

“좋아요”가 없을 때: 소셜미디어 태도형성에 있어 지각-감정 관계 조절을 통한 자기모순 해결 방안

No “Like” is Fine: Resolving Self-Contradiction in Social Media Attitudes by Flipping Cognition-Emotion Dynamics

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요 약

본 연구는 소셜미디어 사용에 있어 like 기능에 대한 인식이, 자신이 받은 like의 수에 의해 어떻게 영향을 받는 지 알아보았다. 일반적으로 사람들은 like의 개수가 콘텐츠의 질과 유명세를 반영한다고 생각한다. 그러나 본 연구는 사람들이 like에 대해 고정된 인식을 갖고 있지 않고, 상황에 따라 변하는, 양가적인 인식을 가진다는 점에서 출발하였다. 구체적으로, 연구모델은 사람들로부터 받은 like에 대한 감정적인 반응이 like의 가치 판단에 영향을 미칠 수 있다고 제안한다. 또한 그 과정에서 생성되는 like에 대한 모순적인 판단을 전통적으로 알려진 지각에서 감정으로 생성되는 메커니즘을 감정에서 지각으로 형성되는 메커니즘으로 전환함으로써 해결한다고 제안한다. 이에 대한 검증은 548명의 소셜미디어 사용자들을 대상으로 이루어졌다. 분석 결과는 소셜 미디어 사용자들의 like에 대한 태도는 그들이 받은 like 수에 대한 감정적 반응에 영향을 받는다는 것을 보여주었다. 본 연구는 소셜 미디어 사용자들의 like에 대한 양가적인 태도를 그들이 받은 like의 수에 대한 가치 판단을 기반으로 설명한다는 점에서 시사점을 준다.

키워드 : 소셜미디어, 지각, 감정, Like, 양가적 태도

I. Introduction

Digital footages in social media, such as numbers of likes, followers, and views, are often considered significant measures of social media activities (Chin *et al.*, 2015). People believe that these footages reflect the popularity of the users and the value of their contents (Dumas *et al.*, 2017). Some may even exert efforts

to receive more responses from their friends because they believe that the numbers of likes, followers, and views represent their significances in social media sphere (Chua and Chang, 2016). However, extreme obsessions on these response numbers sometimes result in high levels of stress, anxiety, and even depression (Blease, 2015). For many users, the practical effects entrenched in these numbers are not easy to ignore.

Although the above view is true for many social media users, some do not fully agree with it. These

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people do not perceive the numbers of likes, replies, and followers as a proper reflection of the actual values of their contents and popularity because these footages are instant, superficial, and easy to manipulate (Beukeboom *et al.*, 2015). They argue that the number of likes does not ensure positive assessment or attitudes toward the contents even though it may partially represent popularity (Kim and Yang, 2017). People sometimes respond by pressing like buttons simply to acknowledge the contents or even habitually, without serious considerations on their implications (Lee *et al.*, 2016).

Is the number of likes important? How do social media users perceive the significance of their received likes? How does their perceptions affect their attitudes? Existing literature has focused on investigating whether the numbers of likes and replies honestly reflect the values of social media activities and are important parameters of popularity and significance of contents (Lipsman *et al.*, 2012). However, the perception of social media users on these numbers and their attitudes toward these parameters are not yet thoroughly explored. This study investigates the perception of social media users toward the number of likes and explains how people form their perceptions and attitudes as they receive different levels of responses from other users.

We divide like assessment into two circumstances: like-abundant and like-scarce. In this way, we can provide the basis for understanding how the users rationalize their changing attitudes toward likes according to circumstances. We use a cognition-emotion dynamics to understand the attitude formations of social media users (Lee and Pee, 2015). Then, we obtain the core elements of our analysis by combining the two conditions: like assessment circumstances and psychologically different responses. Lastly, we investigate gender differences to highlight the subtle process of attitude formations.

The remainder of this study is organized as follows. First, we explain how the like perception can change according to different circumstances. Second, we introduce a cognition-emotion framework to develop a 2×2 social media users' attitude matrix on likes. After discussing gender differences, we propose a total of 11 hypotheses. Third, we conduct a survey among 500 social media users to validate our theoretical assumptions. The results show that eight among the eleven hypotheses are supported. We also provide a summary of the results to discuss the contributions and the implications of this study.

II. Theoretical Development

2.1 Ambivalent Attitudes on Likes: Changing Assessments based on Like Abundance

We first note that people often respond differently according to the quantities of their received likes to capture their ambivalent attitudes toward likes (Scissors *et al.*, 2016). Some people are pleased when they receive many likes from others, but others are not necessarily become sad when their online posts receive few or no likes. Thus, large number of likes may imply some fulfillments, popularities, or appraisals but no like does not prove any of the opposites.

We propose that people operate dual standards on like valuation to explain this nonlinear relationship between likes and fulfillments. People may consider like as important and meaningful by psychologically neighboring likes with their selves. At the same time, people may consider likes as unreliable and meaningless factor that does not reflect any real value by psychologically distancing likes from their selves. Thus, people conveniently assess likes as its quantity changes through these sets of like valuations.

People perceive like as important and meaningful when their psychological distance between self and the like is close. People with this attitude are often sensitive to the number of likes and thus their lives are easily influenced by it. They are happy when receive many likes because they believe likes are important and represent their values on social media (Phua and Ahn, 2016). This dimension captures the reactions of peoples who care about the likes and are concerned with it.

Conversely, people perceive likes as not highly valuable when their psychological distance between self and the like is far from each other. People distancing their selves from the likes usually perceive like as superficial and instant that does not imply the actual value of the self or the contents and can be easily manipulated as a parameter in the Internet world (Naylor *et al.*, 2012). Moreover, they are not concerned when they do not receive likes from others because of the vanity of like as a measure.

This study proposes that the psychological distance between the like and the self is not permanent and fixed but dynamic and changing. People conveniently adjust the psychological distance between them and the likes according to circumstances (Merchant *et al.*, 2014). For example, people may perceive like as important and meaningful when they receive enough number of likes from others. However, they may also perceive like as unimportant when they receive only few likes. These two types of assessments are not exclusive but compatible within a single person under different situations.

2.2 Cognitive and Emotional Responses to Likes

We use the well-known cognition-emotion framework to present the dynamics of attitude formation

toward likes (Chua *et al.*, 2008; Kemper, 1978). According to cognitive-affective systems theory of personality, cognition and emotion are two exhaustive but distinguishable psychological units that mediate people’s perception on their behaviors (Homburg *et al.*, 2007). Individuals differ on how they perceive and encode situational stimuli and how these encodings activate human behavior through the complicated mediations of cognition and emotion (Mischel and Shoda, 1995). This framework is effective to explain the flow of rationales of an individual because it shows the interactions of two essential psychological units of human beings: cognition and emotion.

According to this theory, cognitive perception on like shows how one “values” the likes. Rational valuation on likes may include the rational comparison of cost and benefit and estimation of the value of the likes. It is a straightforward and conscious process of being aware of likes based on reason and rationale. It is an assessment of likes based on facts, reason, and evidence (Chua *et al.*, 2008). Finally, it measures how much people perceive likes as important and meaningful according to their rationales.

Emotional perception of like assessment captures how one “feels” about the likes. This valuation does not necessarily from reasoning and understanding but from feeling and sense (Morrow *et al.*, 2004). It captures how sensitively a person is responding to the likes. It is the response referring to the “heart.” For example, people may feel happiness by receiving many likes because they can be emotionally highly sensitive to likes. However, people may also not feel sadness when receiving no like because they can also be emotionally neutral to likes.

Numerous studies examined the broad relationship between the cognition and emotions in various context (Lawler, 2001; Weiner, 1985). The majority of them maintain that it is the cognition that evoke emotion

(McKnight *et al.*, 2004) but also admit that the relationship can be dynamic and changing (Lee *et al.*, 2015). Since the human perception system is one of the most complicated and comprehensive system that needs continuing research effort, it is one of the significant bodies of the studies that tested the relationship between cognition and emotion repeatedly (Kim and Ahmad, 2013).

2.3 Attitude Matrix of Likes

According to the cognition-emotion framework and the like assessment situation explained above, we develop a 2 by 2 matrix of like attitudes, as shown in <Table 1>. This matrix shows the elements of like perception to explain social media users' attitudes in exhaustive manners. Vertical dimension shows the like assessment situations that differentiate users' attitudes, whereas the horizontal dimension shows their cognitive and emotional perceptions toward likes. In this way, <Table 1> creates four different types of like perceptions by combining vertical and horizontal dimensions.

A cognitively active response on like may emerge when people receive many likes. This response captures

how importantly people perceive, value, and evaluate the likes. It also shows how they perceive and estimate the value and significance of the likes. We name this construct as significance of likes. Emotionally active response on like presents how sensitively and emotionally people respond to the likes. People are presumed to be emotionally active to the likes when they feel pleased to receive many likes from others. We name this construct as gratification with likes.

Cognitively passive response on like may emerge when people receive few likes. This response captures how indifferently and meaninglessly people perceive the likes. People do not necessarily dislike or disvalue the like but they may not care about it and psychologically keeps a distance from it. We name this construct as triviality of likes. Emotionally passive valuation captures to what extent people are emotionally neutral to the likes. In this case, they may not be influenced by the number of likes, regardless of its quantity. Thus, they may not feel sadness when they receive no like. We name this construct as apathy to likes. Examples of the four elements are provided in <Table 1>.

<Table 1> Like Attitude Matrix

		Psychological framework	
		Cognitive responses to Likes (i.e., how the one values like)	Emotive responses to Likes (i.e., how the one feels about like)
Situational difference	Like-abundance situation (i.e., like is being close with self)	Significance of likes: Capturing how importantly a person perceives likes Ex) "Like is important," "Number of likes is a meaningful measure," "Number of like represents real value."	Gratification with likes: Capturing how much a person would be positively responding and sensitive to likes: Ex) "I feel happy when I receive many likes," "I am fulfilled when I receive many likes," "I am proud when I receive many likes."
	Like-scarce situation (i.e., like is being distant with self)	Triviality of likes: Capturing how unimportantly and indifferently a person would perceive like: Ex) "Like is unimportant to me," "Number of likes is not a meaningful measure," "Number of like does not reflect real value."	Apathy to likes: Capture how much a person would be indifferent and insensitive to likes: Ex) "I do not care how many likes I received," "I don't feel bad when I receive no like," "I am not embarrassed when nobody responded to my posting."

III. Research Model

3.1 Emotion-to-Cognition Model of Social Media Use

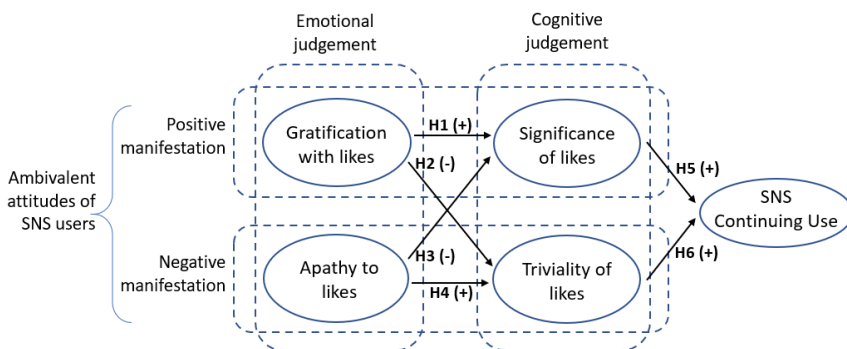
In our research model, we propose that the emotion produced by stimuli influences the cognition formation. This process is different from the traditionally known cognition-emotion dynamics wherein cognition influences emotion (McAllister, 1995). Specifically, people think and judge based on the external stimuli and then acquire emotion from their thoughts. We reverse this dynamics by explaining that people produce emotions after receiving stimuli and then they form their thoughts based on their feelings and emotions to influence their attitudes.

This emotion-to-cognition system is proposed given that human perception system does not consist of a single subprocess (Cyr and Ivanov, 2009). According to Kahneman (2011), people have two types of perception systems: the first one is for quick and instant decision and the second one is for effortful decision with thorough review of the situation. These two processes interact with each other to build an individual’s final perceptions. Human perception system is a totality of various types of subsystems, and this study highlights the process wherein emotion affects cognition to build attitudes.

We propose that gratification on likes has a positive influence on the significance of likes. People who care about likes and feel happy to receive many likes from others may assess the likes as an important measure. This emotional appreciation confirms and enhances their beliefs on the value of the likes (Hermida *et al.*, 2012). This process is the same with confirmation bias wherein people’s instant emotional reaction confirms their a priori belief (Thong *et al.*, 2006). Accordingly, we propose the following hypothesis:

H1: Gratification with likes has a positive association with significance of likes.

We also propose that gratification with likes has a negative influence on the triviality of likes. People’s priory suspicions that likes are a meaningless measure will be lessened when they realize that they are happy to receive many likes from others. This tendency is natural for people because they enhance their beliefs aligned with the externally processed information (Kahneman, 2011). People’s existing perceptions (i.e., triviality of likes) will spontaneously diminish when they realize that their natural reactions to likes are different from their prior beliefs (i.e., being happy with likes). Accordingly, we propose the following hypothesis:



〈Figure 1〉 Emotion-to-Cognition Model of Social Media Use

H2: Gratification with likes has a negative association with triviality of likes.

Apathy to likes indicates a psychological distance between likes and the self. Thus, people are not necessarily emotionally influenced by and sensitive to the likes. This construct specifically measures to which extent people keep their distance from the likes. It also shows how people are indifferent to the number of likes when they receive few likes. People's perceptions of the significance of likes will decrease when they keep distance from and are neutral toward it. In this way, low levels of emotional reaction negate the belief of importance. Accordingly, we propose the following hypothesis:

H3: Apathy to likes has a negative association with significance of likes.

Conversely, apathy to likes increases one's perception of triviality on likes. Low sensitivity to likes enhances the belief that likes are not a significant measure to match people's emotion with cognition. For example, people's perception that likes are not important is strengthened when they are emotionally unoccupied with the number of likes. The human tendency to have a posteriori consistency between instinct and thinking systems have been observed in numerous cases (Harmon-Jones and Mills, 2019). Accordingly, we propose the following hypothesis:

H4: Apathy to likes has a positive association with triviality of likes.

Users who highly value the likes are likely to continuously use SNS because those who appreciate likes are usually more involved with the use of SNS. Moreover, users who care about the likes are more

involved with the consumption of content in SNS, more satisfied with the use of SNS, and more willing to continuously use SNS (Lee and Huang, 2014). Accordingly, we propose the following hypothesis:

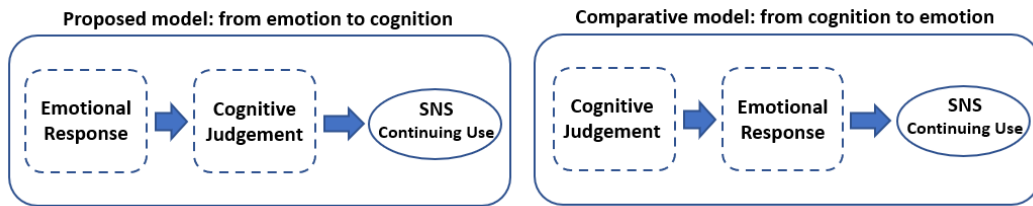
H5: Significance of likes has a positive association with SNS continuing use intention.

Interestingly, triviality of likes also has a positive association with SNS continuing use intention because the triviality in this model partly represents the compromised solution for emotional turbulence that people face when they receive few or no like/s. People's beliefs on triviality of likes are strengthened when they disregard likes (Sumner *et al.*, 2018). This perceptual flow of disregard to triviality enable people to continuously use SNS even when they only have a subtle interaction with others and do not receive much likes. It is also verified that the relationship between the use of SNS and emotional responses are dynamic and complicated (Foroughi *et al.*, 2019). Accordingly, we propose the following hypothesis:

H6: Triviality of likes has a positive association with SNS continuing use intention.

3.2 Emotion-to-Cognition Model Justification: A Defense Mechanism

We compare our research model with the traditional model of cognition to emotion to strengthen our theoretical assumptions (<Figure 2>). Our research model consisting of the six hypotheses is presented in the left side of <Figure 2>, whereas the traditional model of cognition to emotion is presented in the right side. We argue that the proposed model can accurately and reasonably reflect the authenticity of SNS use with high model fit.



〈Figure 2〉 Model Comparison

The rationale for the proposed model is based on deliberate cognition process proposed by Kahneman (2011). According to him, when people experience a situation that does not align with their in-priori beliefs, they evoke a slow and deliberate cognition system to resolve the cognitive dissonance. The outcome of this process can override people’s existing perceptions (Kahneman, 2011).

We can strengthen our proposed emotion-to-cognition flow that changes the a priori perception by applying the slow and deliberate cognition process to our model. We view this flow as a defense mechanism of social media users who experience cognitive dissonance between the significance and triviality of likes (Jeong *et al.*, 2019). Accordingly, we propose the following hypothesis:

H7: The emotion-to-cognition process model will have better explanation for SNS continuing use intention than the traditional cognition-to-emotion model.

3.3 Gender Differences: Stronger Protective Attitudes of Women Than Men

Numerous gender studies have identified that men are more goal-oriented than women, whereas women are more relationship-oriented than men (Krasnova *et al.*, 2017). In social media context, gender differences

are interpreted in various ways. For example, men are more interested in making many friends and being popular in networks, whereas women are more interested in managing relationship qualities with their close friends and being popular among their social groups (Lin *et al.*, 2017). Thus, men use social media to make “many” friends, whereas women use social media to strengthen the relationships with their “close” friends.

According to these differences, we propose that men emphasize the active evaluation process on likes more than women in general. First, men are more explicit in achieving many likes and being happy about it than women. Second, men are goal-oriented and thus straightforward about their goal of obtaining as many likes as possible from others. Consequently, they are less interested in who responded and how they replied. They are happy to receive many likes not necessarily because they care about the relationships with those who responded but because likes show that they are popular and accepted by other users. Accordingly, we propose the following hypotheses:

H8: The effects of gratification with likes are stronger for men than women.

H8a: The effect of gratification with likes on significance of likes is stronger for men than women.

H8b: The effect of gratification with likes on triviality of likes is stronger for men than women.

H9: The effect of significance of likes is stronger for men than women.

However, passive evaluation mechanism is observed stronger for women than men. As previously discussed, passive evaluation is often working as a defense mechanism for people who do not receive likes from others. People assure themselves by persuading that likes are not important and do not mean anything when this situation occurs (Beukeboom *et al.*, 2015). Women are better in providing condolence to themselves because they care about relationship quality and need strong defense (Haferkamp *et al.*, 2012). People who care about their relationships develops strong defense mechanisms. Thus, they are likely to have passive evaluations. Accordingly, we develop the following hypotheses:

H10: The effects of apathy to likes are stronger for women than men.

H10a: The effect of apathy to likes on significance of likes is stronger for women than men.

H10b: The effect of apathy to likes on triviality of likes is stronger for women than men.

H11: The effect of triviality of likes is stronger for women than men.

IV. Methodology

We develop scales for the hypotheses test of the five constructs as follows. For cognitive dimension constructs, such as significance and triviality, we refer to existing literature on personality systems theory of motivation (Lee and Pee, 2015) and extract key adjectives describing cognitive assessment process, such as important, valuable, and meaningful. For significance, we formulate like assessment scales in affirmative sentences, such as “Like is important,” “Number

of likes is a meaningful measure,” and “Like indicates something significance.” For triviality, we formulate scales in negative sentences, such as “Like is not important,” “Number of likes is not a meaningful measure,” and “Like does not indicate something significant.”

For emotional dimension construct, such as gratification and apathy, we refer to a major literature and extract key adjectives, such as happy, sad, feel good or bad, and be proud of (Jeong *et al.*, 2019). We extend these adjectives to describe how people perceive likes given to their posts. We specify situations according to the number of likes to highlight the psychological gap. Then, we formulate sentences to describe how much people are emotionally involved with the number of likes when they receive many. Sample items are “I am happy when I receive many likes,” “I feel good when I receive many likes,” and “I am proud when I receive many likes.”. For apathy to likes, we formulate sentences to describe how much people are emotionally affected by the number of likes when they receive few. Sample items are “I am not sad when I receive no like,” “I do not feel bad when I receive no like,” and “I am not ashamed when I receive no like.” For continuing intention of SNS use, we adopt items from a prior study (Jung, 2011).

We recruit six graduate students who use social media actively and are interested in social media studies to refine the above measures. We explain meanings and the context of the study and show them the developed measures to check whether they accurately reflect the intended meanings. We also ask them to refine the questionnaire in more natural and casual nuance if necessary and exchange the refined scales within the group to have a group discussion. Initially, we develop six or seven items for significance, triviality, gratification, and apathy. However, we only select three items with the highest content validities after reviewing

the feedback provided by the students. Accordingly, we have a total of 15 items for five constructs (see <Appendix>).

V. Analysis Result

5.1 Descriptive Study

Panel contacts with controlled age and gender were obtained from a large survey company (<Table 2>). To ensure that the respondents understand the survey context of the social media use, we provide a screening question whether they were currently using social media such as Facebook, Twitter, and Instagram. If they respond negatively to the question, they were prohibited from participating. Only those who are currently using social media can proceed.

After excluding the outliers and missing value answers, in total 548 data sets were used. As shown in <Table 2>, 83% of the respondents have social media experience that range from 1 to 6 years; 73% use social media below one hour per day but 10% of the users use social media more than two hours per day. The active use of social media supports that the respondents are capable of understanding questionnaire contexts accurately.

5.2 Measurement model

We performed exploratory factor analysis (EFA)

to ensure the unidimensionality (i.e., convergent and discriminant validities) of the scales. EFA is invaluable as a preliminary analysis method when the theoretical foundation is relatively new and rarely validated as in this study. <Table 3> shows that all items presented loading values above 0.7 (Bagozzi and Yi, 1988). Reliability was tested using *Cronbach’s alpha*, and the minimum threshold alpha value of 0.6 is completely satisfied for all constructs (Nunnally and Bernstein, 1994).

We also conducted confirmatory factor analysis and confirmed that all of the fit indexes showed adequate levels (GFI = 0.924, AGFI = 0.887, CFI = 0.963, NFI = 0.945, sRMR = 0.101, RMSEA = 0.042, CMIN/DF = 2.887). The internal consistency and convergent validity of the constructs are then tested by examining the item-construct loading, composite reliability, and average variance extracted (AVE). All items exhibit the recommended level of loading values (>0.7) and the values of the composite reliabilities are all higher than 0.7 as suggested (Nunnally and Bernstein, 1994). Also, the values of AVE are all above 0.5 (Fornell and Larcker, 1981) as shown in <Table 5>. The discriminant validity is further examined using the square root of the AVE. In <Table 4>, all the square roots of AVE are greater than the off-diagonal construct correlations in the corresponding rows and columns.

<Table 4> presents the results of the correlation analysis ranging from 0 to 0.51 of the coefficients. All correlation coefficients were below 0.7, which did

<Table 2> Descriptive Study

Gender	N (%)	Age	N (%)	Yrs in use	N (%)	Use per day	N (%)
Male	275(50.2)	20’s	132(24.1)	1~3	213(38.8)	0.5 hrs >	226(41.2)
Female	273(49.8)	30’s	135(24.6)	4~6	246(44.9)	1 hrs >	176(32.1)
Total	548(100)	40’s	138(25.2)	7~9	67(12.2)	2 hrs >	93(17)
		Over 50’s	143(26.1)	9 <	22(4)	2 hrs <	53(9.6)
		Total	548(100)	Total	548(100)	Total	548(100)

〈Table 3〉 Exploratory Factor Analysis

		C1	C2	C3	C4	C5
Gratification	GR1	.912	.154	.077	.187	-.037
	GR1	.921	.184	.100	.187	-.055
	GR3	.807	.279	.095	.315	-.043
Apathy	AP1	.274	.258	.036	.817	-.020
	AP2	.125	.158	.043	.924	.036
	AP3	.259	.187	.050	.868	.004
Significance	SI1	.194	.843	.100	.239	-.074
	SI2	.200	.894	.095	.170	-.058
	SI3	.186	.869	.131	.193	-.076
Triviality	TR1	-.008	.131	.045	.046	.798
	TR2	-.142	-.149	.061	.030	.862
	TR3	.036	-.202	.181	-.070	.834
Continuing use	CU1	.065	.065	.913	.054	.095
	CU2	.084	.107	.932	.048	.092
	CU3	.085	.116	.899	.022	.097
Cronbach's alpha		.931	.915	.920	.911	.794

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser normalization.

Rotation converged in 6 iterations.

〈Table 4〉 Correlation, Composite Reliability, and Average Variance Extracted Analyses

	Gratification	Apathy	Significance	Triviality	Continuing use	composite reliability (CR)	Average Variance Extracted (AVE)
Gratification	0.940					0.958	0.883
Apathy	.505**	0.960				0.972	0.921
Significance	.471**	.464**	0.938			0.957	0.880
Triviality	-.099*	-.015	-.154**	0.933		0.951	0.870
Continuing use	.203**	.131**	.230**	.200**	0.955	0.969	0.912

** : Sig. (2-tailed) < 0.01, * : Sig. (2-tailed) < 0.05.

〈Table 5〉 Multicollinearity Test (on three independent variables)

Constructs	Tolerance limit	VIF	Dimensions	Eigenvalue	Condition index
	must be >0.1	must be <10		must be >0.01	must be <30
Gratification	.672	1.489	1	4.790	1.000
Apathy	.675	1.482	2	.103	6.825
Significance	.696	1.438	3	.054	9.439
Triviality	.969	1.032	4	.036	11.467
			5	.017	16.681

Dependent var.: Continuing use

<Table 6> Common Method Bias (Harmon’s single factor analysis)

Component	Initial Eigenvalues		
	Total	% of variance	Cumulative %
1	5.374	35.826	35.826
2	2.797	18.644	54.470
3	1.845	12.302	66.773
4	1.400	9.335	76.107
5	1.181	7.876	83.983

Extraction Method: Principal Component Analysis.

not reveal any concern for multicollinearity. However, additional multicollinearity tests were conducted to ensure. <Table 5> presents the results. The range of the variance inflation factors (VIFs) was below 10, as suggested by O’Brien (2007). The tolerance limit, which must be above 0.1, had high values that range from 0.672 to 0.969. The eigenvalues in the model met the criterion that all results must be above 0.01. Condition indexes were at the adequate level of below 30, where the maximum is shown in the table is 16.68 (Belsley, 1991). These results confirm that the multicollinearity is not revealed among the constructs.

We tested a possible common method variance (CMV) through Harman’s single-factor test (Podsakoff *et al.*, 2003). This test shows the amount of spurious covariance shared among the variables because of the common method (e. g., ambiguous wording) used during data collection. CMV exists if a single factor accounts for a majority of the covariance in the variables. The EFA analysis of our items revealed all five constructs are with eigenvalues of over 1. They together explained 84% of the variance in the constructs. The first factor explained 36%, whereas the last one explained 8%. The argument that a single dominant factor exists is difficult to pursue because of the presence of five factors. These results indicated that our data were not compromised by common method bias (see <Table 6>).

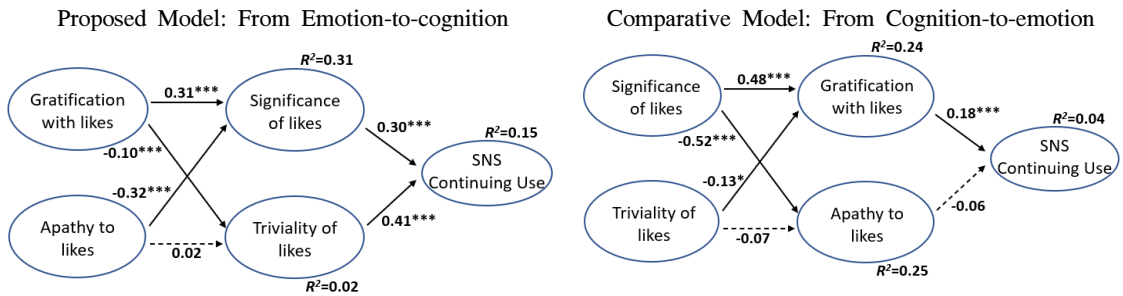
5.3 Hypotheses Test

5.3.1 Base Research Model Test from H1 to H6

First, we test a base research model (H1 to H6). Using Amos, we first check model fit indexes to ensure the model adequacy and confirmed that all the indexes are satisfactory (<Table 7>). The path from gratification to significance is significant, and H1 is supported. The path from gratification to triviality is also significant and H2 is supported. The path from apathy to significance is significant while to triviality is not significant. H3 is supported but H4 is not supported. The path from significance to SNS use intention and from triviality to SNS use intention are both significant. H5 and H6 are supported. Among the six hypotheses, five are supported and one is not supported as presented in the left side of <Figure 3>.

5.3.2 Model Comparison for H7 Test

To test H7, we compare our proposed cognition-to-emotion model with the emotion-to-cognition model (i.e., alternative model). <Figure 3> and <Table 7> present the result of model comparisons. In terms of fit indexes, the proposed model exhibits improved fit indexes than traditional model in broad aspects. All of the fit indexes in <Table 7> show that the proposed model is structurally better fitting than the



<Figure 3> Proposed- and Comparative- Research Model Test Results

<Table 7> Fit Index Comparison between Models

	GFI	AGFI	PGFI	CFI	TLI	NFI	sRMR	RMSEA	CMIN /DF	R ²
Proposed model	.918	.881	.635	.960	.949	.941	.0639	.043	3.009	0.15
Comparative model	.908	.867	.628	.947	.932	.928	.1011	.049	3.65	0.04

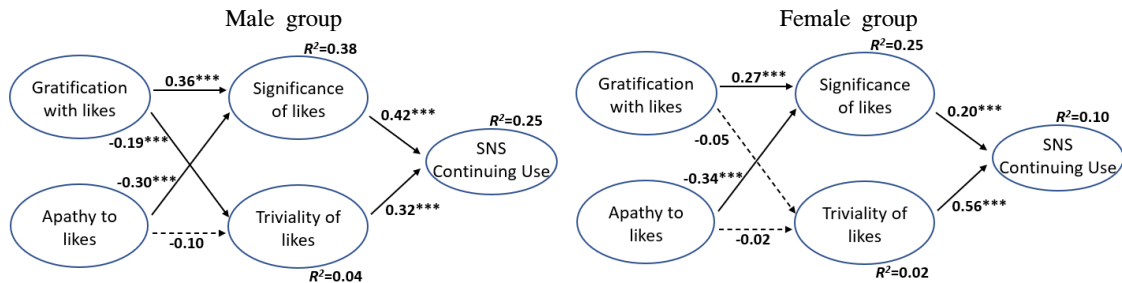
traditional model. For example, all Goodness of Fit indexes of the proposed model including GFI, AGFI, PGFI and CFI show higher values than those of the traditional model. RMR and RMSEA show smaller values in the proposed model meaning that it has smaller errors and residuals. Also, R² value of the dependent variable in proposed model shows significantly higher value than that in the alternative model. Based on these evidences, we can conclude that our proposed cognition-to-emotion model shows the improved model structure than the traditional emotion-to-cognition model. H7 is supported.

5.3.3 Gender Difference Test: H8-H11

To check group difference, we conduct chi-squared test. We first calculated the chi-squared value differences between the pooled model (i.e., the model using the entire data set) and testing models (i.e., the model relaxing the assumption that the target paths are the same between the groups). If the chi-squared values are significantly different between the groups, the path

coefficients are considered different between the groups. <Figure 4> and <Table 8> present the test results of group difference between men and women.

The path from gratification to significance is not significantly different between the groups. H8a is not supported. On the contrary, the path from gratification to triviality is significantly different. H8b is supported. The path from significant to continuing use is significantly difference thus H9 is also supported. The path from apathy to significance is not significantly different and H10a is not supported. The path from apathy to triviality is not tested because the paths in both models are insignificant. When the paths in both models are insignificant, calculating the difference is pointless (i.e., H10b is not applicable). Finally, the path from triviality to SNS continuing use is tested and found insignificant. H11 is not supported. Among the four hypotheses testing gender difference, one is supported, one is partially supported and two are not supported. <Table 9> summarizes the hypotheses test results.



〈Figure 4〉 Gender Difference Test

〈Table 8〉 Chi-square Test on Gender Difference

Paths	Men	Women	X^2 test (d.f.=363)			Hypotheses testing	
	Beta.	Beta.	X^2 when path is constrained	X^2 Difference (ΔX^2)	Sig.	Hs	Result
Gratification → Significance	.361**	.265**	750.4	750.4-749.3 = 1.1	> 0.1	H8a	Not Supported
Gratification → Triviality	-.187**	-.045	752.6	752.6-749.3 = 3.3	< 0.1	H8b	Supported
Significance → Continuing use	.424**	.199**	755.8	755.8-749.3 = 6.5	< 0.05	H9	Supported
Apathy → Significance	-.295**	-.340**	749.6	749.6-749.3 = 0.3	> 0.1	H10a	Not Supported
Apathy → Triviality*	-.098	.022	-	-	-	H10b	Not applicable
Triviality → Continuing use	.319**	.561**	751.3	751.3-749.3 = 2	> 0.1	H11	Not Supported

Unconstrained model: $X^2 = 749.3$, d.f.= 249

Fully constrained model: $X^2 = 782.8$, d.f.= 281

* When comparing models, we drop the paths that are insignificant in both groups.

〈Table 9〉 Hypotheses Test Result

H	Hypotheses	Result
H1	Gratification with likes has a positive association with significance of likes.	Supported
H2	Gratification with likes has a negative association with triviality of likes.	Supported
H3	Apathy to likes has a negative association with significance of likes.	Supported
H4	Apathy to likes has a positive association with triviality of likes.	Not Supported
H5	Significance of likes has a positive association with SNS continuing use intention.	Supported
H6	Triviality of likes has a positive association with SNS continuing use intention.	Supported
H7	The emotion-to-cognition model of SNS continuing use intention has better model fit indexes than the traditional cognition-to-emotion model.	Supported
H8a	The effect of gratification with likes on significance of likes is stronger for men than women.	Not Supported
H8b	The effect of gratification with likes on triviality of likes is stronger for men than women.	Supported
H9	The effect of significance of likes is stronger for men than women.	Supported
H10a	The effect of apathy to likes on significance of likes is stronger for women than men.	Not Supported
H10b	The effect of apathy to likes on triviality of likes is stronger for women than men.	Not applicable
H11	The effect of triviality of likes is stronger for women than men.	Not Supported

VI. Discussion

6.1 Summary of Findings

First, triviality shows stronger direct effect on SNS continuing use intention than significance. However, significance shows much stronger mediating effect than triviality. Significance ($R^2 = 0.31$) is well explained by various emotional responses, such as gratification and apathy, whereas triviality is not explained thoroughly ($R^2 = 0.02$). However, triviality still plays an important role as an antecedent of social media use. This result implies that people's feelings are mostly mediated through positive assessment (i.e., significance) than negative assessment (i.e., triviality). Moreover, triviality is presumed to have antecedents other than gratification and apathy as a separate and independent construct from significance.

Second, gender difference is clearly observed. Specifically, relative effects of significance and triviality are opposite between men and women. Significance shows stronger effect than triviality for men, whereas triviality shows much stronger effect than significance for women. Stronger effect of triviality than significance may imply stronger self-protective attitudes of women that likes are not important. Thus, women increase use intention by thinking likes are not important. Moreover, they are unlikely to transfer emotional judgement to cognitive phases to separate their attitudes from feelings. Overall, the results show different mechanisms that women are more protective and soothing in the use of SNS than men.

6.2 Academic Contributions

First, we develop a 2×2 attitude matrix that captures the systematic and ambivalent attitude formations of SNS users toward likes. This matrix assumes that people

may perceive the importance and the unimportance of the likes concurrently. The perceived significance and triviality are not necessarily opposite but can exist in parallel with interactions. This matrix also explains how the same person can be happy or neutral with large or small numbers of likes, respectively. Thus, these ambivalent attitudes are not attributed to external factors but to dual standards innate with the users.

Second, we adopt the basic concept of the traditional cognition-to-emotion framework and develop it further by reversing the dynamics. This reversed emotion-to-cognition relationship argues that people may adjust their allegedly evidence-based cognitions according to their emotions to self-rationalize their beliefs in priori (Kahneman, 2011). This reversal can be aligned with other well-known theoretical frameworks, which have argued that people may evoke slow thinking to overcome the unsatisfactory cognitive outcome from fast thinking (Jeong *et al.*, 2019). In addition to the prior efforts of verifying the causal relationship between the emotion and the cognition (Lee *et al.*, 2015; McKnight *et al.*, 2004), mostly in trust and distrust context, we highlight this dynamic relationship between emotion and cognition and name it as the “defense mechanism” of social media users.

Lastly, we present how men and women are different in perceiving likes according to the emotion-cognition relationships. Prior studies have investigated gender differences in social media, but most of them have focused on the attitudes as outcomes (Tifferet, 2019). This study explores how the attitude formations vary using the concept of defense mechanism. Our method is effective in seeing how men and women are different in perceiving and processing the likes. This like perception difference between two genders contributes to the existing understanding of other various types of attitudinal and gender differences in the context of social media.

6.3 Practical Implications

First, this study explains social media users' seemingly contradictory but ambivalent attitudes toward likes. Social media users are usually categorized into two: those who care and neutral about likes. However, this study argues that most people have undetermined and ambivalent attitudes toward likes that are realistic and reasonable. This study also verifies that the ultimate attitudes are the mix of the two different attitudes (i.e., significance and triviality) wherein the portion of the mix is according to the situation and context. In this way, the complexity of the attitudes of social media users is rationalized. People often run strong defense mechanisms, but they may also feel neutral sometimes. Dividing the assessment into active and passive dimensions practically support the existing understanding of social media users' general attitudes toward social media activities, such as liking and replying.

Second, this study guides organizations on how to manage their likes received from their customers. Given that social media users have possible ambivalent attitudes toward likes, they may have ideas other than likes when they approve of social media pages. Studies have also shown that many likes received from customers are not related with the actual benefits for organizations, such as sales or loyalty (Nelson-Field *et al.*, 2012). For instance, Instagram has recently stopped showing the total number of likes to people using the app, implying that the total number of likes can provide people wrong signals about the popularity or even the value of the contents. Along with Instagram's recent change, this study also implies that likes are not a definite measure of popularity or customer loyalty and encourages different organizations to adopt various ways to express users' responses.

Third, this study shows the strong flow of protective attitudes of women when they realize the lack of likes from their friends. The practical implication of this finding is that women's attitudes are possibly more resilient and adaptable in using social media than men. For organizations, this attitude of women in social media can be utilized through flexible and diversified ways to extract and collect users' responses. Overall, men are more goal-oriented and use social media to widen and show off their networks, whereas women use social media to enhance their relationships with close friends of whom they can relate.

6.4 Limitations and Future Studies

This study has several limitations. First, like perception items are needed to be refined further. These items are newly developed for this study and the wordings and nuances are especially important in this case because of our ambivalence framework. Increasing the number of items for the constructs are also considerable. Second, future studies can discuss the antecedents of the ambivalence. This study focuses on the direction of the ambivalence attitudes and highlights its reversal. Thus, the identification of the attitude antecedents can provide deeper understanding on social media use. Third, to increase the power of explanation, it is suggested considering other factors that explain continuing intention of SNS use such as self-presentation and personalities (Chen and Marcus, 1992) beyond like-related factors. Lastly, future studies can extend the social media responses from like to other types of expressions. Various types of response functions are currently provided in social media, including high-end emoticons. Exploring these responses can support the management skills of organizations and individuals to communicate with their social media acquaintances.

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〈Appendix〉

Construct	Item	Measurements
Gratification	GR1	When my social media posts receive many likes from my acquaintances, I am happy about it.
	GR2	When my social media posts receive many likes from my acquaintances, I am delighted with it.
	GR3	When my social media posts receive many likes from my acquaintances, I feel proud of it.
Significance	SI1	When my social media posts receive many likes from my acquaintances, I think number of likes is important.
	SI2	When my social media posts receive many likes from my acquaintances, I think number of likes is a meaningful parameter.
	SI3	When my social media posts receive many likes from my acquaintances, I think number of likes represents something significant.
Apathy	AP1	When my social media posts receive few or no likes from my acquaintances, I am not extremely sad about it.
	AP2	When my social media posts receive few or no likes from my acquaintances, it does not hurt me that much.
	AP3	When my social media posts receive few or no likes from my acquaintances, I am not extremely ashamed of it.
Triviality	TR1	When my social media posts receive few or no likes from my acquaintances, I think number of likes is not extremely important.
	TR2	When my social media posts receive few or no likes from my acquaintances, I think number of likes is not a meaningful parameter.
	TR3	When my social media posts receive few or no likes from my acquaintances, I think number of likes does not represent something significant.
SNS continuing use intention	CU1	I like to use social media in the future.
	CU2	I intend to continue using social media in the future.
	CU3	I expect my use of social media to continue in the future.

No “Like” is Fine: Resolving Self-Contradiction in Social Media Attitudes by Flipping Cognition-Emotion Dynamics

Jung Lee*

Abstract

This study investigates how the users’ perceptions on like function in social media affect their attitudes toward the number of likes they receive from others. People conveniently believe that the number of likes is a significant measure of their online content quality and popularity. However, we take an ambivalent view that people do not settle their perceptions on the likes but change their like assessments according to circumstances. Specifically, we propose a model wherein emotional responses to the received likes may affect the value assessment of the likes. Our model shows how people resolve their internal contradiction on the value of the likes by flipping the traditional *cognition-to-emotion* mechanism to *emotion-to-cognition* mechanism. We validate the reversed dynamics between judgments and feelings using the data collected from 548 social media users. Results confirm that social media users’ attitudes toward likes is largely affected by their emotional responses to their received number of likes. The implications of this study explain social media users’ ambivalent attitudes toward likes by showing how they adjust their individual like valuation using their emotional responses.

Keywords: *Social Media, Cognition, Emotion, Like, Ambivalent Attitude*

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현재 한국외국어대학교 글로벌 캠퍼스 Global Business & Technology 학부에 재직 중이다. 관심을 가지고 있는 연구 분야는 온라인 구전효과, 소셜 미디어 플랫폼 등이며 Decision Support Systems, Information and Management, Technovation 등의 저널에 논문을 게재하고 ICIS, PACIS, AMCIS 등의 컨퍼런스에 참석하였다.

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