



# Myself in Snapchat vs. Instagram: The interactive effect of users' self-construal and their SNS uses related to the efficacy of an advertisement

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This study investigates how using a specific SNS platform has impact on users' self-construals. Also, this research examines the effect of the association between SNS platforms and users' self-construals in improving the efficacy of advertising in SNSs. Based on self-construal theory and information processing model (affective vs. cognitive processing), it is assumed that users' self-construals can be primed by their SNS use and the primed self-construals can have impact on their information processing in SNS contexts. Two laboratory experiments were conducted to test these assumptions. A total of 191 (Study 1 – 74 & Study 2 – 117) undergraduate students participated in this research. The findings from study 1 empirically supported that SNS platforms could prime users' self-construals differently. The results from Study 2 not only provided compatible evidence that SNS platforms can change users' self-construal but also demonstrated the interplay between the primed self-construal by SNS platforms and ad types (emotional appeal vs. cognitive appeal ad) in shaping individuals' response toward the ad. Also, the mediating role of users' self-construal on the interplay between SNS platforms and ad types was confirmed. Since the current research tested two image-based SNS platforms with undergraduate students, future research may need to test different population with more various platforms to re-examine the findings from this study. The current research contributes to the field by expanding the self-construal concept in SNS research, as well as provides practical implications to improve the efficacy of SNS advertising campaigns.

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## 1. Introduction

Social networking sites (SNSs) refer to web-based communication platforms where users can create profiles and establish and maintain their own social networks to interact with other users by posting, liking, and commenting on shared content, such as photos and videos (Ellison *et al.*, 2014). Currently, over 80% of the U.S. population uses some type of SNS (“Social media usage in the United States – Statistics & Facts,” n.d.), and most people use two or more platforms daily (Quan-Haase and Young, 2010). The rising popularity of SNSs has altered information distribution and communication trends relating to social interactions (Chen and Marcus, 2012). Due to the rise of SNSs, researchers have become interested in the effect SNSs have on individuals’ social networks and communication habits. For example, Vaterlaus and colleagues (2016) suggest that “snaps” that use pictures with overlaid text in Snapchat can reduce the potential for miscommunication among young adults. Further, Ellison, Steinfield, and Lampe (2007) found that the intensity of Facebook use can influence how users create and maintain their social capital. Given that an individual’s self-construal influences their interaction with others, investigating the effect SNSs may have on

how individuals define themselves can provide an opportunity to better understand the impacts of SNSs on one’s social interactions and communication behaviors. Furthermore, previous research suggests that individuals’ self-concept, such as self-construal, can impact their decision-making process (Aaker and Lee, 2001; Aaker and Schmitt, 2001; Hong and Chang, 2015). More specifically, Hong and Chang (2015) suggest that individuals with independent self-construal tend to depend on feelings and emotions, whereas individuals with interdependent self-construal prefer cognitive thinking in decision-making. Thus, if SNSs can influence users’ self-concept (e.g., self-construal), it can be also postulated that SNSs may impact users’ decision-making process.

SNS research has recently been examining how such effects and individual traits may vary depending on the platform being used (Davenport *at al.*, 2014; Lee, *at al.*, 2015). Consistent with this trend, the current research seeks to add to the literature by investigating the relationships between users’ self-concepts and SNSs and the effect of the relationships on users’ information processing by using two SNSs which are highly popular with younger adults but have different features – Snapchat and Instagram,

## 2. Literature review and theoretical framework

### 1) Snapchat and Instagram

Snapchat and Instagram are image-based SNSs and their popularity continue to show growth. Users of the two image-based SNSs have more than doubled in less than a decade, and they have been regarded as valuable venues to increase consumer engagement by marketing practitioners (Ashley and Tuten, 2015; Kim *et al.*, 2017). In addition, many SNS users use their pictures, such as profile photos, to build more positive self-identities (Ellison *et al.*, 2006; Hum *et al.*, 2011). Lee and her colleagues (2015, p. 552) explain this phenomenon as, “pictures speak louder than words.”

Snapchat is a photo and video-sharing site that allows users to send time-sensitive photos or videos, also known as “snaps” (Alhabash and Ma, 2017). Snapchat affords users a fair amount of control over their messages through the creation, sharing, and ephemeral nature of their snaps, thus facilitating self-expression for its users. Snapchat users can choose who can see their snaps; they can send them directly to friends, to a public story, or to their own story. Waddell (2016) found that this feature allowed users to connect with

friends by maintaining privacy. Snaps sent directly to friends expire after viewing, while snaps posted to “stories” disappear after 24 hours (Piwek and Joinson, 2016). Furthermore, users can personalize their snaps, which are usually selfies, with text, filters, or thematic tags. For many users, the visual personalization features of Snapchat, combined with the ephemeral nature of the content, facilitated a greater capacity for self-expression than other SNSs (Waddell, 2016). Snapchat’s unique features, including its time-sensitivity and audience control, encourage playful, rapid communication that garners strong ties and bonding between close friends and family (Piwek and Joinson, 2016).

Instagram is a photo-sharing application that allows users to edit their pictures with filters and share them both on the app and other platforms (Alhabash and Ma, 2017). Lee and colleagues (2015) found that Instagram users express their personalities and lifestyles through Instagram’s photographic medium and that they see it as an empowering medium for self-presentation. Unlike Snapchat, Instagram users are much more likely to have public profiles with followers they do not know personally. The more public the audience, coupled with the fact that Instagram posts are not ephemeral like snaps, encourages Instagram users to

record and archive their daily lives, as well as form parasocial relationships with public figures (Lee *et al.*, 2015).

## 2) Self-construal

Individuals perceive themselves through their relationships with other people. Singelis (1994) defines an individual's self-construal as a "constellation of thoughts, feelings, and actions concerning one's relationship to others such as the self being distinct from others or connected to others" (p. 582). There are two types of self-construal, *interdependent* self-construal and *independent* self-construal. According to Markus and Kitayama (1991), individuals with interdependent self-construal view themselves as part of larger group. With this self-concept, they base their attitude and behavior on the relationships with other members of the group (Markus and Kitayama, 1991). Therefore, behaviors of interdependents are heavily influenced by social connectedness and group harmony. By contrast, individuals with independent self-construal tend to view themselves as an independent individual entity. Independents' behaviors are more influenced by their own internal repertoire of thoughts, feelings, values, and traits. Accordingly, individuals with independent self-construal make their own choices based on their internal orientation, regardless of

the social contexts they belong to (Chang, 2015).

Given that SNSs have been utilized as one of the most popular tools to manage users' self-presentation and construct their self-identity, many researchers have been interested in how users' self-concept and their SNS uses can be associated with each other (Appel *et al.*, 2016; Choi and Sung, 2018; Kim *et al.*, 2017). Especially, since self-construal is closely related to individuals' behavior and attitude, a number of studies have investigated the relationship between self-construal and SNS behaviors. For example, Lee, Kim, and Kim (2012) demonstrated that individuals who were primed into interdependent self-construal tend to post more on, and feel more affiliated with, Facebook branded communities, rather than those primed into independent self-construal. In addition, individuals with interdependent self-construal are more associated with social motives (e.g., maintaining relationships) compared to non-social motives (e.g., seeking entertainment; Kim *et al.*, 2010) when they use SNSs.

Piwek and Joinson (2016) suggest that Snapchat is a more appropriate SNS platform for building "strong ties" among users' social networks. Given that the principal goal of the interdependent self-construal is to maintain harmonious

relationships with others (Markus and Kitayama, 1991), it can be hypothesized that individuals with interdependent self-construal who are more concerned with their in-group membership will feel more attraction to use Snapchat than Instagram. Conversely, Instagram users have been found to be motivated by their self-presentation and a desire to be seen (Ridgway and Clayton, 2016). Through filtered images of their lives, Instagram users tend to display positive aspects of themselves and lead other users to have more favorable attitudes toward them. Considering individuals with independent self-construal seek to stand out from their group with their uniqueness (Markus and Kitayama, 1991), Instagram can be regarded as a more appropriate SNS platform for expanding a user's social network and constructing "weak ties" with others, as compared to Snapchat.

Furthermore, Choi and Sung (2018) empirically reveal that individuals are more likely express their true and actual self through Snapchat rather than Instagram. Since the unique features of Snapchat such as the ephemeral contents to the selected receivers lead its users to think the conversations in Snapchat are similar to their real-time communications with their close friends, users can show their hidden aspects of their selves more easily. By

showing their true and authentic selves, Snapchat users' interdependent self-construal can be enhanced. By contrast, since Instagram contents can be continuously exposed to the public, the users tend to be more sensitive how they will be shown to other people and try to modify the contents to create the best look (Rosenberg and Egbert, 2011). Therefore, Instagram users can be more easily engage in self-presentation behaviors and while they are using Instagram, their independent self-construal can be reinforced.

Previous psychology literature suggests that the two self-construals (independent and interdependent) coexist in an individual's memory (Mandel, 2003) and, depending on the situations with which individuals face, different self-construals can be activated (Aaker and Lee, 2001; Trafimow *et al.*, 1991). For example, Sung and Choi (2011) demonstrate that individuals can be primed into either interdependent or independent self-construal by displaying two different types of sports (team sports vs. individual sports). Based on these findings, which indicate that self-construal can be changed through situational contexts, it can be hypothesized that different SNSs platforms can also prime users toward interdependent or independent self-construal.

Through a series of experimental research, Kim and his colleagues (2017) empirically

support that the relationship between a user's self-concept and SNS use is not unidirectional but bidirectional. More specifically, they show that individuals with a low level of self-monitoring demonstrate higher intensity toward Pinterest than Instagram. Additionally, their use of Pinterest makes their self-monitoring level lower, as compared with their dispositional self-monitoring (i.e., before using Pinterest). This reciprocal relationship may thus be able to apply to the relationship between self-construal and SNS use. Research that relates to these concepts, as applied to specific platforms, is preliminary. But, as Snapchat has been shown to allow for more private conversations with performance geared to building relationships with a more closed network (Waddell, 2016), it may be expected that Snapchat use leads individuals to have more interdependent self-construal than their usual self-construal. Conversely, as Instagram has been shown to allow for looser and even parasocial relationships with broader audiences and even strangers (Lee *et al.*, 2015), Instagram use may lead individuals to have a higher level of independent self-construal. Therefore:

H1a: After using Snapchat, individuals will show a higher level of interdependent self-construal, as compared to before using Snapchat.

H1b: After using Instagram, individuals will show a higher level of independent self-construal, as compared to before using Instagram.

### 3) Self-construal and affective and cognitive information processing

According to Hong and Chang (2015), self-construal can impact a consumers' decision-making process. Since independents tend to direct their attentions toward themselves (Markus and Kitayama, 1991), they consider making a decision for the self as a personal matter to satisfy their own needs and goals. However, interdependents - who pay more attention to their social relationships - are more likely to perceive that even making a decision for the self can be associated with others (Hong and Chang, 2015). Therefore, for interdependents, this decision making process is not limited by their own needs and goals. These different foci (toward the self or toward others) can lead consumers to choose different modes of information processing.

Affective (feelings-based) processes and cognitive (reason-based) processes are the most widely used information processing modes in consumer psychology (Chaiken and Trope, 1999; Gorn *et al.*, 2001; Pham *et al.*, 2001; Zajonc, 1980). Previous research suggests that consumers tend to rely more

on their affective feelings when they make a decision for themselves than when the decision is related to others (Forgas, 1991; Loewenstein *et al.*, 2001). For example, Van Boven *et al.* (2010) demonstrated that individuals are more likely to represent an object emotionally when they perceive the object is closely associated with themselves. Individuals' emotions have much stronger impact on the judgement of life satisfaction in individualistic cultures compared to in collectivistic cultures (Suh *et al.*, 1998). In addition, Hong and Chang (2015) displayed that individuals who were primed with an independent self-construal preferred affective dimensions to cognitive dimensions when they made a decision (e.g., choosing apartment). By contrast, interdependents who are more likely to feel social pressure to justify themselves to others tend to engage in cognitive processing and put more cognitive efforts in their decision making (Chaiken, 1980; Tetlock and Kim, 1987). Previous research demonstrated that greater pressure for justification can lead to more cognitive processing and a more detailed choice process (Hagafors and Brehmer, 1983; Huber and Seiser, 2001). Similarly, individuals with interdependent self-construals are more likely to represent an object or event in more detailed and specific features than individuals with independent self-

construal (Kim *et al.*, 2018; Spassova and Lee, 2013). Based on the findings from previous studies, it can be postulated that if SNS platforms (Snapchat & Instagram) can prime users' self-construal (H1), users who use different SNS platforms may use different information processes when assessing the same information.

According to Ruiz and Sicilia (2004), when individuals' information processing style, in terms of emotion and cognition, is consistent with an advertising appeal (emotional and cognitive appeal), the effectiveness of the advertisement increases. If Snapchat can prime its users into interdependent self-construal, showing a cognitive appeal advertisement to Snapchat users can result in more positive reactions, as compared to providing an emotional appeal advertisement. By contrast, for Instagram users, an emotional appeal advertisement will be more persuasive than a cognitive appeal advertisement. Consequently, the following hypotheses are proposed:

H2a: A cognitive appeal advertisement will be more persuasive to Snapchat users rather than Instagram users.

H2b: An emotional appeal advertisement will be more persuasive to Instagram users rather than Snapchat users.

In order to confirm the association between the two social media platforms and the distinctive appeals more clearly, the role of individuals' self-construals needs to be investigated. Therefore, it is assumed that an individual's self-construal will play a mediating role of creating matching effect between the social media platforms and advertising appeals to increase the efficacy of the advertising.

H3: An individual's self-construal will mediate the effect of fit between SNS platforms (Snapchat vs. Instagram) and the advertising appeals (a cognitive vs. an emotional appeal) on the effectiveness of the advertising.

### 3. Research method

#### 1) Overview of the study

To examine the proposed hypotheses, two studies were conducted. Study 1 explored how individuals' SNS uses may impact the users' self-construal, and Study 2 examined the interactive effect between SNS uses and advertising appeals on the effectiveness of advertisements by using a 2 (SNSs: Snapchat vs. Instagram)  $\times$  2 (advertising appeals: emotional vs. cognitive appeal) between subjects design.

#### *Participants and Procedure*

A total of 191 (Study 1: 74 & Study 2: 117) undergraduate students from a major southeastern university in the U.S. participated in this study in exchange for extra credit. Two weeks before Study 1, a pretest was conducted to measure participants' dispositional self-construal. A total of 140 undergraduate students (81.6% female, 17.7% male, .7% other or non-binary;  $M_{age} = 20.16$ ,  $SD_{age} = 1.09$ ) participated in the online pretest in exchange for research credit. At the pretest, their dispositional self-construal was measured by the self-construal scale developed by Singelis (1994; 7-point Likert Scale; 1 = strongly disagree to 7 = strongly agree; 12 items for interdependent & 12 items for independent;  $a_{interdependent} = .67$ ,  $a_{independent} = .65$ ). At the end of the pretest, participants were informed that there would be a main study and if they participated in the main study, they would receive additional research credit.

Study 1 was carried out about two weeks after the pretest was completed. Participants of pretest who agreed to participate in study 1 received an email invitation with another request to offer their informed consent and were given a lab time. A total of 74 undergraduate students (53.5% from study 1; 83.8% female, 14.9% male, 1.4% other or non-binary;  $M_{age} = 20.01$ ,  $SD_{age} = .82$ ) came



into the computer lab at their assigned time and were provided oral instruction. Participants were randomly assigned to one of two SNSs conditions ( $n_{\text{Snapchat}} = 34$  vs.  $n_{\text{Instagram}} = 40$ ). First, their SNS usage patterns were measured, then they were asked to log into either their Snapchat or Instagram accounts, depending on their condition, and spend 20 minutes using the platform. They were asked to use their SNS as they normally do in their daily lives, such as contacting their friends, posting photos, and browsing posted content from friends and themselves. Following their use, their self-construal was measured by the same scale (Singelis 1994) that was adopted in study 1. To explore the effect of SNSs on individuals' self-construal, each participant's dispositional self-construal (measured in study 1) and primed self-construal following SNS usage (measured in study 2) were compared.

To investigate the effect of SNS platforms on users' information process, a 2 (Snapchat vs. Instagram)  $\times$  2 (cognitive appeal ad vs. emotional appeal ad) between subjects design was employed for study 2. A total of 117 undergraduates (82.2% female, 17.8% male,  $M_{\text{age}} = 19.79$ ,  $SD_{\text{age}} = .93$ ) from a large southeastern university in the U.S. participated in study 2. Similar to study 1, participants received research credit as

compensation. Once participants agreed to participate in the study, they were informed of their lab schedules.

Participants who attended the laboratory experiment were randomly assigned to one of two SNS conditions ( $n_{\text{Snapchat}} = 60$  vs.  $n_{\text{Instagram}} = 57$ ). After they answered several questions related to their SNS usage patterns, such as motivations for using SNS and SNS intensity, similar to study 2, they were asked to use the assigned SNS (Snapchat or Instagram) for 20 minutes. After using their SNS for 20 minutes, their self-construal was measured by a twelve-item 7-point Likert scale (modified from Singelis, 1994;  $a_{\text{interdependent}} = .65$ ,  $a_{\text{independent}} = .70$ ). Then, to explore the association between users' self-construal and their information processing, two distinctive advertising appeals (emotional vs. cognitive appeal) were randomly provided to participants ( $n_{\text{emotional}} = 59$  vs.  $n_{\text{cognitive}} = 58$ ).

Based on the assumption that participants' SNS intensity may have an impact on the priming effect of SNSs, participants' SNS intensity was employed as covariate in the analysis. SNS intensity was measured by a six-item 7-point Likert scale (Ellison *et al.*, 2007; 6 items;  $a = .87$ ). To assess the overall efficacy of the advertisement, two dependent variables were measured by 7-point semantic differential scales: attitude toward the ad

(1 = bad, not helpful, not believable; 7 = good, helpful, believable;  $\alpha = .78$ ) and attitude toward the brand (1 = bad, negative, unfavorable; 7 = good, positive, favorable;  $\alpha = .94$ ; Lee and Aaker, 2004).

## 2) Stimuli (Study 2)

To prevent the possible confounding effects of using a real brand which might be perceived differently by participants, a fictitious brand was used for this study. Also, considering coffee is one of the most frequently consumed product categories by university students (Mahoney *et al.*, 2018), a fictitious coffee brand “Seattle Espresso” was created. Based on previous studies (Hong and Chang, 2015; Septianto and Pratiwi, 2016), the cognitive appeal advertisement focused on the quality and functional aspect of products, whereas the emotional appeal advertisement emphasized the feelings that products may evoke. Through a pretest, the most distinctive pair of copies (among 8 copies) was selected to be employed in this study. For the emotional appeal, the copy selected was, “Seattle Espresso, Pure joy in every cup. Subtle bliss in every sip.” In contrast, for the cognitive appeal, the copy selected read, “Quality coffee is not an accident! The best land, the most sumptuous beans. An amazing commitment to our work,

Seattle Espresso. From our farm to your cup.” 7-point Likert scales were used (1 = *strongly disagree*, 7 = *strongly agree*; cognitive appeal: Overall, I think the copies infer the quality of coffee, Overall, I think the copies are informational; emotional appeal: Overall, I think the copies evoke my feelings, Overall, I think the copies are emotional; modified from Hong and Chang, 2016, Yoo and MacInnis, 2005). The results from the pretest showed that the two advertisements differed in terms of their appeals. More specifically, participants who were exposed to the emotional appeal ad indicated that the ad was more concerned with emotion ( $M = 5.98$ ) than with cognition ( $M = 4.48$ ,  $t = -4.93$ ,  $p < .01$ ). In contrast, participants who were exposed to the cognitive appeal ad indicated that the ad was more associated with cognition ( $M = 6.15$ ) than with emotion ( $M = 5.13$ ,  $t = 4.28$ ,  $p < .01$ ). Except for the copies, all other factors in the stimuli were identical (see Appendix 1).

## 4. Results

### 1) Hypothesis 1 testing

To investigate how SNSs influence users’ self-construal, participants’ self-construal scores (pre-use vs. post-use) were compared

through paired sample  $t$ -tests. As shown in Table 1, after individuals used Snapchat for 20 minutes, their interdependent self-construal scores became higher than before they used Snapchat [ $t(38) = -2.53, p = .02; M_{\text{post}} = 5.04, SD = .60, M_{\text{pre}} = 4.87, SD = .60$ ]. Conversely, individuals who used Instagram for 20 minutes demonstrated higher independent self-construal scores compared to before using Instagram [ $t(34) = -2.28, p = .03; M_{\text{post}} = 5.01, SD = .67, M_{\text{pre}} = 4.86, SD = .69$ ]. Therefore, H1a and b were supported.

## 2) Hypothesis 2 manipulation checks

In order to assess whether the two SNS platforms (Snapchat and Instagram) could prime participants toward interdependent

self-construal or independent self-construal, an independent  $t$ -test was conducted. The results revealed that participants who used Snapchat for 20 minutes showed stronger interdependent self-construal ( $M = 5.24, SD = .66$ ) than independent self-construal [ $M = 4.99, SD = .72, t(116) = 2.00, p < .05$ ]. The reverse was true for participants who used Instagram for 20 minutes [ $M_{\text{Instagram}} = 5.51, SD_{\text{Instagram}} = .63; M_{\text{Snapchat}} = 5.27, SD_{\text{Snapchat}} = .70, t(116) = -2.01, p < .05$ ]. In addition, participants in the cognitive appeal advertisement condition perceived that the ad was more associated with information ( $M = 4.12, SD = 1.35$ ) than emotional feeling [ $M = 3.55, SD = 1.44; t(116) = -2.22, p < .05$ ], whereas those in the emotional appeal advertisement condition perceived that the ad appealed more toward their emotion ( $M$

(Table 1) Interdependent & Independent Self-Construal, Pre- & Post-

	Mean	SD	Sig.
<b>Snapchat (n=34)</b>			
<i>Interdependent self-construal</i>			
Before Using	4.87	.60	.016*
After Using	5.04	.60	
<i>Independent self-construal</i>			
Before Using	4.78	.52	.412
After Using	4.84	.63	
<b>Instagram (n=40)</b>			
<i>Interdependent self-construal</i>			
Before Using	5.09	.60	.889
After Using	5.10	.57	
<i>Independent self-construal</i>			
Before Using	4.86	.69	.029*
After Using	5.01	.67	

= 4.57,  $SD = 1.60$ ) than information [ $M = 3.72$ ,  $SD = 1.47$ ;  $t(116) = 2.98$ ,  $p < .05$ ]. Thus, manipulations for participants' self-construal and types of advertisement were successfully secured.

### 3) Hypothesis 2 testing

An analysis of covariance that included two independent variables (SNSs and Ad type) and one covariate (SNS intensity) on two dependent variables (*attitude toward the ad* and *attitude toward the brand*) was conducted to test the hypotheses.

The results of an ANCOVA demonstrated that there was a significant two-way interaction effect on attitude toward the ad [ $F(1,111) = 6.79$ ,  $p < .05$ ,  $\eta^2 = .06$ ]. Two main effects (SNSs and Ad type) were not

significant [ $F_{\text{SNS}}(1,111) = .19$ ,  $p > .05$ ;  $F_{\text{Ad type}}(1,111) = 1.35$ ,  $p > .05$ ]. Covariate effect of social media intensity was not also significant [ $F(1,111) = .28$ ,  $p > .05$ ].

To investigate the two-way interaction further, planned contrast tests were conducted. As expected, the cognitive appeal advertisement was more effective for participants who used Snapchat than for those in Instagram condition [ $F(1,111) = 4.17$ ,  $p < .05$ ,  $\eta^2 = .04$ ]. However, when using the emotional appeal advertisement condition, no significantly different attitude toward the ad between Snapchat and Instagram users was found [ $F(1,111) = 2.48$ ,  $p > .05$ ,  $\eta^2 = .02$ ].

The matching effect on the attitude toward the brand was tested by a two-way ANCOVA. As shown in Table 5, there was

(Table 2) Mean Values of Attitude toward the Ad

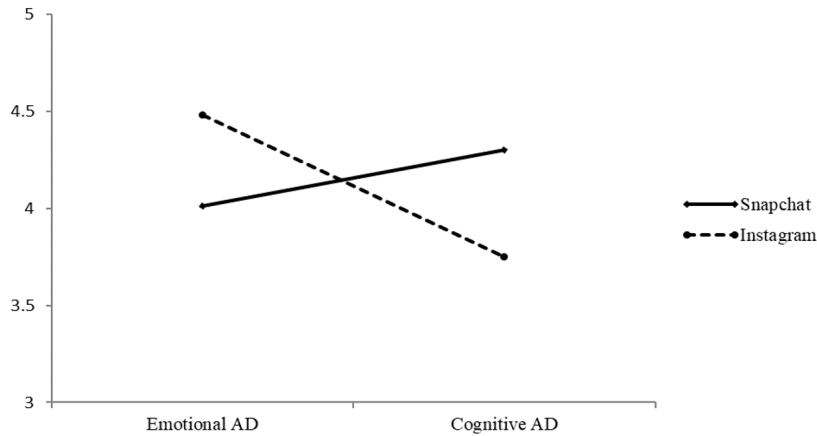
Dependent variables	Snapchat		Instagram	
	Emotional AD	Cognitive AD	Emotional AD	Cognitive AD
Attitude toward the ad	4.01 (1.01)	4.30 (1.16)	4.48 (1.00)	3.75 (1.01)
	n = 31	n = 29	n = 28	n = 28

Note: Standard deviations are in parentheses.

(Table 3) Summary of ANCOVA (Attitude toward the Ad)

Dependent variables	Two-way ANCOVA				
	Factors	SS	MS	F	$\eta^2$
Attitude toward the ad	SNSs (Snapchat vs. Instagram)	.13	.13	.19	.00
	Ad type (cognitive vs. emotion)	1.47	1.47	1.34	.01
	Social media intensity	.30	.30	.28	.01
	SNSs × Ad type	7.43	7.43	6.79**	.06

Note:  $p < .05^{**}$



(Figure 1) Attitude toward the ad

a significant interaction effect between SNSs and Ad type [ $F(1,111) = 10.02, p < .05, \eta^2 = .08$ ]. Similar to the attitude toward the ad, the main effect of SNSs and ad type were not significant [ $F_{\text{SNS}}(1,111) = .47, p > .05; F_{\text{Ad type}}(1,111) = .14, p > .05$ ]. A significant covariate effect was not also found [ $F(1,111) = 3.45, p > .05$ ].

Subsequent contrast analyses were

performed to examine the two-way interaction. Consistent with the attitude toward the ad, participants showed more positive attitudes toward the brand when the cognitive appeal advertisement was matched with Snapchat than among those matched with Instagram [ $F(1,111) = 7.15, p < .05, \eta^2 = .06$ ]. However, for the emotional appeal ad condition, no significant difference

(Table 4) Mean Values of Attitude toward the Brand

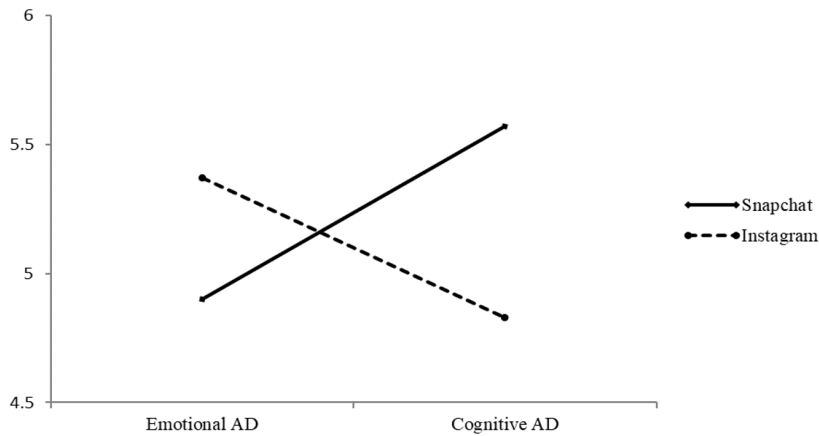
Dependent variables	Snapchat		Instagram	
	Emotional AD	Cognitive AD	Emotional AD	Cognitive AD
Attitude toward the brand	4.84 (1.06)	5.54 (1.04)	5.40 (1.00)	4.89 (1.04)
	n = 31	n = 29	n = 28	n = 28

Note: Standard deviations are in parentheses.

(Table 5) Summary of ANCOVA (Attitude toward the Brand)

Dependent variables	Factors	Two-way ANCOVA			
		SS	MS	F	$\eta^2$
Attitude toward the brand	SNSs (Snapchat vs. Instagram)	.50	.50	.47	.00
	Ad type (cognitive vs. emotion)	.16	.16	.14	.00
	Social media intensity	3.64	3.64	3.45	.03
	SNSs × Ad type	10.60	10.60	10.02**	.08

Note:  $p < .05^{**}$



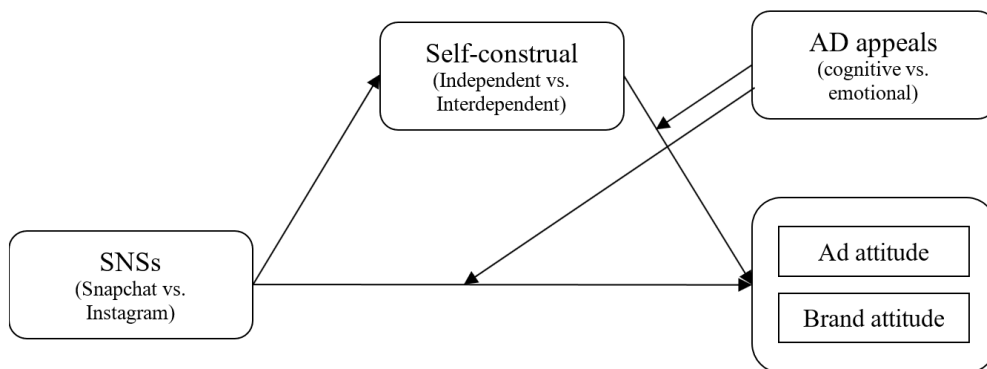
(Figure 2) Attitude toward the brand

was found [ $F(1,111) = 3.12, p > .05, \eta^2 = .03$ ]. Therefore, these results supported H2a but did not support H2b.

#### 4) Hypothesis 3 testing

To test H3, a series of moderated mediation analyses were conducted by using Model 15 of Hayes' PROCESS MACRO (Hayes, 2013). The mediated moderation analyses based on 10,000 bootstrap samples included two independent variables (SNSs

and Ad type), one mediator (self-construal) and one covariate (SNS intensity) on two dependent variables (*attitude toward the ad* and *attitude toward the brand*). A self-construal variable was created by subtracting the independent self-construal score from the interdependent self-construal scores (positive scores mean interdependent self-construal and negative scores mean independent self-construal). Figure 3 demonstrates a conceptual research framework of Study 3 and all moderated mediation



(Figure 3) A research framework of study 3

(Table 6) R-square for the Proposed Mediation Models

Model	R-square	MSE	F	df1	df2
SNS → SC	.06	1.10	3.39**	2	113
SNS → SC × ADT → $A_{ad}$	.11	1.07	2.22**	6	109
SNS → SC × ADT → $A_{brand}$	.16	1.02	3.37***	6*	109

Note: \*\*  $p < .05$ , \*\*\*  $p < .01$ ; SNS = Social Network Sites; SC = Self-construal; ADT = Advertising Types.

$A_{ad}$  = attitude toward the ad;  $A_{brand}$  = attitude toward the brand

models were significantly fitted.

The results indicated that significant main effects of SNS and types of advertising on attitude toward the ad [SNS:  $b = 1.69$ ,  $se = .63$ ,  $t(109) = 2.68$ ,  $p < .05$ ; Ad Type:  $b = 1.48$ ,  $se = .61$ ,  $t(109) = 2.43$ ,  $p < .05$ ]. However, the mediating effect of self-construal was not significant ( $b = .50$ ,  $se = .29$ ,  $t(109) = 1.70$ ,  $p > .05$ ). In addition, consistent with the findings from an ANOVA, the direct interaction effect of SNS and ad type ( $b = -1.19$ ,  $se = .40$ ,  $t(109) = -3.01$ ,  $p < .05$ ) and the mediated interaction effect of self-construal and Ad type ( $b = -.39$ ,  $se = .08$ ,  $t(109) = -2.06$ ,  $p < .05$ ) were significant.

For attitude toward the brand, significant main effects of SNS and Ad type [SNS:  $b = 2.07$ ,  $se = .98$ ,  $t(109) = 3.36$ ,  $p < .05$ ; Ad Type:  $b = 2.09$ ,  $se = .60$ ,  $t(109) = 3.51$ ,  $p < .05$ ] and the mediating effect of self-construal ( $b = .69$ ,  $se = .62$ ,  $t(109) = 2.40$ ,  $p < .05$ ) were found. Similarly, there were the significant direct interaction effect of SNS and ad type ( $b = -1.44$ ,  $se = .39$ ,  $t(109) = -3.70$ ,  $p < .05$ ) and the

mediated interaction effect of self-construal and ad type ( $b = -.41$ ,  $se = .19$ ,  $t(109) = -2.22$ ,  $p < .05$ ). Overall, these mediated moderating effects were found to be significant in two dependent variables: attitude toward the ad (Index = .20, 95% CI: .00, .47) and attitude toward the brand (Index = .21, 95% CI: .02, .49). Hence, H4 was supported.

## 5. Discussion

Drawing upon the self-construal concept, the present study explored the relationship between users' self-concepts and their SNS uses. The results of the research showed that using SNS could impact and change users' self-construal. More specifically, when individuals use Snapchat, they become more interdependent than usual, whereas when they use Instagram, their independent self-construal becomes more potent. Furthermore, the changed self-construal can influence how users process information related to brands, such as a

brand's advertising. Through a laboratory experiment, the current research empirically demonstrates how an individual's self-construal can be primed by SNS use and the impacts of that priming on a user's information processing

The results from Study 1 demonstrated that upon using a more private, in-group platform such as Snapchat, users do in fact become more interdependent. This implies that once in one's own group dynamic, individuals become more reliant on group behaviors and fitting into those behaviors. Conversely, when using a broader, more public platform such as Instagram, users become more independent, meaning the public performance dynamic of the platform facilitates a need to offer more of a performance of one's self. Through a laboratory experiment, Study 1 reveals the effect SNS platforms have in their ability to prime an individual's self-construal.

The results from Study 2 provide compatible evidence that SNS platforms can change users' self-construal. The primed self-construal by different SNS platforms also had an impact on how individuals process information related to brands. The significant mediated interaction effect of SNS and the ad type also support this evidence. This was especially noted in relation to how the cognitive appeal

advertisement induced more positive responses from individuals when it was matched with Snapchat, as compared to when it was matched with Instagram. Even though the ad type matching effect with SNSs was not significant in the emotional appeal advertisement condition, the mean values showed that the emotional ad with Instagram ( $M_{AAD} = 4.40$  &  $M_{AB} = 5.34$ ) was relatively better than the ad with Snapchat ( $M_{AAD} = 4.02$  &  $M_{AB} = 4.90$ ).

## 6. Theoretical Implications

Unlike most studies focusing on how SNS users' self-construal influences their behaviors in SNS contexts such as motivation, self-presentation, and sharing information (Chu, Windels, & Kamal 2016; Hofmann et al, 2021), the current research mainly focuses on reciprocal relationship between users' self-construal and SNS platforms.

The results from study 1 demonstrate that SNS platforms *can* prime users' self-construal into either independent or interdependent self-construal. Most self-construal studies in SNS contexts have emphasized the influence of users' self-construals on their SNS uses. For instance, Chang (2015) suggests that individuals with interdependent self-construal try to disclose their positive selves



on Facebook to satisfy their social motives such as the need for belonging and popularity. However, those activities were not found among individuals with independent self-construal (Chang, 2015). Similarly, Chu, Windels, and Kamal (2016) indicate that individuals with independent self-construal tend to use their SNSs to establish their unique identity, whereas individuals with interdependent self-construal tend to use SNSs to build and maintain their friendships. By focusing on the priming effect resulted by SNS platforms, the current research contributes to the field by expanding the self-construal concept in SNS research. The results from the two studies suggest that individuals' self-construal can be influenced by SNS platforms and the primed self-construal can have impact on individuals' information processing.

Also, many self-construal research has employed individuals' cultural orientations a main factor to form the self-construal. Previous studies show that individuals in individualistic cultures such as Western countries are more likely to adopt an independent self-construal, whereas individuals in collectivistic cultures (e.g., Asian countries) tend to adopt an interdependent self-construal (Markus and Kitayama, 1991; Triandis, 1989). The findings of the current research show that individuals' self-construal can be

temporally formed by SNS platforms. Thus, this research can offer a new factor to influence forming individuals' self-construal.

Lastly, two studies required participants to use the platforms for 20 minutes and then report their self-construal. Thus, by conducting a laboratory experiment that let participants use their actual SNSs, the validity of the findings is arguably improved over self-reporting results.

## 7. Practical Implications

Previous research suggests that audiences' self-concepts can be primed by advertising contexts and that the primed self-concepts can impact the efficacy of the advertisement. For example, Sung and Choi (2011) suggest that individuals who are primed into interdependent self-construal by watching team sports evaluate a prevention-focused ad message more positively, as compared to a more promotion-focused ad message. The reverse is true for individuals who are primed into independent self-construal. To enhance these message matching effects, the current research examined these advertising implications in an SNS context. By suggesting the priming effect of SNSs, the current research suggests that when a cognitive appeal advertisement is

distributed through Snapchat, the efficacy of the advertisement can be improved, as compared to when it is distributed through Instagram. The results from study 3, which revealed the matching effect of self-construal when primed by SNSs and advertising appeal, can shed light on how to create more effective ad campaigns on different SNS platforms.

Recently, marketing practitioners have paid more attention to the role of the online brand within SNS communities and on SNS platforms. According to Lee and colleagues (2012), interdependent self-construal has a positive impact on consumers' electronic word of mouth (eWOM) behavioral intentions through their Facebook online brand community engagement self-efficacy. In the same vein, the findings from this research that Snapchat can make users be more interdependent shows how brand managers may be able to increase the effectiveness of eWOM in SNSs. For example, using Snapchat may be more effective when a brand needs to increase consumers' engagement and may be able to promote more active eWOM, as compared to other SNSs. In sum, the priming self-construal effect from using SNS platforms can help the field better understand how to not only change messaging strategies when using different SNS platforms but also how to

approach SNS media strategies more broadly.

## 8. Limitations and future research

As with any study, this project has a few limitations. First, consistent with all experimental designs, these results may not be generalizable. Relatedly, the sample of university students may differ from other populations. Also, the unbalanced gender ratio (study 1, 82.1% female; study 2, 83.8%) may impact results. Second, the study tested two social media platforms, but platforms like Facebook may have different results. More specifically, Facebook users can categorize their social networks by using different Facebook pages (Timeline & NewsFeed). Since only close friends can read and react to posts in the Timeline, by using this page, Facebook users can enhance their in-group membership. By contrast, by using the NewsFeed page, they can communicate with someone they do not know much. Therefore, the different characteristics of social media should be considered to increase the generalizability of this research. Third, experimental designs often only test a moment in time. Results may vary if participants were examining their social

media outside of a lab setting. Lastly, since the popularity of Snapchat is not big enough in Korea, the findings from this study may not fully applied for the social media contexts in Korea. With this aspect, another image-based social media platform which is highly popular in Korea needs to be investigated. In sum, future studies may want to test different populations with different platforms to re-examine these effects.

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## <Appendix 1>



Emotional appeal advertisement



Cognitive appeal advertisement



# 스냅챗과 인스타그램 내의 자아개념 차이: 이용자의 자기해석과 SNS 사용 간의 상호작용 효과가 광고 효과에 미치는 영향

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**본** 연구의 목적은 특정 SNS 플랫폼(스냅챗 & 인스타그램)이 이용자의 자기해석(Self-construals)에 미치는 영향과, 이로 인해 SNS광고 효과가 어떻게 증진될 수 있는지를 알아보는 데 있다. 자기 해석(Self-construals) 이론에 기반하여 총 2번의 실험 연구가 미국 남부의 유력 대학 학부생을 대상으로 진행되었다. 연구 결과, SNS 플랫폼은 이용자의 자기해석(스냅챗- 상호의존적 자기해석, 인스타그램-독립적 자기해석)에 영향을 주는 것으로 나타났고, 플랫폼에 의해 영향을 받은 자기해석은 해당 SNS 플랫폼에 노출된 두 가지 다른 형태의 광고(감정적 광고 vs. 인지적 광고)에 다르게 작용을 하는 것으로 나타났다. 이용자의 자기 해석이 SNS 플랫폼과 광고 형태의 상호작용에 매개 작용을 하는 것 역시 밝혀졌다. 본 연구의 결과는 자기해석 이론을 SNS 연구에 활용할 수 있는 새로운 방안을 제시했을 뿐 아니라, 소비자의 SNS 이용이 광고 효과에 어떠한 영향을 줄 수 있는지를 입증함으로써 보다 효율적인 SNS 광고 집행에 대한 새로운 방향성을 제안할 수 있을 것으로 기대한다.

주제어 : 자기해석, 소셜미디어, 인스타그램, 스냅챗, 광고 효과(광고 메시지)

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