftekhar et al., 2014); for example, if a Facebook user selects "*like*" for certain content (e.g., a photo, status message), that particular content becomes available to his or her Facebook friends. Consequently, the Facebook "*like*" is seen as a means to give

"attention to others" and to showcase "care or respect for friends" (Eftekhar et al., 2014). In addition, the Facebook "*like*" is considered a tool for adolescent socialization (Manago, Taylor, & Greenfield, 2012).

Despite this massive popularity and frequent use of the Facebook "*like*" as an online activity, the different associated factors influencing Facebook users' intention to click on the "*like*" button as well as its game mechanics are currently not known. There is a pressing need to understand the factors influencing the continuation intentions and actual use behavior of the "*like*" function for different reasons. First, it will bring newer insights into the gamification elements (e.g., like, tag, reactions) offered by computer-mediated platforms including Facebook. Second, it will enable scholars to better understand users' engagement and participation in SNS, particularly the reasons behind the popularity of "*like.*" Third, it will potentially address the urgent demand for an investigation of the U&G of specific SNS features (e.g., tagging, like, comment) because such investigations offer more nuanced approaches toward understanding the U&G of new media (see Dhir et al., 2015; Dhir, 2016a). Fourth, it will address the longstanding demand for understanding the different factors influencing adolescents' engagement in the use of SNS (see Baker & White, 2010).

The present study addressed the aforementioned research gaps by investigating the different factors that influence the continuation intentions and the game mechanics of the Facebook "*like*" using the theory of planned behavior (TPB) (Ajzen, 1991). TPB is a well-known theoretical framework that has been extensively utilized for explaining the complex relationships pertaining to the behavioral decision-making process, through the identification of significant predictors of an individual's behavior (Baker & White, 2010). The present investigation utilized an extensive list of factors based on the TPB for predicting the independent variables—namely, continuation

intentions and the game mechanics of the Facebook "*like.*" This includes attitude (hedonic motivation, reciprocal benefit, social presence), subjective norms (primary influence and secondary influence), and perceived behavioral control (self-efficacy, habit). The findings of this study offer various theoretical as well as practical implications for scholars engaged in the research examining computer-mediated communication platforms, online advertising, business models, and online virtual communities. Similarly, small, medium, and large organizations with a presence on Facebook could benefit from the findings of this study because the "*like*" function is considered as a means of user engagement and participation in user-driven innovation on online communication platforms.

2.   Background Literature

2.1.   Facebook "*like*"

People in general are motivated to be seen as attractive, likeable, competent, and virtuous (Leary, 1996). Consequently, SNS users also strive to project a positive image of themselves (Barash, Duchenaut, Isaacs, & Bellotti, 2010). The Facebook "*like*" is part of self-impression management (Fullwood, Nicholls, & Makichi, 2014; Gill, Nowson, & Oberlander, 2009) through which an individual can present a favorable image of him- or herself in the online space. The Facebook "*like*," referred to as a directed communication between two or more Facebook users, has the potential to strengthen the bonding and bridging of social capital (Burke, Kraut, & Marlow, 2011). Similarly, SNS users make use of the "*like*" to interact and respond to other SNS users' activities (e.g., status updates, photo and video uploads, tagged photos) (Ellison, Vitak, Gray, & Lampe, 2014). The use of "*like*" leaves visible traces, which are seen by other SNS users as proof that "*liked*" content has been seen and attended by other SNS users (Ellison et al., 2014). The Facebook "*like*" is a form of social feedback through which Facebook users can interact directly with shared

information and subsequently respond to the user (Sutcliffe, Gonzalez, Binder, & Nevarez, 2011). Social feedback can be positive (e.g., earning "*likes*" after posting a photo), which results in a positive reaction or an experience of self-affirmation (Toma & Hancock, 2013). For these reasons, the Facebook "*like*" is treated as a form of user engagement and participation.

The Facebook "*like*" is also of particular importance and relevance for small and big organizations interested in connecting with and reaching their existing and potential consumers (Eftekhar et al., 2014). According to Jin, Phua, and Lee (2015), the number of "*likes*" on a Facebook brand community (e.g., Facebook fan page) is interpreted as a quantitative indicator of online popularity. Facebook users can now join any brand community by just clicking on a "*like*" button. Furthermore, once a Facebook user "*likes*" a given community via Facebook, he or she subscribes to that community. There are different ways in which consumers can participate in these brand communities. Consumers can "*like*" a given post, leave a comment, share it on their own wall so that others can see it, or tag themselves in the post. All these actions show their support, respect, and approval for that product (Eftekhar et al., 2014). Similarly, the SNS commerce features (i.e., Facebook like, comment) are linked with social support and quality relationships (Liang & Turban, 2011) as well as enhanced purchase intentions and brand evaluation (Naylor, Lamberton, & West, 2012).

The number of "*likes*" on Facebook content actually shows how interesting that content is for other users and what level of engagement the "*liked*" content brings for the SNS audience (Bakhshi, Shamma, & Gilbert, 2014). Furthermore, the number of "*likes*" quantifies the total number of users who like the content; hence, it is considered a strong social signal for the SNS audience (Bakhshi et al., 2014). Ellison et al. (2014) stated that, if a Facebook status fails to attract "*likes*," it is considered to have a "lack of interest" among one's network; therefore, a "*like*" helps in bridging

social capital. Similarly, more "*likes*" are strongly correlated with the likelihood of repinning on Pinterest (Gilbert, Bakhshi, Chang, & Terveen, 2013). Despite all these findings regarding the Facebook "*like*," there is not even a limited understanding of the continuation intentions and game mechanics of the "*like*" feature. Similarly, no prior study has yet investigated the different reasons behind the popularity of the Facebook "*like*" among adolescent Facebook users. These gaps are addressed in the present study.

2.2.   Theory of Planned Behavior (TPB)

The theory of reasoned action (TRA) explains human behavior by predicting users' intention using the two different components of attitude and subjective norms (Ajzen & Fishbein, 1980). Intention reflects the user's motivation or probability of performing the behavior under question (Fishbein & Ajzen, 1975). A user's attitude represents his or her overall evaluation, which can be a positive or negative perception of the behavior under investigation, whereas subjective norms symbolize the effect of significant others or perceived social pressure on users' behavior (Ajzen, 1991). Scholars have criticized the TRA for neglecting the influence of users' control on their behavior. This limitation is addressed by the successive version of this theory, referred to as the theory of planned behavior (TPB) (Ajzen, 1985). The TPB adds the additional element of perceived behavioral control (PBC) along with attitude and subjective norms. The PBC explains the extent of influence the user possesses over the underlying behavior under investigation. Furthermore, users' control over the environment can be viewed in terms of their ability and availability of the resources and opportunities (Ajzen & Madden, 1986).

TPB is a general model that explains human behavior broadly but does not specify any specific beliefs that constitute attitude, subjective norms, or PBC. The beliefs underlying these measures can differ in different contexts. Furthermore, the predictive capabilities of attitude, subjective

norms, and PBC are context dependent (Ajzen, 1991). However, overwhelmingly, the prior literature has supported the ability of TPB to explain human behavior in the field of information systems (Liang & Lim, 2011; Pelling & White, 2009). The majority of prior studies have focused on undergraduate students (or young adults) (Pelling & White, 2009; Cameron, 2010; Leng, Lada, Muhammad, Ibrahim, & Amboala, 2011; Darvell, Walsh, & White, 2011; Cho, Park, & Kim, 2014; Zoonen, Verhoeven, & Elving, 2014). In comparison, adolescent SNS users are rarely studied (Baker & White, 2010). Consequently, there is an urgent need for newer investigations on SNS users' behavior among adolescents, as addressed by the present study. Furthermore, despite the fact that the TPB is popular and well researched in predicting technology use, it has rarely been used to understand the continuance of technology systems (Al-Debei, Al-Lozi, & Papazafeiropoulou, 2013). It is important to understand the continuance of technology systems because it provides insightful knowledge of different issues pertaining to actual user or service experiences, service delivery, engagement, and participation. Thus, Al-Debei et al. (2013) examined the intentions of continuance engagement and participation in Facebook in general. In comparison, the present study investigated the engagement and participation in the context of a specific Facebook feature—that is, the "*like.*"

3. Research Model and Hypotheses

3.1. Research Model

In the present study, we built a research model based on the well-known theoretical framework of TPB in order to explain the complex continuation intentions and game mechanics of the Facebook "*like*" (see Figure 1). Congruent with TPB, its three components—namely, attitude, subjective norm, and PBC—have direct impacts on continuation intentions. The continuation intention positively influences the actual user behavior. Furthermore, PBC indirectly predicts user behavior

via continuation intention in addition to having a direct impact on actual use behavior. The positive attitude toward the Facebook "*like*" with greater influence from the different primary and secondary entities (i.e., subjective norms), coupled with increased PBC, influences users' continuation intention to use the "*like*" feature. The users' continuation intentions influence their behavior—that is, the game mechanics of the Facebook "*like*" in the present study. Prior literature has pointed out that, although the TPB has been successful in explaining complex user behavior and intentions in the context of technology use, significantly large proportions of variance remain unexplained, such as between 39% in behavioral intentions and 27% in use behavior (see Armitage & Conner, 2001; Al-Debei et al., 2013). This lower percentage of variance explained by TPB has motivated scholars to adopt different strategies for increasing the predictive capabilities of this theoretical framework (e.g., Baker & White, 2010; Al-Debei et al., 2013). Scholars have emphasized the need to bring specific changes to TPB as well as utilizing additional variables for increasing the percentage of variance explained in behavioral intentions and actual use behavior (see Bae & Kang, 2008). These recommendations are also consistent with the observations of the original theory that has advocated for utilizing additional variables for enhancing the predictive capabilities of the TPB model (see Ajzen, 1991). Consequently, in the present study, newer measures were utilized in the traditional TPB model in order to improve its predictive ability as well as the explanatory power of TPB without violating the parsimonious nature of this theory (see Al-Debei et al., 2013).

Insert Figure 1 here

3.2. Hypotheses

3.2.1. Attitude

Attitude is defined as the user's positive or negative perceptions of a particular action. Scholars have found that attitude influences users' continuation intentions in the context of technology use (Huang & Hsu, 2009; Jung, Kim, & Chan-Olmstead, 2014; Wu & Liu, 2007). Similarly, in the context of SNS, an overwhelming number of studies have found that attitude has a significant influence on the behavioral intentions (Pelling & White, 2009; Al-Ghaith, 2016) and SNS users' continuance intentions (Al-Debei et al., 2013; Hajli, Shanmugam, Powell, & Love, 2015). Consequently, we posit that the attitude of adolescent Facebook users plays a significant role in influencing their continuous intentions of the Facebook "*like.*" Prior literature has decomposed attitude into different components: hedonic outcomes, utilitarian outcomes, and social outcomes (Venkatesh & Brown. 2001; Dwivedi, 2005). Similarly, recent prior computer-mediated communication literature has found that hedonic needs, reciprocal benefits, and social presence were the main drivers of the use of a specific Facebook feature—that is, tagging (Dhir et al., 2015)—as well as general Facebook use (Dhir & Tsai, 2017; Dhir, Khalil, Lonka, & Tsai, 2017) among adolescents. Therefore, the present study decomposed user attitude using three measures: hedonic motivation, reciprocal benefit, and social presence. Our choice of these measures is also based on the motivational perspective (van der Heijden, 2004) and the theory of network externalities (see Katz & Shapiro, 1985). We argue that the Facebook "*like*" is influenced by the hedonic and utilitarian factors (i.e., reciprocal benefit and social presence). For example, adolescent Facebook users get enjoyment, entertainment, and fun through its use and see a utility

in the "*like*" function, such as receiving more likes and helping with their peer network and sociability.

3.2.1.1.   *Hedonic motivation*

Hedonic (or pleasure-oriented) motivation is defined as the user's tendency to behave or act in a particular way based on the elements of fun and enjoyment derived from it (Venkatesh et al., 2012). Scholars have found that hedonic elements (e.g., fun, enjoyment, entertainment) influence users' attitudes and use intentions in the context of technology systems (Wu & Liu, 2007; Lin & Lu, 2011). Prior literature has found that hedonic elements play a significant role in influencing users' intention to play online games (Wu & Liu, 2007) and use mobile-based location applications (Roback & Wakefield, 2013) as well as online check-ins on computer-mediated platforms (Laurn, Yang, & Chiu, 2015). Similarly, several studies have found that hedonic motivation plays a significant role in the use of SNS (see Chen & Sharma, 2013; Al-Jabri, Sohail, & Ndubisi, 2015; Sukhu, Zhang, & Bilgihan, 2015; Lin & Lu, 2011). The most recent studies have also concluded that hedonic motivation (e.g., perceived enjoyment) was the strongest predictor of continuance intentions to use SNS (Mouakket, 2015; Lin, Featherman, & Sarker, 2016) and SNS-based mobile apps (Qin, Kim, & Tan, 2016). As SNS cater to the hedonic needs of their users, it is relevant to investigate the influence of the hedonic elements of "*like*" on the continuation intentions of "*like*."

Hypothesis 1: Hedonic motivation influences continuation intentions to use the Facebook "*like*."

3.2.1.2.   *Reciprocal Benefit*

Reciprocal benefit is defined as the user's perceptions regarding the attainment of the mutual benefits in lieu of the performed actions (Hsu & Lin, 2008; Kaur, 2016a). In the information systems literature, reciprocal benefit represents the utilitarian outcomes associated with the use of any product or service (Hsu & Lin, 2008). Scholars have agreed that users' desire to gain

recognition and seek information plays an influential role in driving their behavior intentions in the computer-mediated communication space (Habibi, Laroche, & Richard, 2014; Hsu & Lin, 2008). Similarly, the influential role of reciprocal benefit has been emphasized in the context of participating in SNS (Hamari & Koivisto 2013; Hsu & Lin, 2008; Habibi et al., 2014). In this study context, the "*like*" is termed as an online gift used for receiving and contributing (or reciprocating) to building strong relationships (Eftekhar et al., 2014; Kaur, 2016a; Ellison et al., 2014). The use of "*like*" can be explained with the theory of reciprocity, which states that nice and kind acts are often rewarded or reciprocated by equally nice and kind behavior (Falk & Fischbacher, 2006). Similarly, agreeable friends tend to receive more "*likes*" for their posted content due to the reciprocity of their kindness (Eftekhar et al., 2014). Therefore, it is relevant to investigate the impact of reciprocal benefit on the "*like*" continuation intentions.

Hypothesis 2: Reciprocal benefit influences continuation intentions to use the Facebook "*like*."

3.2.1.3.   *Social Presence*

Social presence refers to different user perceptions that are personal and social in nature (e.g., intimacy and psychological closeness) (Gefen & Straub, 2004; Short, Williams, & Christie, 1976). Scholars have agreed that the social presence of a medium plays a significant role in influencing the behavioral intentions related to technology use (Gefen & Straub, 2003; Hassanein & Head, 2007), such as online purchase intention (Gefen & Straub, 2003) and online user participation (Fortin & Dholakia, 2005). In the case of SNS, several recent studies have pointed out that specific features of SNS (such as Facebook's "*like*" function, comments, and emoticons) actually enhance users' sense of social presence (Hajli, Sims, Zadeh, & Richard, 2017; Naylor et al., 2012; Liang & Lim, 2011). Furthermore, social presence is significantly related to the intentions to use SNS (Lu & Fan, 2014; Naylor et al., 2012). Therefore, it is plausible to assume that the social presence

associated with the Facebook "*like*" has a significant influence on the "*like*" continuation intentions.

Hypothesis 3: Social presence influences continuation intentions to use the Facebook "*like*."

3.2.2. Subjective Norms

Subjective norms are defined as the influence of important others (such as friends, family, peers, commercials, newspapers) on user behavior (Ajzen, 1991). Scholars have observed that subjective norms have a significant influence on purchasing behavior (Venkatesh & Brown, 2001), the usage and adoption of broadband (Dwivedi, 2005), mobile data service continuance intention (Kim, 2010), and users' behavioral intentions in online space (Mäntymäki, Merikivi, Verhagen, Feldberg, & Rajala, 2014). Subjective norms have been consistently shown to possess a significant influence on the behavioral intentions in the context of SNS, such as mobile SNS apps (Qin et al., 2016) and SNS in general (Pelling & White, 2009; Al-Ghaith, 2016; Ku, Chen, & Zhang, 2013; Cheung & Lee, 2013). Similarly, recent studies have found a significant relationship between subjective norms and SNS use continuance intentions (Ku et al., 2013; Mouakket, 2015; Al-Debei et al., 2013) and online communities (Hajli et al., 2015). However, not all studies have agreed, as some have found an insignificant relationship between subjective norms and intentions to use SNS (see Kim, Lee, Lee, Sung, & Choi, 2016; Zoonen et al., 2014). Therefore, the present study aims to further examine the role of subjective norms in influencing the continuous intentions to use the Facebook "*like.*" In this study, we posit that adolescent Facebook users keep posting Facebook "*likes*" on different forms of content, partly as a result of the influence of friends, family, media and commercials. Based on the recommendation of the recent SNS literature, in the present context, subjective norms are investigated using the primary and secondary influences of the Facebook "*like.*"

### 3.2.2.1.	Primary Influence

Primary influence is defined as the influence of referent entities (e.g., friends, family, peers, colleagues) on user behavior (Venkatesh & Brown, 2001). Scholars have found overwhelming evidence suggesting that the primary influence of friends and peers on young people greatly influences their user behavior (e.g., exercise, binge-drinking) (Johnston & White, 2003; Mason & White, 2008). In the context of SNS use, Baker and White (2010) found that the primary influence of peers and friends explains young people's frequent SNS usage. Thus, the present study investigated the impact of primary influence associated with the Facebook "*like*" on the continuation intentions to use it.

Hypothesis 4: Primary influence influences continuation intentions to use the Facebook "*like*."

### 3.2.2.2.	Secondary Influence

Secondary influence is defined as the informational influence of external or non-personal sources (e.g., offline commercials, magazines, online publicity, mass media reports) on the formulation of behavioral intentions and use behavior (Venkatesh & Brown, 2001). Scholars have found that secondary influence has a significant impact on behavioral intentions in the context of technology use (Dwivedi, 2005; Mäntymäki et al., 2014). In the context of SNS, Muk and Chung (2014) found that the secondary influence of advertisements in SNS on the users' intention to join brand pages (e.g., Facebook pages) on SNS was significant. Consequently, the secondary influence on the Facebook "*like*" continuation intentions was investigated.

Hypothesis 5: Secondary influence influences continuation intentions to use the Facebook "*like*."

### 3.2.3.	Perceived Behavioral Control (PBC)

Perceived behavioral control (PBC) refers to the users' perceptions of their control in a given situation. Prior literature suggests that PBC significantly influences behavioral intentions and user behavior in the use of technology systems (Mäntymäki et al., 2014; Dwivedi, 2005). Similarly, in the context of SNS, PBC has a significant influence on intentions to use SNS (Baker & White, 2010; Chu, Chen, & Sung, 2015) as well as selfie posting behavior on SNS (Kim et al., 2016). However, not all studies have agreed with this observation as some recent studies have found an insignificant influence of PBC on SNS use intentions (Al-Ghaith, 2016). Therefore, the current study aimed to examine the role of PBC in influencing the continuation intentions as well as the game mechanics of the Facebook "*like*" feature. Scholars have recommended the need to decompose PBC into different measures (e.g., knowledge, facilitating conditions, self-efficacy, perceived ease or difficulty of usage, basic required knowledge) to understand better the impact of PBC on continuation intentions (Venkatesh & Brown, 2001). Therefore, in this study, we hypothesize that the continuation intention and game mechanics of the Facebook "*like*" are partly the result of adolescent users' perceived control, which has been decomposed into self-efficacy and the habit of using "*like.*"

3.2.3.1.   *Self-Efficacy*

Self-efficacy is defined as the user's confidence in his/her own abilities, which is required to perform the desired behavior (Bandura, 1977). In other words, a high level of self-efficacy equates to a higher level of intention to use a computing system. Self-efficacy has been recognized as a strong measure for evaluating PBC in computer-mediated environments (Venkatesh & Davis, 2000; LaRose et. al., 2012). Scholars have found that self-efficacy influences behavioral intentions (Venkatesh & Brown 2001; Mäntymäki et al., 2014; Dwivedi, 2005). However, in the context of SNS, most findings related to the influence of self-efficacy on behavioral intentions have been

contradictory. For example, Zhou, Lu, and Wang (2011) found that self-efficacy enables user participation in Facebook. In comparison, a recent study by Qin et al. (2016) found that self-efficacy has no influence on the behavioral intentions to use mobile SNS apps. Thus, the current study aims to further investigate the role of self-efficacy associated with the Facebook "*like*" in influencing the continuous intentions and game mechanics of the Facebook "*like*" feature.

Hypothesis 6: Self-efficacy influences continuation intentions to use the Facebook "*like*."

Hypothesis 7: Self-efficacy influences continuation intentions to use the Facebook "*like*."

3.2.3.2.   Habit

Habit is defined as a behavior when a user has attained a level of automaticity through self-learning (Kim & Malhotra, 2005; Limayem, Hirt, & Cheung, 2007). Scholars have found that habit has a significant impact on users' behavior in computing systems because it plays an influential role in predicting use intentions in the context of technology use (Kim & Malhotra, 2005; Limayem et al., 2007; Venkatesh et al., 2012). However, according to Mouakket (2015), the role of habit in the context of SNS use has never been examined; this scholar found a significant influence of habit on the continuance intention to use SNS. Therefore, in the present study, we have examined the role of habit associated with the Facebook "*like*" in influencing the continuous intentions and game mechanics of the Facebook "*like.*"

Hypothesis 8: Habit influences continuation intentions to use the Facebook "*like*."

Hypothesis 9: Habit influences the game mechanics of the Facebook "*like*."

3.2.4.   Game Mechanics of "*like*"

Game mechanics of "*like*" refers to a tendency among Facebook users to become more active and generate more content on Facebook after receiving more "*likes*" to their Facebook activity. Furthermore, the game mechanics of "*like*" refers to the game-like environment that Facebook

users experience when others "*like*" their content or activity (Witt et al., 2011). In the present study, the game mechanics of "*like*" is the use behavior of "*like*"—that is, a user clicking on "*like*" for any posted content on Facebook. Prior literature suggests that users' intentions to use a service or product significantly influence their actual use behavior (Dwivedi, 2005; Venkatesh & Brown, 2001). We hypothesize that adolescent Facebook users' intention to continue using "*like*" influences their actual user behavior (i.e., the game mechanics of "*like*").

Hypothesis 10: Continuation intentions toward the Facebook "*like*" influence its game mechanics.

4.   Research Methods

4.1.   Study Participants

The data were collected using a pen-and-paper cross-sectional survey from 728 adolescent Facebook users from eight different senior and junior high schools in four cities in Northern India. The participating schools were typical private schools with English as their medium of instruction. The average age of the study participants was 14.54 (SD = 1.09) years, and 65.5% (n = 511) were male adolescents. The research process for recruiting the study participants was as follows: First, a random number of different senior and junior high schools in four different Indian cities were chosen and invited via email and phone calls to participate in the study. At this stage, the invited schools were clearly informed of the objectives, requirements, and expected outcomes of the intended study. Second, eight senior and junior high schools representing the four cities of Northern India agreed to participate in the study. Third, after receiving formal approval to conduct this cross-sectional survey, the study was advertised to the target population of adolescent Facebook users via teachers and bulletin boards. In the study advertisement, the different details pertaining to the actual study—namely, the study objectives, main research questions, expected outcomes, time requirement, and date and time—were clearly mentioned. Fourth, the survey

instrument was pilot tested with 30 students representing the target population from the participating schools. The pilot study data were not included in the final data collection, and the survey instrument was updated based on the feedback, which mainly related to the textual aspects. Finally, the study participation was kept voluntary and anonymous. The participants had the freedom to quit the study at any moment, and they were informed against providing any identifying information (e.g., name, roll number, email, or phone number).

4.2. Data Analysis

The cross-sectional data were analyzed using two statistical software packages: IBM SPSS 22.0 and AMOS 21.0. The survey items for the study measures did not deviate from normal distribution as the skewness and kurtosis were in the acceptable range of ±1 (Byrne, 2001; George & Mallery, 2003; Hair, Anderson, Tatham, & Black, 1998). The Z-score for the survey items was calculated in order to determine if there were any potential outliers in the collected data. The Z-score for all items was far below the recommended threshold value of 3.29 (Tabachnick & Fidell, 2007); hence, the gathered data were assumed to be free from any outliers. Afterwards, the processed data were analyzed using a two-step consecutive process, which is a recommended approach for ensuring that study measures have sufficient psychometric properties concerning validity and reliability before actually drawing any structural relationships (see Shen, Cheung, & Lee, 2013). In the first step, the measurement model was estimated to examine its model fit and investigate if the study measures had sufficient validity and reliability. In the second step, the structural model was estimated to test the validity of the different research hypotheses of the present study.

The chosen measures are consistent with the context of the study (i.e., the Facebook "*like*"). Furthermore, these measures were drawn from prior literature; hence, they have been previously validated numerous times in different contexts (see Table 1). The different measures constituting

attitude, subjective norms, and PBC are hedonic motivation, reciprocal benefit, social presence, primary influence and secondary influence, self-efficacy, and habit. All the different measures of our research model were evaluated by the participants in a cross-sectional survey using a five-point response scale ranging from 1 = "never" to 5 = "always."

Insert Table 1 here

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5.   Results

5.1.   Measurement Model

A confirmatory factor analysis (CFA) was performed to examine the model fit and different forms of validity and reliability for the different study measures using AMOS. The maximum likelihood (ML) estimation method is known for its robustness with large data-sets, making it a natural choice for the CFA (Reinartz, Haenlein, & Henseler, 2009). The recommended values for the goodness-of-fit indices for evaluating the model fit are: χ^2/df (Chi-square ratio degrees of freedom) ≤ 3, comparative fit index (CFI) $\geq .92$, Tucker–Lewis Index (TLI) $\geq .92$ and root mean square error of approximation (RMSEA) $\leq .08$ (Byrne, 2001; Hair et al., 1998). The measurement model returned a good model fit, indicating correct specification between the theoretical model and the empirical data ($\chi^2/df = 2.22$, $CFI = 0.96$, $TLI = 0.96$, $RMSEA = 0.04$).

The validity and reliability of the measurement model were examined by investigating the different types of instrument validity (e.g., content, face, convergent, and discriminant), and reliabilities (e.g., internal reliability) with respect to the different study measures. The content validity was ensured by adapting the different items for the study measures from prior literature examining the applicability of TPB in the SNS context. Therefore, all measurement items were drawn and

adapted from existing literature and had been validated by different international scholars from different domains as well as reviewed by an international panel of reviewers. Face validity was examined by performing a pilot study with 30 adolescent Facebook users from the participating pool of junior and senior schools. The pilot study participants were representative of the target population. Based on feedback from the pilot study, minor modifications related to the language and wording of the measurement items were performed.

Prior structural equation modelling (SEM)-based literature has suggested different statistical tests for confirming the convergent and discriminant validity of study measures. To confirm convergent validity, factor loadings for the items must be greater than 0.70, composite reliability (CR) should be greater than 0.70, and the average variance extracted (AVE) for a given study measure should be greater than .50 but smaller than its corresponding CR value for the study measure (Devellis, 2012; Straub, Boudreau, & Gefen, 2004). All study measures satisfied these conditions, clearly suggesting that they possess sufficient convergent validity (see Table 2). Similarly, to confirm sufficient discriminant validity, the prior SEM literature suggests that the correlation between different pairs of study measures should be smaller than 0.70 (Straub et al., 2004), the value of the maximum shared variance (MSV) of any given study measure should be smaller than its corresponding AVE value, and the correlation value of a given study measure with other study measures should be smaller than the square root of its corresponding AVE value (Devellis, 2012; Hair et al., 1998). All study measures were found to possess sufficient discriminant validity (see Table 2).

The internal reliability of the study measures was evaluated using the CR value that should be greater than 0.70 for confirming sufficient internal reliability (Devellis, 2012). All study measures

possessed a CR value above the threshold limit of .70 (see Table 2). All these statistical tests clearly indicate that the study measures possessed sufficient validity and reliability.

Insert Table 2 here

5.2.   Structural Model

The structural model was estimated using SEM in order to examine the influence on different factors on the continuation intentions and game mechanics of the Facebook "*like*." The study utilized two dependent variables: continuation intentions to use "*like*" and the game mechanics of "*like*." It also employed seven independent variables: hedonic motivation, reciprocal benefit, social presence, primary and secondary influence, habit, and self-efficacy. The path-coefficient (ß value) and percentage variance explained (R^2) in continuation intentions and game mechanics were examined using the structural model, which returned a good model fit ($\chi^2/df = 2.22$, *CFI* = 0.96, *TLI* = 0.96, *RMSEA* = 0.04). The hypothesis testing was carried by accessing the structural model (see Figure 2). The measurement model explained 71% of the variance in the continuation intention to use "*like*" and 59% of the variance in the game mechanics of "*like*" (or user behavior). The hypothesis testing results are presented in Table 3. The results suggest a significant direct effect of social presence (H3), self-efficacy (H6), and habit (H8) at $p < .001$ as well as primary influence (H4) and secondary Influence (H5) at $p < .05$ on the continuation intentions to use the Facebook "*like*." Similarly, self-efficacy (H7) and habit (H9) had a significant direct effect on the game mechanics of "*like*" at $p < .001$. In comparison, hedonic motivation (H1) and reciprocal benefit (H2) did not share any significant relationship with continuation intentions to use the Facebook "*like*." Furthermore, continuation intentions toward the Facebook "*like*" showed no

influence on its game mechanics (H10). Thus, hypotheses H1, H2, and H10 were not supported. The research model explained a high degree of variance, indicating that it possessed good predictive powers.

Insert Figure 2 here

Insert Table 3 here
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6.   Discussion

The present study investigated the determinants of the continuation intentions and game mechanics of a specific feature of online social media: the Facebook "*like.*" A well-known theoretical framework, the theory of planned behavior (TPB), was utilized and adapted in the context of the online social media and the Facebook "*like*" to develop a research model. This research model examined the influence of attitude, subjective norms, and perceived behavioral control in predicting the continuation intentions of "*like*" and the game mechanics of the Facebook "*like*" among adolescent Facebook users. This investigation was timely and much needed because, despite the fact that online social media (including Facebook) have witnessed an exponential rise in their user base, to date only limited understanding exists of their post-adoption issues (see Al-Debei et al., 2013). The situation is no better when it comes to the post-adoption of online social media among adolescents or the post-adoption issues concerning the specific features of SNS (such as like, comment, tag, or share). In addition, this study is consistent with the recent recommendations emphasizing the need to investigate the influence of different factors on

behavioral intentions with regard to consumption issues concerning online social media (Järvinen, Ohtonen, & Karjaluoto, 2016; Bilgihan, Barreda, Okumus, & Nusair, 2016).

The study results suggest that the attitude dimension composed of hedonic motivation (H1) and reciprocal benefit (H2) had no direct influence whereas only social presence (H3) had a direct influence on the continuation intentions to use the Facebook "*like*." The hedonic motivation (i.e., fun and enjoyment) (H1) had no influence on Facebook users' intention to continue using the Facebook "*like*" in the future. This finding is contradictory to several recent SNS studies that have indicated a significant relationship between hedonic motivation and behavioral intention to use SNS (Morosan & DeFranco, 2016; Baptista & Oliveira, 2015; Al-Jabri et al., 2015; Sukhu et al., 2015; Mouakket, 2015; Qin et al., 2016; Lin et al., 2016). One possible explanation could be that hedonic motivation is only significant in pre-adoption and not in the case of post-adoption contexts; thus, the feeling of being entertained does not last long enough to impact the user's continuation intentions. Another possibility could be that hedonic motivation is not significant in the case of specific SNS features (such as "*like*").

The increased possibility of gaining mutual or reciprocal benefits (H2) showed no influence on the behavioral intentions to use "*like.*" This is inconsistent with prior SNS studies, which found the possibility of gaining mutual benefits (e.g., recognition and information seeking) in lieu of user participation impacting their behavioral intentions (Habibi et al., 2014; Hamari & Koivisto 2013; Hsu & Lin, 2008). Possible reasons for this could include that clicking on "*like*" on others' posts in return for getting "*likes*" could enable both parties to rise to the same social status. However, in the case of adolescents, this might have a different meaning. For example, adolescent Facebook users might be interested in enhancing their own social status by gaining more appreciation for their posted content. However, compared to this, the idea of getting more appreciation by

reciprocating appreciation to others might result in their friends gaining similar social status, which might not sit well with adolescents currently in a stage of emotional development. Therefore, this finding is specific to our target user group (i.e., adolescents) and should be further examined. In addition, the Facebook "*like*" is utilized for building strong relationships (Eftekhar et al., 2014; Kaur, 2016a; Ellison et al., 2014) and reciprocity of kindness (Eftekhar et al., 2014), but our findings suggest that reciprocity does not influence the continuation intention to use the Facebook "*like*."

The study findings have shown that social presence (H3) exerted a significant influence on users' intentions to continue using the "*like*" functionality on Facebook, which is consistent with the observation of several SNS studies (Baker & White, 2010; Al-Debei et al., 2013; Lu & Fan, 2014; Naylor et al., 2012). Possible reasons behind the significant influence of social presence could include that specific SNS features such as the Facebook "*like*" have the capability to enhance SNS users' social presence by providing them with the feelings of sociability and human warmth (Hajli et al., 2017; Naylor et al., 2012). Sociability and human warmth are known as important gratifications that adolescents seek (Dhir, 2016a; Dhir et al., 2015), which help them develop the identity they might consider important for their well-being (Dhir, 2016a; Dhir, 2016b).

The study findings on primary influence (H4) and secondary influence (H5) suggest that subjective norms have a significant influence on the continuation intentions at the $p < 0.05$ significance level. These findings are consistent with the prior extended SNS literature (Ku et al., 2013; Mouakket, 2015; Al-Debei et al., 2013; Qin et al., 2016; Al-Ghaith, 2016; Cheung & Lee, 2013). Furthermore, the results are also consistent with the findings of the existing literature suggesting that young people (e.g., adolescents) are dependent on the approval and opinion of important others for making their decisions (Muk & Chung, 2014; Baker & White, 2010). These findings further

confirm that the influence of family, friends and peers, and external influencers (e.g., media and commercials) has a significant influence on the continuation intentions to click on the Facebook "*like*."

The perceived behavioral control comprising self-efficacy (H6, H7) and habit (H8, H9) demonstrated a significant influence on the continuation intentions (H6, H8) as well as the game mechanics (H7, H9) of the Facebook "*like*." The findings on self-efficacy are consistent with prior extended literature (e.g., Venkatesh & Brown 2001; Mäntymäki et al., 2014; Dwivedi, 2005) and with Facebook literature. For example, Zhou et al. (2011) found a significant influence of self-efficacy on Facebook users' participation. Yet at the same time, this finding contradicts the results of a recent study by Qin et al. (2016), who found no influence of self-efficacy on the use of mobile SNS apps. Similarly, the study findings on habit were consistent with prior extended literature (e.g., Limayem et al., 2007; Venkatesh et al., 2012) as well as with several recent SNS studies (Morosan & DeFranco, 2016; Escobar-Rodríguez & Carvajal-Trujillo, 2013; Arenas-Gaitan, Peral-Peral, & Ramon-Jeronimo, 2015; Baptista & Oliveira, 2015; Mouakket, 2015). These findings clearly suggest that continuation intentions and games mechanics to use a specific SNS feature (e.g., Facebook "*like*") are greatly influenced by the user's previous experience as well as Facebook users' habituated performance of similar acts or behavior. In addition, the study findings confirmed the postulates of TPB—namely, that perceived behavioral control has a direct influence on continuation intentions as well as use behavior.

The study findings confirmed that continuation intentions (H10) have no influence on the game mechanics of the Facebook "*like*," which contradicts prior literature suggesting the significant influence of user intentions on user behavior (Dwivedi, 2005; Venkatesh & Brown, 2001). A possible reason for such inconsistent results could be the differences in the context. For example,

game mechanics of "*like*" are about becoming more active and generating more content after attracting or receiving more "*likes*" from others on their own Facebook activity. In contrast, continuation intentions refer to one's own tendency to "*like*" a given content or activity. Consequently, they are not connected to each other.

7.   Study Implications

The present study offers different theoretical and practical implications for both scholars and practitioners engaged in the interdisciplinary field of research in computer-mediated communication, new media, information systems, human–computer interaction, social media, adolescent psychology, and youth studies. Regarding the theoretical implications, the present study findings significantly contribute to the theoretical framework of TPB as they offer concrete evidence that TPB is suitable for explaining the post-adoption behavior of a specific feature of Facebook (i.e., "*like*") among adolescent Facebook users. This was much needed because much of the prior TPB literature focused on the pre-adoption issues of information systems (Baker & White, 2010; Pavlou & Fygenson, 2006), while the testing and supporting of the applicability of TPB in the post-adoption context has been largely ignored (Al-Debei et al., 2013). Furthermore, almost all prior TPB-based studies on social media have examined the acceptance and adoption of SNS use as a whole; in comparison, the present study focused on the continuation use of a specific SNS feature (i.e., "*like*"). Second, the present study extended the original TPB by decomposing the attitude, subjective norms, and perceived behavioral control dimensions of TPB into newer components, in addition to existing ones, for improving the predictive ability of the original theory. It should be noted that prior TPB literature decomposed the attitudinal dimension into hedonic and utilitarian outcomes (Dwivedi, 2005; Venkatesh & Brown, 2001), but still lacked the examination of specific types of utilitarian outcomes. The situation was no different in the case of the subjective

norms and perceived behavioral control dimensions. To address this gap, the present study decomposed users' attitudes toward "*like*" into the hedonic motivation, reciprocal benefit, and social presence measures. Similarly, subjective norms were decomposed into primary and secondary influences while the perceived behavioral control was decomposed into habit and self-efficacy measures. Third, the structural model based on the extended TPB was able to explain 71% of the variance in the continuation intention to click on "*like*" on Facebook and 51% of the variance in the game mechanics of "*like*." The study findings clearly suggest that the extended TPB is suitable for explaining the use of a specific feature of SNS, and the study provides sufficient empirical support for future consideration of these new measures for investigating user behavior while using the extended TPB. Furthermore, the study provided newer insights into the predictive power of the extended TPB, thereby significantly contributing to an important IS theory, ongoing social media, as well as consumer insight research. Fourth, the present study extended the original TPB by examining the impact of continuation intention on the game mechanics of "*like*" (i.e., a form of user behavior). Fifth, the present study focused on a specific user group (i.e., adolescent Facebook users). This was important because, overwhelmingly, the prior literature has focused on college-attending young adults as well as adults (Dhir, 2016a; Dhir & Tsai, 2017). Therefore, the findings of the present study significantly contributed to the limited prior literature examining the use of specific SNS features among adolescent Facebook users.

The present study offers different practical implications. First, the study findings can provide necessary guidance to social media managers and administrators for generating engaging social media content so that SNS users click on "*like*" more often. The usage of "*like*" represents one important form of active user participation and also reflects users' appreciation of the proposed and existing ideas and concepts. Furthermore, more "*likes*" on their generated content can have a

positive influence on their future active content generation. Similarly, the study findings are important to service companies interested in understanding the motivation models for retaining existing and attracting prospective customers. For example, these companies should focus on supporting social presence, habit, and self-efficacy through their platforms or services. Second, the study findings can also help strengthen the operation of social media-based brand communities (e.g., Facebook pages), which can also help boost the organizations' user-centric service innovation initiatives because active content generation can help intensify user-centric innovation activities. Third, the study results could be insightful for IT developers and interface designers; for example, the study findings can provide knowledge of the development of newer features that can support the social presence-, habit-, and self-efficacy-related needs of their users.

8.   Study Limitations and Future Work

The present study suffers from some limitations that offer possible future research directions. Despite the limitations posed by the present study, it still has contributed significantly to the limited prior literature examining the use of specific SNS features among adolescent SNS users. First, the present study investigated the continuance and game mechanics of "*like*" in the context of Facebook. Thus, the findings of the present study are limited to the IT artifact (i.e., the Facebook environment). Second, the study findings are limited to a specific group of Facebook users (i.e., adolescents), meaning it is likely that the study findings might differ if other SNS age groups are studied (e.g., young adults, adults, older adults). Third, the study set-up has a methodological limitation due to the fact that only self-reported data were considered, and self-reports are prone to methodological bias.

Based on these study limitations, we propose a few directions for future research. First, future investigations should focus on the user behavior concerning the use of "*like*" in other social media

platforms such as Instagram, YouTube, or Twitter. Second, future studies should validate the findings of the current research with users from broader age groups (e.g., adults, young adults). To address the methodological bias, future investigations should involve longitudinal or repeated cross-sectional studies in the same research settings to validate the findings of the current study. Apart from these possible directions, we believe that scholars should examine and test the validity and applicability of newer exploratory measures for enhancing the predictability of the TPB theory (e.g., the percentage of variance explained in the game mechanics of "*like*" was only 51%). Furthermore, continuation intentions for other forms of user participation (sharing, commenting, tagging, etc.) must be investigated.

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Data Availability

The data used in the article may be obtained for replication purposes by writing to the lead author at amandeep.dhir@tdt.edu.vn.

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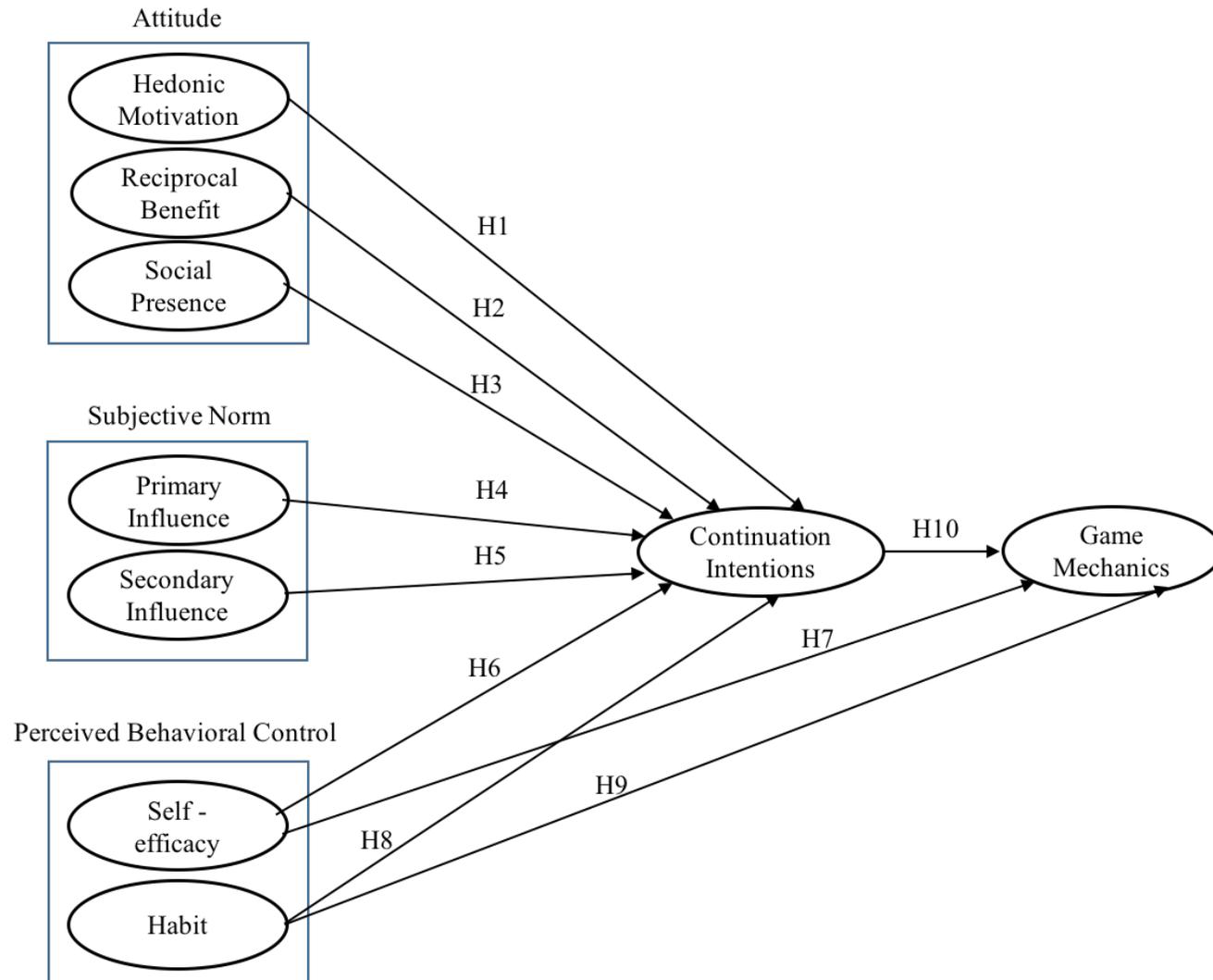
Figure 1: Our research model and proposed hypotheses

Table 1: Summary of study measures, Factor loadings of CFA and SEM

Study Measures (Reference)	Measurement items	Factor loadings structural model (SEM)	Factor loadings measurement model (CFA)
Primary Influence (PI) (Ajzen, 1991)	PI1: People who are important to me think that I should add likes.	.75	.75
	PI2: My friends think adding likes is a good idea.	.74	.73
	PI3: People who influence my behavior think that I should add likes.	.74	.74
	PI4: People whose opinion I value think I should add likes.	.67	.67
Reciprocal Benefit (RB) (Hsu & Lin, 2008; Hamari & Koivisto. 2013)	RB1: Liking can be mutually helpful.	.78	.77
	RB2: Liking can be advantageous to me and other people.	.80	.79
	RB3: Liking improves my motivation to participate.	.76	.78
	RB4: The FB community encourages me to like.	.65	.66
Secondary Influence (SI) (Bhattacherjee, 2000)	SI1: I feel pressure from media and commercials to use likes.	.83	.83
	SI2: I feel encouraged by media and commercials to use likes.	.84	.84
	SI3: I feel persuaded by media and commercials to use likes.	.82	.82
Social Presence (SP) (Gefen & Straub, 2004)	SP1: There is a sense of human contact in liking.	.79	.79
	SP2: There is a sense of sociability in liking.	.84	.84
	SP3: There is a sense of human warmth in liking.	.80	.80
Self-efficacy (SE) (LaRose et al., 2012)	SE1: I feel confident using the like function.	.81	.81
	SE2: I feel confident in utilizing the like function.	.83	.84

	SE3: I feel comfortable using the like function on my own.	.79	.79
	SE4: I can easily operate the like function on my own.	.77	.77
	SE5: I feel comfortable using the like function even if there is no one around me to tell me how to use it.	.61	.60
Habit (HB) (Venkatesh et al., 2012)	HB1: The use of likes has become a habit for me.	.82	.82
	HB2: I am addicted to using likes.	.81	.81
	HB3: I must use likes.	.79	.79
	HB4: Liking has become natural to me.	.82	.82
Hedonic Motivation (HM) (Venkatesh et al., 2012)	HM1: Liking is fun.	.81	.81
	HM2: Liking is enjoyable.	.93	.93
	HM3: Liking is very entertaining.	.78	.78
Game Mechanics (GM) of "*like*" (Witt et al., 2011)	UB1: Receiving more likes on my FB activity will increase my motivation to become more active on FB.	.76	.75
	UB2: Receiving more likes on my FB activity will increase my motivation to generate more content on FB.	.78	.80
Continuation Intentions (CI) (Venkatesh et al., 2012)	BI1: I intend to continue using the like function in the future.	.82	.82
	BI2: I will always try to use the like function in my daily life.	.89	.89
	BI3: I plan to continue to use the like function frequently.	.79	.79

Table 2. Mean, standard deviation, composite reliability, AVE, and correlations among the measures

Study Measures	Mean	SD	CR	AVE	MSV	ASV	GM	PI	HM	RB	SE	SI	SP	H	CI
Game Mechanics (GM)	3.44	1.27	.75	.60	.56	.40	.78								
Primary Influence (PI)	3.64	0.98	.81	.52	.42	.27	.61	.72							
Hedonic Motivation (HM)	3.69	1.20	.88	.71	.39	.29	.63	.55	.84						
Reciprocal Benefit (RB)	3.24	1.07	.84	.56	.56	.35	.75	.65	.58	.75					
Self-efficacy (SE)	3.58	1.05	.88	.59	.44	.35	.66	.53	.57	.61	.77				
Secondary Influence (SI)	2.95	1.22	.87	.69	.27	.20	.52	.31	.38	.43	.38	.83			
Social presence (SP)	3.46	1.08	.85	.65	.42	.28	.52	.42	.42	.51	.58	.50	.81		
Habit (H)	2.99	1.21	.88	.66	.60	.33	.65	.44	.51	.53	.57	.51	.53	.81	
Continuation Intention (CI)	3.21	1.21	.87	.70	.60	.36	.62	.49	.51	.52	.63	.52	.65	.77	.84

Note: Standard deviation = SD, Composite Reliability = CR, Average Variance Explained = AVE, MSV = Maximum Shared Variance,

ASV = Average Shared Variance, GM = Game Mechanics

Table 3. Summary of the hypothesis testing (N = 728)

Hypothesis	Path		ß	Significance
H1	Hedonic Motivation (HM)	→ Continuation Intention (CI)	0.02	n.s.
H2	Reciprocal Benefit (RB)	→ Continuation Intention (CI)	-0.08	n.s.
H3	Social Presence (SP)	→ Continuation Intention (CI)	0.24	<0.001
H4	Primary Influence (SI)	→ Continuation Intention (CI)	0.09	<0.05
H5	Secondary Influence (SI)	→ Continuation Intention (CI)	0.08	<0.05
H6	Self-Efficacy (SE)	→ Continuation Intention (CI)	0.16	<0.001
H7	Self-Efficacy (SE)	→ Game Mechanics (GM)	0.44	<0.001
H8	Habit (HB)	→ Continuation Intention (CI)	0.50	<0.001
H9	Habit (HB)	→ Game Mechanics (GM)	0.36	<0.001
H10	Continuation Intention (CI)	→ Game Mechanics (GM)	0.07	n.s.

Note: n.s. stands for non-significance

Figure 2. Results of the structural model