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What makes us click “like” on Facebook? Examining psychological, technological, and motivational factors on virtual endorsement

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ABSTRACT

This study examines motives for virtually endorsing others on social media, focusing on the Facebook “like” function. Motives are studied in terms of uses and gratifications, Theory of Reasoned Action, and personality and technology factors. Data from an online survey of 213 respondents were examined using factor- and hierarchical-regression analyses. Findings showed enjoyment and interpersonal relationship as most salient motives. Two types of user profiles emerged. Those with higher self-esteem, more diligence, more emotional stability, and less subjective norm clicked “like” to express enjoyment. Those with lower self-esteem, less diligence, less emotional stability, and higher subjective norm clicked “like” for pleasing others.

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1. Introduction

A quick and simple click that allows users to virtually endorse content on social network sites (SNSs) – such as the Facebook “like” button – has become ubiquitous across new media platforms. A “like” acts as a form of virtual endorsement to publicly support another user, a brand, or an organization with instantaneous display in virtual communities. Similar one-click endorsement functions happen on YouTube, Twitter, LinkedIn, and other online platforms. Amassed likes or virtual endorsements offer crowd-sourced support that may positively influence others’ attitudes [1]. The widespread use of “like” may in fact be shifting its meaning toward acknowledgment or agreement, and less about “liking” [2]. However, what a “like” as virtual endorsement means to the user is less known. Factors that motivate use of this technological function are emerging in some studies but remain limited.

This study builds on early research about clicking “like” and other endorsement mechanisms. An online survey of 213 respondents was conducted with focus on key variables for using “like” through factor and hierarchical-regression analyses. Motivations were examined with the uses and gratifications (U&G) perspective in virtual communities [3–7]. Motivations, attitudes, and behaviors are explored along with individual differences of personality, self-esteem, social influences, and technology uses.

Findings from this work show ways that SNSs and virtual endorsements influence the online social experience. According to Duggan and Smith’s 2013 study [8], among U.S. Internet users, 73% engage in social media and 71% use Facebook. eMarketer’s 2013 report [9] showed that from mid-2012 to mid-2013, Facebook “likes” increased 37% from PCs, 43% from mobile phones, and 74% from tablets. Facebook “power users” dominate clicking “like,” resulting in users in an average month receiving 20 likes though they only gave 14 [10]. “Liking” a product on Facebook may be connected with a promotional message sent to friend networks [11]. Virtual endorsement also may include typing comments (e.g., commenting on a YouTube video), but one-click mechanisms provide the quickest options for passing along updates (e.g., retweeting a Twitter update) or choosing content to share (e.g., skill endorsements on LinkedIn).

This work contributes to initial understanding of virtual endorsement motivations that align with particular attitudes and behaviors. Theoretical and practical implications are discussed in terms of virtual endorsement on Facebook with extensions to current and future SNSs.

2. Literature review

Virtual communities and specific features of SNSs are considered within the framework of uses and gratifications studies as applicable to virtual endorsement. Individual aspects in terms of personality traits and self-esteem qualities are included. Social influences that may sway SNS users in choosing to engage in virtual endorsement are reviewed. The literature also offers ways to view this endorsement in terms of technology factors for using particular SNS features (Fig. 1)

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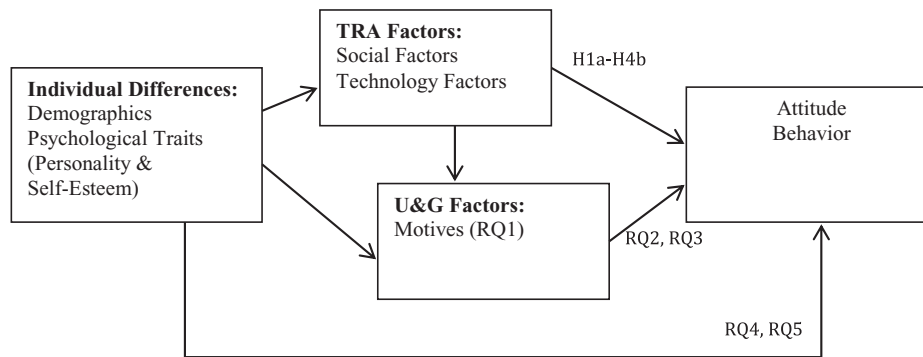


Fig. 1. The proposed relationship between independent and dependent factors.

2.1. Uses and gratifications in new media

Uses and gratifications (U&G) research, arising in the late 1940s, aims to explain how people use media to gratify needs and understand motives for media use [12]. The origin of U&G research centers simply on knowing more about audience members with awareness of individual differences for using media [13]. For U&G, audiences are active and purposely select media to satisfy their needs.

Research regarding use of the Internet may be insightful for studying the use of SNSs. For instance, Papacharissi and Rubin in 2010 [14] identified five motives for using the Internet based on the U&G approach, including interpersonal utility, passing time, information seeking, convenience, and entertainment. The two most salient motives were information seeking and entertainment. For the predictors of Internet use, the interpersonal utility motive, such as to participate in discussions and express the self freely, appeared the strongest because it was the only motive predicting both the amount of Internet exposure and affinity. For user profiles, those who avoided face-to-face communication were more likely to be motivated by interpersonal utility. Unlike a traditional U&G approach, focusing on the gratifications sought and obtained, this study provides insights toward understanding how individual differences regarding social and psychological factors affect motivations.

In terms of social media, Dholakia et al. [4] applied U&G and social influence perspectives to investigate user motives and participation in virtual communities. The authors differentiated two types of virtual communities, network-based and small-group-based. Network-based refers to online communities in which members might not know each other, whereas small-group-based communities have members who do know each other. For participants of network-based virtual communities, purposive value such as information seeking was found to be a key driver of participation. For participants of small-group-based virtual communities, social benefits such as maintaining interpersonal connectivity and social enhancement were the strongest motives. Similarly, a study of Twitter use also revealed that social connection was the strongest motive [15].

In exploring the use of Facebook, Papacharissi and Mendelson in 2011 [5] applied U&G to identify nine motives: expressive information sharing, habitual passing time, relaxing entertainment, cool and new trend, companionship, professional advancement, escape, social interaction, and new friendships. The most salient motives were habitual passing time and relaxing entertainment, which reflected a ritualistic use of Facebook. This study suggested that users who were active and social offline tended to use Facebook more to connect, increase, and maintain their social networks.

Smock et al.'s 2011 study [7] suggested that the motives for general use of Facebook and specific features on this social site were different. The results showed that only three motivations — relaxing entertainment, expressive information sharing, and social interaction — significantly predicted general use. The other six

motivations significantly predicted the use of specific features. For instance, the use of status updates was predicted by expressive information sharing. Comments were positively predicted by relaxing entertainment and social interaction but negatively predicted by companionship. Writing Wall postings was predicted by habitual passing time, professional advancement, and companionship. Based on the findings, the authors emphasized that general motivations were not able to provide insight into user perceptions and practices.

Motivations, as seen in another study, may not align with behaviors. An examination of the use of text-based communication media, including e-mail, cell-phone texting, and Facebook Wall postings, found that motivations for media use did not significantly predict the use of media [16]. Instead, media attributes were stronger factors in predicting use of different media features. For instance, media richness predicted Facebook Wall postings and cell-phone texting. Perceived network effect predicted the use of e-mail. Technological characteristics of the media appeared to drive the use of these technologies rather than the motivations.

A number of U&G studies have investigated the use of SNSs or online communication tools. In these works, [4,7,14,15] found motives related to interpersonal relationship and social interactions. Further, [5,7,14] indicated entertainment was an important motive. Both [5,14] suggested passing time and other purposive values such as information seeking or expression. Overall, these media platforms seem to fulfill the role of traditional media in terms of surveillance, cognition, entertainment, and habitual use for passing time. Unlike traditional media, the motives of sociability and self-expression were salient factors for the SNS use. Based on [4,5,7,14,15], motives related to interpersonal relationships, social interactions, passing time, entertainment, self-expression, and purposive values were used in this study. The first research question considers influences from U&G aspects related to overall SNS use and specific-feature use.

RQ1. What motives support virtual endorsement on Facebook?

In addition, this study examines the relationship between the motives of virtual endorsement and potential impacts on user attitudes and behaviors for clicking “like” on Facebook. Thus, our second and third questions are:

RQ2. How do these motives predict attitudinal outcomes of virtual endorsement on Facebook?

RQ3. How do these motives predict behavioral outcomes of virtual endorsement on Facebook?

However, studies indicated that the motivations of general uses of SNS might not offer enough insight to understand the specific use of different SNS features [5,7,14]. Papacharissi and Mendelson [5] suggested the motivations of using Facebook varied by individual personality traits. Smock et al. [7] emphasized the role of technology

factors in the use of Facebook. Thus, the present study also examines impacts of individual differences in terms of psychological traits and technology factors on virtual endorsement on Facebook.

2.2. Personality and self-esteem

Several studies have shown that personality traits are related to how and why people use SNSs. Typically these studies focus on the Big Five Personality factors of extraversion (sociable and outgoing); agreeableness (trusting and cooperative); conscientiousness (organized and diligent); neuroticism (psychological distress and sensitivity); and openness to experience (original and creative) as noted in [17,18].

However, the results from these studies are mixed. For instance, Tazghini and Siedlecki in 2013 [19] found that extraversion was associated with a greater number of Facebook friends and people with low self-esteem (measured by the Rosenberg Self-Esteem scale) tended to be more likely to accept friend requests from individuals that they do not know well. Correa et al.'s 2010 study [20] suggested that extraversion and openness to experience were associated with greater use of social media. Other studies found that only extraversion is the most significant predictor for the use of SNSs [21,22]. Alternatively, Özgüven and Mucan's 2013 study [23] found not only openness to experience but also conscientiousness was associated with the amount of time spent on SNSs. In addition, individuals low on extraversion seemed to passively use SNSs and disclosed the least honest information online [24]. In terms of the motivations, people with high agreeableness and neuroticism were most likely to use Facebook for belongingness-related behaviors [25]. Extraversion was associated with the use of communication with others while people with low conscientiousness and high neuroticism were more likely to engage in self-presentational behaviors [26].

A number of studies utilized the Rosenberg Self-Esteem scale to reveal the impact of self-esteem on the use of social media. A study found lower self-esteem was related to greater online activity as well as self-promotional content on Facebook [26]. Those with lower self-esteem and higher introversion are more likely to strive to look popular on Facebook [27]. On the other hand, those with higher self-esteem and extraversion increased their popularity by using Facebook. For people who had lower self-esteem, Facebook helped reduce the barriers in terms of forming large and heterogeneous groups of friends [28]. However, the impact of self-esteem on SNS was not robust. For instance, Krämer and Winter's 2008 study [29] did not find the relationship between the use of SNSs and self-esteem.

The above studies indicate that personality traits and self-esteem may influence the use of SNSs. The mixed results further suggest a need for more empirical studies to add to the body of knowledge regarding how psychological factors relate to media use. As such, two more research questions are addressed:

RQ4. *How may personality traits and self-esteem impact users' attitudinal outcomes of virtual endorsement on Facebook?*

RQ5. *How may personality traits and self-esteem impact users' behavioral outcomes of virtual endorsement on Facebook?*

2.3. Social influence factors

Besides the U&G approach, scholars have incorporated other theories, such as the Theory of Reasoned Action (TRA) [30], to account for social factors in the use of social media. The TRA and related frameworks help show influences of these factors regarding human behavior, particularly in online contexts. The TRA offers insight in terms of predicting behavior based on intention to behave in a certain way at a future point in time [31]. The TRA shows influences of a user's attitudes and his/her subjective norm toward performing behaviors. Subjective norm refers to how a user perceives ways people important to

him/her would view the behavior. In reviewing social factors across studies using the TRA and other theories, subjective norms aligned with similar terms, such as social norms and social influences [32]. Related to technology use, these terms of social influence collectively refer to an "explicit or implicit notion that the individual's behavior is influenced by the way in which they believe others will view them as a result of having used the technology" [32, p. 451].

A number of studies indicate that social pressure or subjective norms can affect the acceptance of new technologies [33–35]. For example, subjective norms were found to be positively associated with college students' SNS use [36]. Another series of studies applied we-intention, a commitment to participate in joint action, to examine how social-related factors impact the use of virtual communities and SNSs [37–39]. Perceptions of subjective norms significantly affected intentions to use SNSs, including Facebook, MySpace, and LinkedIn [38]. A later study focusing on Facebook revealed not only subjective norms but also social presence – the perceived presence of others in social media – was the strongest factor in predicting we-intention to use Facebook [39].

Social presence, widely adopted in the research of computer-mediated communication (CMC), has impacted users' attitudes and behaviors in CMC settings [40]. Papacharissi and Rubin's study [14] found that those who perceived the Internet as a warm and social place are more likely to use this media platform for fulfilling time, entertainment, convenience, and interpersonal needs. Dunlap and Lowenthal in 2009 [41] found that using Twitter can enhance social presence by enabling just-in-time social connections and interactions. They argued that using Twitter facilitated free-flowing just-in-time interactions and therefore helped individuals construct meanings through sustained communication. Park and Lee in 2010 [42] found that individuals' intention to use Twitter is significantly affected by social presence, perceived enjoyment, and perceived ease of use. In related work, subjective norms, mobile phone use, and attitudes toward Twitter also predicted its use [43].

Research in this area suggests that subjective norms are positively associated with attitudes toward SNSs or virtual communities. Further, these norms associated with subsequent use of these media. The following hypotheses are based on these studies:

H1a. *Subjective norm is positively associated with users' attitude toward virtual endorsement on Facebook.*

H1b. *Subjective norm is positively associated with users' behavioral outcome on virtual endorsement on Facebook.*

H2a. *Social presence is positively associated with users' attitude toward virtual endorsement on Facebook.*

H2b. *Social presence is positively associated with users' behavioral outcome on virtual endorsement on Facebook.*

2.4. Technology factors

Technology perceptions also play a role as multiple frameworks help study user attitudes and behaviors. In developing the Unified Theory of Acceptance and Use of Technology, Venkatesh et al. [32] reviewed the TRA and seven models, including the Technology Acceptance Model (TAM), Motivational Model, Theory of Planned Behavior (TPB), Model of PC Utilization, Innovation Diffusion Theory, Social Cognitive Theory, and Combined TAM-TPB, to create a unified model that was empirically validated. This work showed commonality in constructs of ease of use (effort expectancy) and usefulness (performance expectations) regarding technology acceptance and use.

For instance, Kwon and Wen's 2010 study [44] found that perceived ease of use and perceived usefulness both positively associated with SNS behavior. Lin and Lu's 2011 study [45] further supported perceived usefulness as a significant factor for continued SNS use.

Table 1
Independent measures.

Constructs	Items	Used for
Motives	See Table 2 (factor loadings)	RQ1, RQ2, RQ3, RQ6 RQ4, RQ5, RQ6
Personality traits (I see myself as...) Source: [48]	Extraverted, enthusiastic. Critical, quarrelsome. Dependable, self-disciplined. Anxious, easily upset. Open to new experiences, complex. Reserved, quiet. Sympathetic, warm. Disorganized, careless. Calm, emotionally stable. Conventional, uncreative.	
Self-esteem Source: [49]	I feel that I am a person of worth, at least on an equal plane with others. I feel that I have a number of good qualities. All in all, I am inclined to feel that I am a failure. I am able to do things as well as most other people. I feel I do not have much to be proud of. I have a positive attitude about myself. On the whole, I am satisfied with myself. I wish I could have more respect for myself. I certainly feel useless at times. At times I think I am no good at all.	RQ4, RQ5, RQ6
Subjective norm Source: [50]	Other people think that clicking “like” is important to me. It is important to my friends and relatives that I click “like.” It really would not matter to most people I know if I decided to not click “like.” Many of the people that I know expect me to continue to click “like.” No one would really be surprised if I just stopped clicking “like.” Many people would probably be disappointed in me if I just decided to stop clicking “like.” Others would probably make me feel guilty if I quit clicking “like.”	H1a – H2b, RQ6
Social presence Source: [4]	There is a sense of human contact on Facebook. There is a sense of personalness on Facebook. There is a sense of sociability on Facebook. There is a sense of human warmth on Facebook. There is a sense of human sensitivity on Facebook.	H1a – H2b, RQ6
Ease of use [32]	I find “like” on Facebook easy to use. It’s easy for me to express myself via clicking “like” on Facebook. It’s easy for me show my support via clicking “like” on Facebook.	H3a – H4b, RQ6
Usefulness [32]	It helps me get information. I learn something that is useful. It helps me network with others.	H3a – H4b, RQ6

Perceived ease of use significantly influenced user acceptance of information systems [35] and, through mobility and interactivity, supported positive attitudes toward Twitter and Facebook [43]. In a TAM examination of adopting social networks, perceived ease of use and perceived usefulness significantly impacted SNS attitudes and behavioral intentions [46]. However, Curran and Lennon’s 2011 study [47] found ease of use and usefulness were not significantly related to SNS use.

Studies of these technology factors suggest more research can examine the role of perceived ease and usefulness in accepting new media technology. Based on the above theories and models, such as the UTAUT [35], the following hypotheses examine these factors:

H3a. Perceived ease of clicking “like” is positively associated with users’ attitude toward virtual endorsement on Facebook.

H3b. Perceived ease of clicking “like” is positively associated with users’ behavioral outcome on virtual endorsement on Facebook.

H4a. Perceived usefulness of clicking “like” is positively associated with users’ attitude toward virtual endorsement on Facebook.

H4b. Perceived usefulness of clicking “like” is positively associated with users’ behavioral outcome on virtual endorsement on Facebook.

Further, this study considers how individual differences relate to user motives. A sixth research question is posed:

RQ6. How do individual differences in demographics, personality, self-esteem, and perceptions of Facebook “like” technology relate to motives?

3. Method

Based on the literature, a questionnaire using 7-point Likert scales was developed to assess the motives of engaging in virtual endorsement with use of “like” on Facebook, personality traits, self-esteem, social presence, perceptions of Facebook “like” technology, and attitudes toward “like.” The questionnaire was finalized as an online survey following Institutional Review Board approval. The survey was administered to a convenience sample of students at a Midwestern university, with collection completed in February 2014. A total of 213 valid responses were collected. The respondents included 78 (42%) males and 135 (58%) females. The mean age was 21.2 years old.

3.1. Demographic and independent variables

Respondents were asked to rate their agreement with statements (1 = strongly disagree and 7 = strongly agree) about clicking “like” on Facebook (see Table 1 for specific measures). Guided by previous research, a total of 26 items regarding motivations of virtual endorsement was developed [4,5,14,16], such as “It helps me show support to others” and “I enjoy the content.” Measures for ease of use, and perceived usefulness regarding “like” were developed based on [32]. The short version of the Big Five personality scale [48] was used

to assess respondents' personalities (Cronbach's $\alpha = .64$). The self-esteem scale [49] was adopted to assess respondents' self-esteem (Cronbach's $\alpha = .91$). Three statements measured ease of use [32], such as "I find 'like' on Facebook easy to use" (Cronbach's $\alpha = .82$). Three items measured perceived usefulness [32], such as "It helps me get information" (Cronbach's $\alpha = .76$). Measures for subjective norms were based on [50] with seven items, including "It is important to my friends and relatives that I click 'like'" (Cronbach's $\alpha = .83$). Social presence was derived with five items [4], such as "There is a sense of human contact on Facebook" (Cronbach's $\alpha = .85$).

3.2. Dependent measures

Eagly and Chaiken [51] argued an attitude could be viewed as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" [51, p. 1]. Importantly, an attitude contains evaluative dimensions (such as positive – negative), which allow researchers to use semantic scales for measurement [52,53]. Thus, the affective attitude in this study was based on a semantic differential blended from attitude and involvement scales [54] to measure a respondent's feelings toward Facebook "like." We asked respondents to rate how they feel about clicking "like" on Facebook. The seven semantic items were: unfavorable/favorable; negative/positive; not useful/useful; worthless/valuable; boring/interesting; unimportant/important; and inconsiderate/considerate (Cronbach's $\alpha = .90$).

A behavior consists of "one or more observable actions performed by the individual" [55 p. 889] and it includes four different elements: "the action, the target at which the action is directed, the context in which the action is performed, and the time at which it is performed" [55, p. 889]. Thus, the behavioral outcomes in this study refer to users' click [action] on the like button [target] when they are using [time] Facebook [context]. Because a direct measurement of behavioral outcomes in media studies is often not obtainable, such as amount of media use, scholars have used multiple items with a self-report to obtain data [56,57]. Mehdizdeh's 2010 study [58] used self-reports to measure the number of times users checked their Facebook page per day and time spent on Facebook per session. Self-reports also have been helpful in studies of behavioral use of Facebook functions [11,59]. For this study, the behavioral outcome of "like" was developed based on two items to estimate user actions with virtual endorsement on Facebook. Respondents were asked to report how many times they clicked "like" on the previous day, and in an average day. The mean of these two items was used to measure the behavioral outcome of virtual endorsement ($M = 5.3$, $SD = 8.3$).

3.3. Statistical analysis

For RQ1, an exploratory factor analysis common in U&G studies was performed to explore the motivational factors [e.g., 4,5,7]. The criteria for loading on a factor were an eigenvalue of more than 1.00 and a factor loading of more than .50. For RQ2, RQ3, RQ4, RQ5 and the hypotheses, hierarchical regression analyses were performed to reveal the unique contribution of each set of factors to the model. For RQ6 canonical correlation analysis was used to examine the relationship between individual differences and motivations.

4. Results and discussion

4.1. Virtual endorsement motives

For RQ1, the factor analysis suggested five factors explaining 75.2% variance after rotation with a total of 21 items remaining (see Table 2). Six items (such as "I enjoy the content" and "It helps me feel or express caring") describing the enjoyment of virtual endorsement were extracted to one factor, termed *enjoyment* (Cronbach's $\alpha = .92$,

Table 2

Principal component analysis results of virtual endorsement motivations.

I click "like" on Facebook because...	Loading	M	SD
Component 1: Enjoyment			
It helps me feel or express caring.	0.52	5.2	1.4
It helps me show support to others.	0.62	5.5	1.4
I enjoy the content.	0.9	5.5	1.3
I can relate to the content.	0.94	5.5	1.3
I agree with the content.	0.96	5.5	1.3
The content is posted by a person who is important to me.	0.74	5.0	1.4
Component 2: Pleasing others			
I feel bad if I do not support my friends' post.	0.73	3.6	1.7
Friends would think less of me if I do not.	0.87	2.6	1.5
It allows me to feel important.	0.81	3.0	1.5
It helps me to impress others.	0.85	2.8	1.5
It helps me fit in with a group of people.	0.74	3.0	1.6
Component 3: Monetary incentive			
It helps me get coupons.	0.97	3.4	1.8
It helps me receive a bargain deal.	0.98	3.4	1.8
It helps me to obtain a better deal.	0.98	3.3	1.8
Component 4: Pass time			
It's just a habit, just something I do.	-0.79	3.7	1.7
It helps me pass time when I am bored.	-0.83	3.9	1.8
Component 5: Interpersonal relationship			
It allows me to maintain friendships.	-0.8	4.7	1.6
It helps me improve relations with friends.	-0.83	4.6	1.6
It allows me to participate in discussion.	0.55	4.9	1.5
It makes me feel included.	-0.75	4.6	1.6
It allows me to obtain people's attention.	-0.58	4.4	1.5

$M = 5.4$). *Pleasing others* was termed based on five items that relate to feelings for others that influence clicking "like," such as "I feel bad if I do not support my friends' posts" and "Friends would think less of me if I do not" (Cronbach's $\alpha = .90$, $M = 2.9$). *Monetary incentive* included three items, such as "It helps me get coupons" and "It helps me to receive a bargain deal" (Cronbach's $\alpha = .97$, $M = 3.4$). *Passing time* included two items, such as "It's a habit, just something I do" (Cronbach's $\alpha = .84$, $M = 3.7$). *Interpersonal relationship* included five items, such as "It allows me to maintain my friendship" and "It helps me to improve relations with friends" (Cronbach's $\alpha = .89$, $M = 4.6$). Enjoyment and interpersonal relationship had the highest mean scores and were highly correlated ($r = .74$, $p = .01$). Passing time was a secondary motive. Monetary incentive and pleasing others were less salient reasons for virtual endorsement.

Based on the U&G perspective, enjoyment and interpersonal relationship were the most salient motives, which revealed the powerful appeal for users to click "like" on Facebook content from members of their social networks. The high correlation between enjoyment and interpersonal relationship further confirmed this finding. The more users engaged in sociability, the more their enjoyment of postings. They also may make those clicks to virtually endorse friends when they have time to kill, or support a company in order to receive a monetary incentive. They were less motivated by the idea of using "like" to please others. This corresponded to the findings regarding Millennials – a more Generation Me with increasing narcissism [60]. The motives found in this study demonstrated the unique power of social media that not only function as traditional media providing the gratifications for entertainment or killing time when bored but also as a way to maintain interpersonal relationships.

4.2. Predictors for affective attitudes and behavioral outcomes

A hierarchical regression was performed to analyze the effects of proposed factors on the attitude toward clicking "like." RQ2 explored the relationships between motives and attitude toward "like." RQ4 examined the relationships between personality traits and attitude toward "like." H1a, H2a, H3a, and H4a examined the effects of

Table 3
Hierarchical regression of demographics, personality, perceptions of Facebook “Like” technology, and motives on affective attitude toward Facebook “Like.”

	Model β		
	1	2	3
Step 1 Demographics and personality			
Age	.11	.11	.05
Gender	-.08	-.11	-.10
Extraversion	.20*	.12	.09
Agreeableness	.17*	.08	.07
Conscientiousness	.02	.05	.01
Emotional stability	-.06	.03	.01
Openness	-.20*	-.16*	-.17*
Self-esteem	.55	-.02	-.02
Step 2 Social influence and technology perception			
Subjective norm		.15*	.13
Social presence		.05	.02
Ease of “like”		.43***	.22*
Usefulness of “like”		.23***	.07
Step 3 Motives			
Enjoyment			.20*
Pleasing others			-.04
Monetary			.10
Pass time			-.03
Interpersonal relationship			.25*

Note: $R^2 = .09$ for Step 1, $\Delta R^2 = .37$ for Step 2, $\Delta R^2 = .07$ for Step 3.

** $p < .01$,

* $p < .05$,

*** $p < .001$.

Table 4
Hierarchical regression of demographics, personality, perceptions of Facebook “Like” technology, and motives on behavioral outcomes of Facebook “Like.”

	Model B		
	1	2	3
Step 1 Demographics and personality			
Age	-.05	-.04	-.07
Gender	-.09	-.10	-.10
Extraversion	.08	.03	.01
Agreeableness	.04	.02	.01
Conscientiousness	-.07	-.05	-.08
Emotional stability	-.03	.01	-.03
Openness	.15	.04	.06
Self-esteem	.03	-.02	-.01
Step 2 Social influence and technology perception			
Subjective norm		.07	.19*
Social presence		.08	.10
Ease of “like”		.18	.07
Usefulness of “like”		.19*	.11
Step 3 Motives			
Enjoyment			.07
Pleasing others			-.31**
Monetary incentive			-.08
Pass time			.19*
Interpersonal relationship			.12

Note: $R^2 = .14$ for Step 1, $\Delta R^2 = .12$ for Step 2, $\Delta R^2 = .05$ for Step 3.

*** $p < .001$,

* $p < .05$,

** $p < .01$,

subjective norms, social presence, perceived ease, and usefulness on the attitude toward “like.” The whole model explained 47% of the variance and was significant, $F(17, 157) = 10.07, p < .001$ (see Table 3). Individual background and personality factors were entered at the first step. Extraversion and agreeableness were positive predictors. However, openness to experience was a negative predictor. The social and technological perceptions of “like” were entered at the second step. In this step, subjective norm, ease of “like,” and usefulness of “like” were positive predictors. Openness to experience was still a negative predictor but extraversion and agreeableness were no longer significant. The third step of variables included the motives. Enjoyment, interpersonal relationship, and perceived ease of “like” positively predicted the attitude toward “like” and subjective norm merged to be marginally significant. Openness to experience was still a negative predictor.

At the conclusion, H2a and H4a were not supported. Users’ perceptions of social presence and usefulness of the Facebook “like” did not influence their affective attitudes toward “like.” H1a, which examined the effect of subjective norms, was marginally significant. H3a was supported. The more users perceived the ease of Facebook “like” technology, the better their attitudes toward “like.” For RQ2, the motivations of enjoyment and interpersonal relationship were significant for predicting attitude toward the Facebook “like.” For RQ4, one personality trait, openness to experience, negatively associated with attitudes toward the Facebook “like.”

Overall, positive predictors for attitude toward clicking “like” are enjoyment and interpersonal relationship as motives, subjective norm, and perceived ease of use. These findings generally are consistent with other studies of social and technological influences related to technology use. As with the TRA in combination with other models, subjective norm is influential [3] along with perceptions of ease of use [32]. However, as mentioned earlier, these findings show that in some cases “like” may connect with technological function and friend expectations more so than actual content. This work also supports explanations for the “power user” phenomenon on Facebook [10].

One personality trait, openness to experience, negatively associated with attitudes toward “like.” Those who are more open to experience

tend to be more original, creative, and daring [17]. They might be more critical in terms of appreciating or evaluating SNS content, which results in negative correlations with virtual endorsement.

Another hierarchical regression was performed to analyze the effects of the same sets of variables on behavioral outcomes (see Table 4). RQ3 examined the relationship between motives and the behavioral outcome of clicking “like.” RQ5 investigated the effects of personality traits on clicking “like.” H1b, H2b, H3b, and H4b examined the effects of social and technological factors on clicking “like.” The whole model explained 11% of the variance and was significant, $F(17, 157) = 2.20, p = .01$. No factors were significant at the first step. In the second step, the perceived ease and usefulness of Facebook “like” technology positively predicted the behavior of clicking “like.” In the third step, subjective norm merged to be significant but the perceived ease and usefulness were no longer significant. Thus, H1b is supported. H2b, H3b, and H4b were not supported. For RQ3, the motive of pleasing others negatively predicted “like” behavior and passing time positively predicted “like” behavior. For RQ5, the results showed personality traits and self-esteem were not significant. At the conclusion, subjective norm and the passing time motive positively predicted clicking “like.” The pleasing others motivation negatively predicted “like” behavior.

Broadly, use of the “like” button appears to be functioning more as a response action, and less as a thoughtful behavior. Combined with the motives, the use of “like” aligns with how people spend their time, seek enjoyment, and connect with others when on SNSs. The results also indicated that while individuals saw “like” as a common way of maintaining relationships, with interpersonal motives and subjective norms, pleasing others as an expectation negatively motivated clicking “like.” Previous research suggested social enhancement was positively related to SNS use. Clicking “like” to please others could be a means of social enhancement. The findings here conflicts with other studies. There might be three plausible reasons. First, as mentioned earlier, Millennials tend to be more narcissistic with high self-confidence [60,61]. They might not feel the necessity to purposefully please others by using “like” to fit into a group. Second, Rigoni et al.’s 2012 study [62] found that subjects who were induced to disbelieve

Table 5
Canonical analysis of virtual endorsement motives, individual background, and perceptions of Facebook “Like” technology.

Canonical	Loading	Canonical	Loading
Root 1			
Set 1:Background/technology		Set 2: Motives	
Self-esteem	−0.11	Enjoyment	−0.78
Gender	−0.2	Pleasing others	−0.47
Age	−0.03	Monetary incentive	−0.46
Extraversion	−0.18	Passing time	−0.55
Agreeableness	−0.19	Interpersonal relationship	−0.95
Openness	−0.09		
Conscientiousness	−0.11		
Emotional stability	0.0		
Subjective norm	−0.3		
Ease “like”	−0.84		
Useful “like”	−0.76		
Social presence	−0.64		
Redundancy = .45		Redundancy = .11	
Root 2			
Set 1:Background/technology		Set 2: Motives	
Self-esteem	−0.42	Enjoyment	−0.42
Gender	−0.19	Pleasing others	0.82
Age	0.03	Monetary incentive	0.1
Extraversion	−0.28	Passing time	0.19
Agreeableness	−0.15	Interpersonal relationship	0.08
Openness	−0.34		
Conscientiousness	−0.45		
Emotional stability	−0.4		
Subjective norm	0.88		
Ease “like”	−0.25		
Useful “like”	0.04		
Social presence	0.01		
Redundancy = .18		Redundancy = .07	
Root 3			
Set 1:Background/technology		Set 2: Motives	
Self-esteem	0.06	Enjoyment	0.39
Gender	−0.07	Pleasing others	0.15
Age	−0.29	Monetary incentive	−0.71
Extraversion	−0.01	Passing time	−0.16
Agreeableness	0.08	Interpersonal relationship	0.3
Openness	0.19		
Conscientiousness	−0.14		
Emotional stability	0.18		
Subjective norm	0.12		
Ease “like”	0.4		
Useful “like”	−0.55		
Redundancy = .14		Redundancy = .01	

Note. Root 1: Wilks's $\lambda = .12$, $Rc^2 = .69$, $F(60, 795.14) = 7.46$, $p < .001$. Root 2: Wilks's $\lambda = .39$, $Rc^2 = .48$, $F(44, 652.33) = 4.02$, $p < .001$. Root 3: Wilks's $\lambda = .77$, $Rc^2 = .16$, $F(30, 502.59) = 1.54$, $p = .03$.

in freewill were unwilling to exert self-control, which led to antisocial behavior. For respondents in this study, expectations of others to click “like” to be viewed as social in their networks caused less internal motivation for this behavior. Reyniers and Bhalla in 2013 [63] found reluctant altruism when charitable donations were requested under peer pressure, which contributed to donors being less happy about their giving. Another explanation might be due to the wording of items for measures in the “pleasing others” factor, which may have impacted validity. Users were not asked outright whether they needed to please others or fit into a group.

4.3. Motives, individual differences, and perceptions of technology

RQ6 investigated how individual background factors in terms of demographics, personality, psychological factors, and perceptions of Facebook “like” technology related to the motives of clicking “like.” Pearson correlations between these variables revealed that, except for age, most factors were significantly correlated with some other factors. This might be due to the respondents in this study having similar ages. Interpersonal relationship has the strongest correlation with the perceived ease of “like” ($r = .69$, $p = .01$) and the

perceived usefulness of “like” ($r = .60$, $p = .01$). This indicated that Facebook “like” technology played an important role for use in seeking and maintaining interpersonal relationships. Additionally, subjective norm and the motive of pleasing others were highly correlated ($r = .62$, $p = .01$).

Canonical correlation analysis produced three significant roots (see Table 5). For root 1 ($Rc^2 = .69$, $p < .001$), among individual demographics, personality, and perceptions of Facebook “like” technology were positively related to each other. For the set of motives, enjoyment, passing time, and interpersonal relationship have the strongest loadings. Across the two sets in root 1, users who perceived higher levels of ease, usefulness, and social presence for Facebook “like” were motivated by enjoyment, passing time, and interpersonal relationship.

For root 2 ($Rc^2 = .48$, $p < .001$), subjective norm was the highest loading factor in the set of individual background factors. Subjective norm was negatively correlated to other background factors, in particular with self-esteem and the personality types of conscientiousness and emotional stability. This indicated that the higher the users' self-esteem, conscientiousness, and emotional stability, the less subjective norm held for clicking Facebook “like.” For the set of motives,

social influence dominated the loading and enjoyment was negatively correlated to other motives. Across two sets, the results indicated that those who have lower levels of self-esteem, conscientiousness, and emotional stability, and care more about subjective norm were motivated by pleasing others rather than enjoyment. Alternatively, the results could be interpreted to mean that individuals with higher levels of self-esteem, conscientiousness, and emotional stability, who care less about subjective norms, were motivated by enjoyment rather than pleasing others. The perceived usefulness and monetary incentive were the highest loadings in root 3 ($R^2 = .16$, $p = .03$). The results showed that those who were motivated by monetary incentive perceived higher levels of usefulness of Facebook “like” technology.

These results indicate that the unique attributes of Facebook “like” play an essential role in promoting engagement with virtual endorsement. Those who used “like” for expressing enjoyment, filling time, and enhancing interpersonal relationships perceived “like” as easy, useful, and high in face-to-face interaction. Also, the ease and usefulness of “like” facilitates the current wave of social media marketing as these factors align positively with the motive of monetary incentive. The more the users perceive “like” as easy and useful, the more often they may click “like” for products or brands to obtain a better deal.

Two types of user profiles emerged based on individual qualities. Those with higher self-esteem, more diligence, more emotional stability, and less subjective norm clicked “like” simply for expressing their enjoyment of another user’s posting. These individuals embrace and “like” content for contributions to their experiences. However, those with lower self-esteem, less diligence, less emotional stability, and higher subjective-norm influence were more likely to use “like” for pleasing others. These individuals also may enjoy content but are clicking “like” to meet expectations of their networks. Potentially, these findings support how lower self-esteem levels can align with higher SNS use [26]. The results correspond to Zywick and Danowski’s study [27], which emphasized how various types of users behave differently, revealing that users with lower self-esteem care more about being popular, such as having more postings on their Walls. This aspect could explain why those with lower self-esteem, diligence, emotional stability, and higher subjective norm were more likely to be motivated by pleasing others.

5. Conclusion and implications

Data analysis of this study shows users embracing “like” to experience and relate to others, while discerning peers’ expectations. The most salient user motivations to click “like” were enjoyment of posted content and maintaining interpersonal relationships with others in SNSs. Perceptions of subjective norms and ease of use positively influenced attitude toward “like,” while the personality trait of openness to experience was of negative influence. Its use was negatively predicted by pleasing others, and positively predicted when users were motivated to use SNSs to pass time. The difference in predictors for attitudes toward “like” and behaviors of clicking “like” were similar to other TRA studies [64]. When motivated to use “like” for enjoyment, passing time, and enhancing relationships, this function was seen as easy and useful, and in turn, users more often clicked “like” to gain an incentive for a product or brand. Two types of user profiles are seen in the study. Users with higher self-esteem, more diligence, more emotional stability, and less subjective norm clicked “like” to express enjoyment. Those with lower self-esteem, less diligence, less emotional stability, and higher subjective norm clicked “like” to please others.

Virtual endorsement as a form of public support for others in online communities happens through individual actions within a virtual culture. “Like” on Facebook has shifted “personal” likes in one-to-one communication to online public endorsement via a one-to-many platform. According to Facebook, “[t]he Like button is the quick

est way for people to share content with their friends. A single click on the Like button will ‘like’ pieces of content on the web and share them on Facebook” [65]. Via a single click of “like,” users not only *like* the postings, but *endorse* the postings and *share* their like-postings to others.

These findings contribute to an evolving understanding of the role of “like” that provides important theoretical and practical implications for researchers and marketers. Among many forms of virtual endorsement, this study focused on the highly used Facebook “like” to see how individual motivations and personality intersect with social and technological factors to influence attitudes and behaviors. When users find content enjoyable and click “like,” the endorsement of the posting immediately spreads out to their networks. Even though some users might not enjoy postings, they may click “like” because of needs related to friendship or passing time. Some user needs appear dependent on personality traits and self-esteem, demonstrated in users with lower self-esteem clicking “like” to please others. In addition, passing time for “like” may be exacerbated through accelerated mobile SNS access in which users are likely to pass time and click “like” with more frequency. This use of “like” gains prevalence in society, potentially contributing to behavioral and subjective norms. Taken together, Facebook has redefined the concept of “like” in the virtual world. A user’s “like” does not necessarily indicate he or she really “likes” it.

Importantly, users are not able to distinguish the real reason behind the “like” action, which ironically strengthens the marketing power of “like” for individuals and companies. Research has indicated an individual’s virtual endorsement on SNSs may affect his or her network’s behaviors, such as purchase intention [66] and health behaviors [67]. Practically, marketers can build on these tendencies by simply promoting “like” actions. “Like” has been broadly adopted by marketing professionals toward promoting brand content to generate electronic word-of-mouth. For individuals and companies, amassing “likes” is a manifestation of popularity, interest, success, and/or other visible measures of positive support from users in the SNS. Popularity factors into user outcomes with Facebook [26,27] as well as 2014 updates to the Facebook algorithm, which uses “likes” to determine what higher-interest or more-popular content will appear in news feeds [68].

6. Limitations and future study

Social network sites are expected to come out continually with new features to improve the user experience in sharing content and connecting with others. As new features are released, new ways of publicly supporting others with virtual endorsement are sure to emerge.

Limitations in this study, administered with a convenience sample, included representation from a predominantly younger and white demographic. The study was limited to one form of virtual endorsement on one SNS. Participants were asked to recall clicks on “like” versus tracking actual feature use and their motives. Due to these factors, there is some caution toward generalization of results.

Future studies should consider other forms of endorsement that may be more comment-based (more time-intensive) or function-based (less time-intensive). Further, other SNSs may include other features for endorsement that blend the easy click with more thought, such as the LinkedIn skill endorsement feature that acts as a hybrid of these concepts. Use of “like” that may differ for friends, brands, and organizations, as well as requests from particular sources to “like” content also could further shape understanding of ways virtual endorsement happens. The meaning of “like” on the popular Facebook may change in time, particularly with feature functions or changed meanings in virtual culture (e.g., overuse of “like”). As the

Internet evolves, SNS features for virtual endorsement will advance too, offering study areas related to user attitudes and behaviors for engagement.

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