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Why SNS Sites Are Using Advertising Models Like You: An Explanation from Construal-Level Theory

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ABSTRACT

Based on the Construal Level Theory, we aim to study a most favorable fit among the advertising model, media type, and message construals, which are important factors in an advertisement. A two (social distance of the ad model in an ad: distal (low similarity) vs proximal (high similarity) by two (social distance of a media type: distal (portal) vs. proximal (SNS)) by two (message construal: abstract vs concrete) laboratory experiment was conducted to examine attitude changes on ad messages. The results show that abstract messages were more effective in attitude toward advertisement and purchase intention under the distal social distance (i.e. advertising model in low-similarity and portal media type) while concrete messages were so under the proximal social distance and SNS media type.

Keywords: Construal Level Theory (CLT), Advertising Message, Social Network Services (SNS), Portal Site, Mobile Advertisement

Ⅰ. Introduction

In an increasingly digitized global advertising market, and a rapidly expanding mobile advertising market (Statista, 2018a; Statista, 2018b), personalized messages can be created by using consumer data, and marketing messages can go viral on social media via functions such as “share” and “like.” However, unlike TV, newspaper, and radio ads, which dedicate time and space to deliver messages, online ads are almost always presented on one screen together with the search results or news articles that are the main focus of consumers, thus making it difficult to attract consumers’ attention. This difficulty is especially problematic in the mobile environment in which small screens limit the number of advertising messages that can be presented. Moreover, people are exposed to over 5,000 ads in various forms every

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day (Schroeder, 2016). Given this flood of advertisements, it is even more difficult to produce ads that catch people's attention on small mobile screens. Therefore, for the mobile advertising market, it is essential that messages are maximally effective, because a small number of messages delivered over short time spans must be capable of attracting consumers' attention and enticing them to make purchases.

While it has been common practice to use celebrities in ads instead of ordinary people as a way of attracting attention, it is interesting that blogs and social media often use ads featuring ordinary people, even though these media, specifically, introduce particular challenges for attracting consumers' attention. In the early days of blogs, some companies promoted products or services by introducing ordinary bloggers who were assumed to be unrelated to the company but were actually hired actors or fictitious characters created by the companies. This drew consumers' interest because "people like me" were perceived as more reliable than a company spokesperson. However, as it became apparent that the "ordinary people" used in advertisements were actually created or employed by the companies, consumers experienced a loss of trust and the practice was criticized as unethical (Langley, 2014; Plummer, 2008). Since then, marketing practices such as astroturfing or sock puppetry have been deemed morally unacceptable; nevertheless, advertisements using ordinary people rather than celebrities are still prevalent on social media (Papasolomou and Melanthiou, 2012). Although ordinary people are cheaper models than celebrities, there are many concerns that their use will be less likely to attract attention and thus limit the effect of the advertising. We believe that the use of ordinary people instead of celebrities is not simply a matter of cost and that the popularity of this phenomenon can be partially explained by construal level theory (CLT).

According to CLT, social distance, one of several dimensions of psychological distance, can be operationalized using various characteristics, including similarity, familiarity, and social power (Edwards et al., 2009; Fiedler, 2007; Nan, 2007). For our research, we defined social distance in terms of similarity and compared the phrases: "the ad model is similar to me" versus "the ad model is not similar to me." CLT explains that when psychological distance is distal, people construe at a high level (i.e., abstract, whole) and when psychological distance is proximal, low-level construal is adopted (Trope and Liberman, 2003; Trope et al., 2007). Based on the fit between the message and situational factors, congruence between message construal and the psychological distance of the factors fosters a favorable response by individuals (Dhar and Kim, 2007; Kim et al., 2012a).

Many studies have examined the effective delivery of advertising messages, but most of them have only identified a single effect on purchasing linked to a particular stimulus—such as celebrity, appeal type, or exposure (Chandy et al., 2001; Dahl et al., 2003; Erdogan et al., 2001; Kamins, 1989; Lee and Cho, 2010; Schuhwerk and Lefkoff-Hagius, 1995). This means there is a lack of research on the complex effects of the various factors that constitute advertisements. By focusing on the effect of social distance and construal level, our study attempts to determine whether there is a most favorable fit among media, message source, and message type, which are three important factors of an advertisement (McGuire, 1978). More specifically, this study aims to investigate the most favorable fit among media (social media / non- social media), message source (someone similar to me / someone not similar to me), and message type (abstract / concrete) through evaluating the following

research questions: (1) Does the fit between the social distance of each advertising factor (model and media type) and the abstractness of the ad message improve individuals' attitudes and intentions? (2) Do construal levels that are congruent along all three factors foster the most favorable attitudes and intentions?

We think this study can contribute to research on mobile advertising by identifying persuasive traits of models and message types for different media, understanding how to organize adequate advertising messages to improve the impact of advertisements, and expanding the research on CLT to mobile ads.

Ⅱ. Theoretical Background and Hypotheses

2.1. Psychological Distance and Construal Level Theory

According to CLT, psychological distance affects the level on which people construe certain objects or events. For a certain object or event, the farther from it that people feel, the higher their construal level; conversely, the closer people perceive the object or event to be, the lower their construal level (Sung and Park, 2019). Higher levels of construal refer to abstract, inclusive, and objective-oriented thinking. Lower levels of construal refer to concrete, detailed, and action-oriented thinking (Fujita et al., 2006; Ledgerwood and Alison, 2010; Smith and Trope, 2006; Trope and Liberman, 2003; Trope et al., 2007).

Psychological distance is defined as the subjective distance perceived in an actor's psychological space between the actor and an event (Kim et al., 2008). There are four dimensions of this psychological distance: temporal, spatial, social, and hypothetical (Liberman et al., 2007b; Trope and Liberman, 2003; Trope and Liberman, 2010; Trope et al., 2007). For example, other conditions being the same, people feel psychologically closer to (or farther from) an event occurring in the near (or distant) future, to an object located adjacently (or distantly), to a person known (or anonymous), and to an occasion more (or less) probable. This way of thinking can be easily located in our daily lives. For example, people plan to "review reports," "buy groceries," and "work out at the gym" tomorrow, whereas they plan to "be healthy," "think positive," and "get a job" next year. In addition, when someone asks for advice, people usually try to offer feasible and concrete solutions if they are familiar with the questioner, but they tend to give ideal and abstract advice to people they do not know well.

2.2. Construal Fit of the Advertising Model

Construal level influences message receptivity. If the level of construal derived from psychological distance is consistent with the abstractness of the messages, consumers will be more receptive to the messages (Dhar and Kim, 2007; Kim et al., 2012a). In other words, abstract messages function better under conditions that lead to high construal levels, and concrete messages are more effective under conditions that help derive low construal levels. This is because construal level determines whether information is processed abstractly or concretely. People with high levels of construal think abstractly and perceive the overall images of the objects based on essential information. Therefore, messages to such people work more effectively when they are delivered abstractly. Conversely, people with low levels of construal are persuaded more by concrete messages emphasizing feasibility because such people think more concretely and focus on specific details. According

to the experiments of Kim et al. (2008), when consumers are in temporally and socially proximal conditions, their product evaluations are significantly influenced by "how" rather than "why" messages.

In this study, we focused on social distance among the various dimensions of psychological distance. Social distance is defined as the perceived difference between individuals or groups (Liberman et al., 2007a). Various factors affect social distance, such as similarity, familiarity, social power, grouping, self-other differences, and acquaintance-stranger differences, and these factors provide the common criteria for determining who is socially close to or distant from oneself (Heider, 2013; Liviatan et al., 2008; Smith and Trope, 2006; Stephan et al., 2011). For someone who is socially close, people tend to identify him or her based on detailed information (Idson and Mischel, 2001), to advise on feasibility (Liberman et al., 2007b), and to take into account subordinate matters rather than simply essential matters when they make decisions about him or her (Zhao and Xie, 2011). Moreover, when people are socially close to a certain person, they consider feasibility rather than product desirability when giving a gift to that person (Liberman et al., 2007b), accept advice more easily when he or she talks about an action plan (Kim et al., 2008), and use concrete language when they describe that person (Stephan et al., 2010).

Advertising models seek similarity to recipients in terms of age, gender, or jobs, and the closer the social distance between the model and the recipient, the lower the level of construal. When advertising models are highly similar to message recipients, construal levels will be relatively low and a concrete advertising message will be more effective. Conversely, for advertising models that are dissimilar and socially remote to message recipients, the construal level will be relatively high and abstract advertising messages will be more effective. Thus, the construal fit between social distance to advertising model (i.e., model similarity) and message abstraction (i.e., feasibility vs. desirability) improves recipients' attitudes toward advertisements. Furthermore, according to the theory of reasoned action (TRA) from Fishbein and Ajzen (1975), beliefs affect attitudes, attitudes affect behavior intentions, and behavior intention affects actual behavior. Favorable attitudes toward ads will lead to purchase intention and actual purchases. Putting all these attributes together, we hypothesized that attitudes toward ads and purchase intention will be favorable when the construal level matches the message type (i.e., a lower construal level with a concrete message or a higher construal level with an abstract message).

H1a: When advertising models are similar to message recipients, attitudes toward ad messages will be more favorable for concrete ad messages than for abstract ad messages.

H1b: When advertising models are dissimilar to message recipients, attitudes toward ad messages will be more favorable for abstract ad messages than for concrete ad messages.

H2a: When advertising models are similar to message recipients, purchase intentions will be higher for concrete ad messages than for abstract ad messages.

H2b: When advertising models are dissimilar to message recipients, purchase intentions will be higher for abstract ad messages than for concrete ad messages.

2.3. Construal Fit of Media

The type of media that is used for advertising is also an important factor related to the effectiveness of advertisements. People relate social distance not

only to people but also to objects. Although social distance is generally applied to relationships with people or groups, several studies have extended it to relationships with objects. Amit et al. (2009) found that their participants perceived foreign currency as more socially distant than local currency. This result shows that people can form social distance not only in terms of people with whom they interact but also in terms of the objects with which they are involved. This concept can also be applied to online media, a vehicle that delivers advertisements to consumers online. Kim et al. (2012a) assert that the social distance is closer to online social media than to mass media. Social network services (SNS), including Facebook, Twitter, and Instagram, are defined as "web-based services that enable users to (1) update open profiles, (2) make a list of friends, and (3) communicate with people connected to them" (Ellison, 2007). One of the most important characteristics of SNS is that they are based on relationships with friends. Users of SNS are inclined to communicate with those who are close to themselves, and this explains why a large proportion of replies, likes, or retweets occur among those who have known each other offline for a relatively long time (Ellison, 2007; Lou and Koh, 2017). This also indicates that SNS users have a high degree of virtual proximity, intimacy, and similarity (Joinson, 2008; Zhao and Rosson, 2009). The opposite of this effect also has been validated in a study that shows the psychological distance between SNS users could be reduced because of their frequent interactions on SNS, even though they may not know each other offline (Lim et al., 2012).

On the other hand, on portal sites, users primarily encounter information about politicians or entertainers with whom they have no personal relationship at all. According to Curtain et al. (2007), Yahoo! News users primarily read stories about entertainment, politics, or global issues—i.e., mostly general, public information, rather than personalized information. Similarly, Google's PageRank algorithm ranks web pages with many links from other sites as more important and advances them to the top of search results (Brin and Page, 2012). Moreover, this clearly shows that the information on portal sites is based on the interests of the general public, not on distinct interests shared by a close community, because the most popular keywords listed on portal sites such as Google, Yahoo!, Baidu, and Naver are produced by anonymous people. For these reasons, SNS often provide more personalized ads than portal sites by using personal feeds and sharing features. For instance, Facebook advertising services such as "Stories about Friends," "Sponsored Stories," or "Advertisements" with social interest, are promoted to go viral by making use of social functions of SNS in order to reach SNS users and their followers (Lipsman et al., 2012). Given these different levels of social distance in terms of online media types, it is expected that individuals will more likely feel socially closer to SNS than to portal sites. Furthermore, the closer the social distance to the media, the lower the level of construal. Based on the construal level, we predict that the fit will be better between SNS and concrete messages and between portal sites and abstract messages, respectively. Thus, we propose the following hypotheses.

H3a: On SNS, attitudes toward ad messages will be more favorable for concrete ad messages than for abstract ad messages.

H3b: On portal sites, attitudes toward ad messages will be more favorable for abstract ad messages than for concrete ad messages.

H4a: On SNS, purchase intention will be higher for concrete ad messages than for abstract ad messages.

H4b: On portal sites, purchase intention will be higher for abstract ad messages than for concrete ad messages.

2.4. Construal Boosting of Advertising Model and Media

Multiple types of psychological distance can boost the effect of construal fit. Huang et el. (2016) asserted a "distance boosting effect," thus validating that spatial distance (i.e., geographically distant vs. proximal restaurant) and temporal distance (i.e., authoring a review after a lengthy delay vs. immediately) jointly influence online review rating positively by amplifying consumers' construal levels. They found that the effect of one type of distance is boosted by another.

Research on multiple dimensions of distance has focused on two areas: fit and distance-on-distance (Huang et al., 2016). First, research on fit studies synchronizes levels of distance and describes how individuals behave when more than one distance is experienced at one time (Huang et al., 2016). According to "fit" research, when a proximal (distal) distance of one type is aligned with a proximal (distal) distance of another type, concrete (abstract) construals of message feel "right" (Kim et al., 2008; Zhao and Xie, 2011) and thus the construal boosting effect occurs (Huang et al., 2016). This fit effect related to multiple types of distance operates differently depending on whether psychological distance is distal or proximal. If even one type of psychological distance is distal, individuals tend to interpret an object or event using high-level construals. Thus, the combination of distal-distal or distal-proximal distance has a similar effect on individuals' construal levels (Kim et al., 2008). Second, research exploring distance-on-distance describes how a feeling of distance in one dimension serially influences how another dimension of distance feels (Huang et al., 2016). Research in this vein has shown that individuals' subjective feelings of "rightness" are heightened with an increase in psychological distance induced by subsequent dimensions of distance (Kim et al., 2012c; Maglio and Polman, 2014; Maglio et al., 2013; Yan, 2014). Specifically, the Weber-Fechner Law states that individuals' behaviors do not increase linearly but logarithmically; as distance increases, sensitivity to subsequent distance decreases (Dehaene, 2003; Huang et al., 2018; Kim et al., 2008;). In this study, we concentrated on the "fit" or "boosting" effect on individuals' behaviors given multiple psychological distances and construal levels at the same time.

Most prior research on multiple psychological distances has centered on the cross-dimension of distance types (i.e., social-temporal, spatial-temporal distance types) (Huang etl al, 2018; Kim et al., 2008; Maglio et al., 2013; Zhao and Xie, 2011) and there has been little research on the within-dimension of distance dimensions (i.e., social-social, spatial-spatial distance types). However, Maglio et al. (2013) investigated a within-dimension sensitivity to initial and sequential temporal distance.

We anticipate that the construal boosting effects of same dimensions of social distance and message abstractness will affect individuals' receptivity to ad messages. Specifically, model similarity and media types that are both socially proximal (or distal) given a concrete (or abstract) ad message will lead to the most favorable attitudes toward ad messages and the highest purchase intention. Thus, we propose the following hypotheses.

H5a: The similar ad model/SNS group will have the most favorable attitudes toward concrete ad messages compared to other groups.

H5b: The dissimilar ad model/portal group will have the

most favorable attitudes toward abstract ad messages compared to other groups.

H6a: The similar ad model/SNS group will have the highest purchase intention toward concrete ad messages compared to other groups.

H6b: The dissimilar ad model/portal group will have the highest purchase intention toward abstract ad messages compared to other groups.

Ⅲ. Methodology

We used a laboratory experiment to empirically test the effects of a model's similarity to participants and media on the effectiveness of different types of advertising messages (i.e., abstract/concrete). This method permitted close control over independent, dependent, moderating, and possible confounding variables to accomplish a high degree of internal validity (Singleton and Straits, 1999, p. 183). And it allows the examination of the fit of a model's similarity to participants, media, and advertising message type.

3.1. Experimental Design

A 2 (similarity) × 2 (media) factorial design with between-subject factors was used. To investigate the receptivity of the ad message, both abstract and concrete messages were provided to each experimental group. The similarity of the advertising model was manipulated by presenting a fictitious character who either was or was not similar to the experiment participants. In the case of the advertising media, we compared media that either did or did not enable social interaction among users. Newsfeed advertisements on SNS were selected as media that provide social functions; banner advertisements on the main screens of portal sites were chosen as media that do not involve social functions. Both media are frequently used to deliver ads digitally, especially in mobile environments. They are similar in that ads typically are composed of simple images and text but differ in the availability of social interaction. Participants were randomly assigned to one of four groups, according to similarity levels and media types as shown in <Table 1>.

One hundred fifty-three students and alumni from a large private university participated in the experiment. The average age of the participants was 25.5, and 78 were male (51.0%) and 75 were female (49.0%). Also, 108 were undergraduate students (70.6%), 34 were graduate students (22.2%), and 11 were alumni (7.2%; less than 2 years after graduation) of the university. Although the majority of the participants were students, their use is unlikely to pose a significant threat to the validity of the study because young people comprise the majority of users of portal sites and SNS.

3.2. Experimental Stimuli

Experimental stimuli consisted of screen images

<Table 1> Experimental Design

Model \ Media	Portal site	Social network service
Model with low similarity	Group 1 (37 participants)	Group 3 (38 participants)
Model with high similarity	Group 2 (39 participants)	Group 4 (39 participants)

of the media, self-introduction of the fictitious characters, advertisements, and scenarios describing the situations. For the advertising media, we selected Naver and Facebook as the portal site and the SNS, respectively, because these sites are the most popular in each category in Korea. Self-introductions and advertisements were inserted in the middle of the mobile screen image of each media so that the participants would be exposed to the advertisements in a way similar to their real-life experience (e.g., scrolling down). We used captured mobile screens of Naver and Facebook applications to represent each media. We conducted a pilot study in which we tested the differences in social distance between the two media. Twenty-one students participated and were randomly assigned to one of the two groups (i.e., portal site or SNS). After they were exposed to the media stimuli, we measured their social distance to the media. The results showed that participants felt a closer social distance to the SNS (M = 4.75) than to the portal site (M = 5.08). Although the effect was not statistically significant (p = 0.652) because of the small sample size, the direction was as we expected. Thus, we decided to proceed with the main experiment using the same screen images.

The self-introductions featured two characters briefly describing their personal information and daily lives. Similarity can be manipulated through various factors, including classes taken, attitudes about an issue, name initials, and nationality (Amit et al., 2009; Liviatan et al., 2008). We manipulated the degree of similarity of our two characters by controlling age, residence, and their daily lives: one was manipulated as close to a normal Korean college student and the other was not. Specifically, considering that the study participants were students or alumni of a private university in Seoul, we described the similar model as a fictitious female student in her twenties attending the same university in Seoul. We presented the dissimilar model as a fictitious female office worker in London in her thirties. Descriptions of daily life used words related to a typical college student in Seoul for the similar model, and words related to office workers in London for the dissimilar model (see <Appendix A>). To exclude any influence imposed by the external appearance of the characters, we used the same portraits. To test the difference in social distance between the two models, we conducted another pilot study, in which 17 participants were randomly assigned to one of two groups (i.e., a similar or dissimilar model). The average social distance to the similar model (M = 4.23) was closer than to the dissimilar model (M = 5.96), and the difference was statistically significant (p = 0.026).

To develop the advertising content in the study, we selected two products with similar involvement levels. Product involvement is an important factor that can affect purchase intention (Bornemann and Homburg, 2011). It is necessary to control the involvement level in order to accurately examine the effects of social distance, which was our main interest. First, we chose four products in a similar price range that are generally of interest to young women in their twenties and thirties. Then, we conducted a short survey of 11 undergraduate and graduate students to find the involvement levels for these four products (i.e., backpack, watch, sunglasses, and travel suitcase). Average product involvements were 5.67, 4.18, 4.06, and 3.76, respectively; thus, we selected the watch and the sunglasses for the main study.

We created advertising messages in which the model promoted either sunglasses or watches in an abstract or concrete way. The ad texts were constructed by combining words and phrases used in actual advertisements of sunglasses and watches. The features that would allow participants to recognize

the actual brand were disguised, and the virtual brand name was presented because brand has a great impact on consumer behavior in general (Dodds et al., 1991). We prepared sixteen types of advertising messages (see <Appendix A>) for the main experiment: 2 (media: SNS vs. portal) × 2 (model: similar vs. dissimilar) × 2 (product: sunglasses vs. watch) × 2 (message: abstract vs. concrete).

3.3. Measurements

We measured social distance to the models and the media, attitude toward the ads, and purchase intention to examine our research model. We also collected data on media use, product involvement, the device used by participants in this experiment, and demographic variables, in order to control their effects on purchase intention. The measurement items are summarized in <Appendix B>.

We measured attitudes toward both abstract and concrete ads in order to evaluate differences in attitudes toward ads with different message abstractions. We then calculated the difference by subtracting the latter from the former. If the difference was positive, participants preferred an abstract ad to a concrete ad, and if the difference was negative, they preferred concrete ads. We measured purchase intention in the same way.

3.4. Procedure

Material for the experiment and the site were produced using Qualtrics software, and the link was distributed to the participants. When they clicked the link, participants first encountered the self- introduction of a fictitious model. Participants were randomly assigned to one of the four groups: a similar character on an SNS or a portal or a dissimilar character on an SNS or a portal. After reading the profile of the model, they answered questions to check manipulation about the model's similarity and media type and responded to measurement items for social distance to the model and the media and for the construal level.

Next, participants were presented with a short advertisement scenario. The scenario indicated that participants found ads on the portal site (or SNS) while they were trying to buy a watch (or sunglasses) and searching for information about these items. There were four kinds of advertising messages (i.e., abstract/watch, concrete/watch, abstract/sunglasses and concrete/sunglasses), and each participant was exposed to two of the four ads such that each participant experienced both products as well as levels of both abstractness and concreteness. In other words, if a participant first saw an advertisement that promoted the sunglasses abstractly, then he or she was subsequently exposed to an advertisement promoting the watch concretely. The order of exposure to abstract/concrete and watch/sunglasses ads was randomly mixed to control the order effects. After looking at the ads, participants responded to questions to check manipulation about the message abstraction, attitude toward ads, and purchase intention, respectively. Finally, we measured the control variables including media use, product involvement, age, gender, academic background, and devices used to participate in the experiment.

Ⅳ. Results

4.1. Manipulation Check

Since we manipulated the independent variables with experimental stimuli, we checked whether the

<Table 2> Manipulation Check Results

Variable	Manipulation	Average	*SD*	*t*	*p*-value
Model similarity	Model with high similarity	5.16	1.09	17.668	.000
	Model with low similarity	1.99	1.12		
Media type	Portal site	1.00	.00		
	SNS	0.00	.00		
Message abstractness	Abstract message	5.75	1.01	31.112	.000
	Concrete message	2.08	.89		

Note: Model similarity and message abstractness are measured on a 5-point Likert scale and media type are measured by binary scale.

<Table 3> Degree of Social Distance for Model Similarity and Media Type

Variable	Manipulation	Average	*SD*	*t*	*p*-value
Model similarity	Model with high similarity	3.54	1.50	9.684	.000
	Model with low similarity	5.98	1.24		
Media type	Portal site	3.75	1.84	-2.306	.023
	SNS	3.13	1.48		

Note: Each item is measured on a 7-point Likert scale with 1 = totally proximal to 7 = totally distal

participants actually perceived our treatments as we intended before we tested the hypotheses. In the posttreatment survey, subjects were directly asked about the degree of model similarity and the abstractness of the ad message. Questions were also used to determine recognition of the portal or SNS. The results of the manipulation check are shown in <Table 2>. And we checked the degree of social distance for our treatments. We presumed that when model is similar to me or media type is an SNS, social distance will be proximal, and when model is dissimilar or media is a portal site, social distance will be distal. So, we additionally tested that assumption, and the its results are as in <Table 3>.

4.2. Results of Construal Fit

We used a SPSS to validate hypotheses. We used a MANOVA to conduct analyses to determine whether model similarity and media type affected the attitude toward ads and purchase intention for different types of advertising messages. We controlled for age, gender, academic degree, device used to respond, product involvement with watches and sunglasses, and media use intensity. The dependent variables were the value obtained by subtracting attitude toward concrete ads from attitude toward abstract ads and the value obtained by subtracting purchase intention for the concrete ads from purchase intention for the abstract ads.

<Table 4> presents the results of the MANOVA and <Table 5> presents the results of the descriptive statistics for the dependent variables of each experimental group. Model similarity had a significant effect on the attitude toward advertising (F = 12.209, P = 0.001) and purchase intention (F = 13.259, P = 0.000). When the advertising model was similar to the participant's profile, ad attitude (mean = -0.612, sd = 1.791) and purchase intention (mean = -0.786, sd = 1.725) were higher for the concrete ad message

<Table 4> MANOVA Results of Model Similarity and Media Type (Abstract Ad - Concrete Ad)

Independent variable	Dependent variable	Type III sum of squares	Mean square	*F*	*p*-value
(1) Model similarity	Ad attitude	42.227	42.227	12.209	.001
	Purchase intention	47.391	47.391	13.259	.000
(2) Media type	Ad attitude	30.408	30.408	8.792	.004
	Purchase intention	35.445	35.445	9.917	.002
(1)×(2)	Ad attitude	1.031	1.031	.298	.586
	Purchase intention	2.446	2.446	.684	.409

<Table 5> Descriptive Statistics of Model Similarity and Media Type (Abstract Ad - Concrete Ad)

Dependent variable	Independent variable	Scale	Average	SE
Ad attitude	Model similarity	Low	0.467	2.131
		High	-.612	1.791
	Media type	Portal site	0.487	1.992
		SNS	-.646	1.922
Purchase intention	Model similarity	Low	0.351	2.228
		High	-.786	1.725
	Media type	Portal site	0.329	2.272
		SNS	-.780	1.668

than for the abstract message, thus supporting H1a and H2a. Also, when dissimilar models were used in advertising, ad attitude (mean = 0.467, sd = 2.131) and purchase intention (mean = 0.351, sd = 2.228) were higher for the abstract ad message, thus supporting H1b and H2b. All hypotheses for construal fit between ad model similarity and ad message were accepted.

For media type, all hypotheses of construal fit were supported. According to the MANOVA results, media type significantly influenced attitudes toward advertising (F = 8.792, P = 0.004) and purchase intention (F = 9.917, P = 0.002). For SNS, the mean value of ad attitude and purchase intention was ‒0.646 (sd = 1.922) and ‒0.780 (sd = 1.668), respectively, indicating that participants responded more favorably to concrete ad messages than abstract ones and offering support for H3a and H4a. Conversely, regarding the media type of portal site, ad attitude (mean = 0.487, sd = 1.992) and purchase intention (mean = 0.329, sd = 2.272) were higher for abstract message construals, thus supporting H3b and H4b.

4.3. Results of Construal Boosting

H5 and H6 explore the boosting effects of more than one psychological distance and message construal level. To validate these effects, we reclassified the experimental groups according to the combination of two types of social distance—namely, model similarity and media type. According to the distance boosting effect (Huang et al., 2016), we set the dissimilar model and the portal site as the stimuli to induce higher construal levels and used the similar model and the SNS as the stimuli to produce lower construal levels. Our main experiment had four groups (refer

to <Table 1>). We combined Group 2 and Group 3 because they had mixed construal levels. In other words, for Group 2, we used the media stimulus (i.e., portal site), which was supposed to lead to a high construal level, and the model stimulus (i.e., a similar model), which was supposed to create the low construal level; Group 3 had opposite features. Consequently, new clusters were created as follows: Cluster 1 in which the model stimulus and the media stimulus were both expected to form a high construal level, Cluster 2 in which the construal levels of two stimuli were mixed, and Cluster 3 in which both stimuli were expected to form a low construal level (see <Table 6>).

The results show significant differences between the three groups ($F_{\text{Ad attitude}} = 13.338$, $p_{\text{Ad attitude}} = 0.000$, $F_{\text{purchase intention}} = 13.715$, $p_{\text{purchase intention}} = 0.000$). The average differences in attitude toward advertisements (abstract ad-concrete ad) were 1.108 for cluster 1, -0.130 for Cluster 2, and -1.122 for Cluster 3; the average differences in purchase intention (abstract ad-concrete ad) were 1.054 for Cluster 1, -0.346 for Cluster 2, and -1.214 for Cluster 3 (see <Table 7>). The differences between the clusters were all statistically significant. The cluster with two proximal social distances had a more favorable attitude toward concrete advertisements than abstract advertisements, and purchase intention for this cluster was also higher for concrete advertisements. Therefore, H5a and H6a are supported. In contrast, the cluster with the two distal social distances reflected the opposite effects. Under this condition, ad attitude and purchase intention were the highest for abstract messages, thus supporting H5b and H6b. The cluster with mixed social distances (one being distal and the other proximal) had lower ad attitude and purchase intention than the other clusters. In that cluster, all dependent variables were slightly higher for concrete ad messages than for abstract messages, but these differences were not significant. These results show that the distance boosting effect may occur even within the same dimension of social distances. However, there was no evidence that distal social distance had a more influential impact on individuals' construals than proximal distance.

<Table 6> Experimental Design for Analysis

Model \ Media	Portal site	Social network service
Model with low similarity	Cluster 1 (37 participants)	Cluster 2 (39 participants)
Model with high similarity	Cluster 2 (38 participants)	Cluster 3 (39 participants)

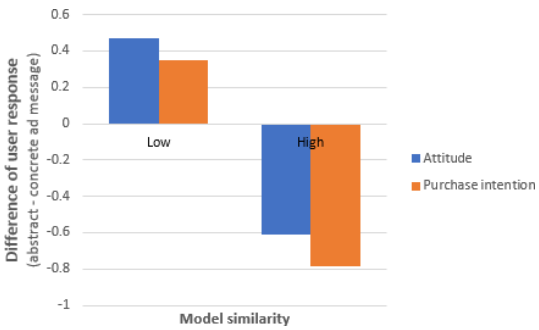
<Table 7> Comparison between Clusters

Dependent variable Comparison	Cluster mean	Comparison	Mean difference	SE	*P*-value
Ad attitude (abstract ad – concrete ad)	Cluster 1 = 1.108	Cluster 1 - Cluster 2	1.238	.377	.001
	Cluster 2 = -.130	Cluster 2 - Cluster 3	.992	.370	.008
	Cluster 3 = -1.122	Cluster 3 - Cluster 1	-2.230	.433	.000
Purchase intention (abstract ad – concrete ad)	Cluster 1 = 1.054	Cluster 1 - Cluster 2	1.400	.382	.000
	Cluster 2 = -.346	Cluster 2 - Cluster 3	.867	.375	.022
	Cluster 3 = -1.214	Cluster 3 - Cluster 1	-2.268	.438	.000

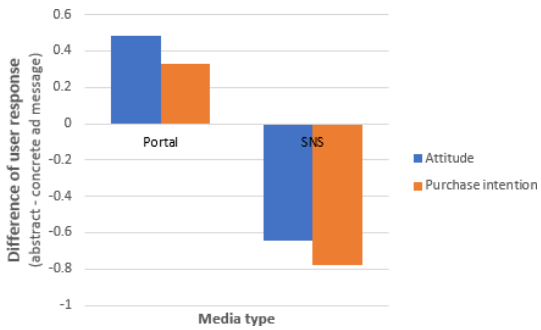
Ⅴ. Discussion

The purpose of this study was to investigate whether the effects of message abstraction differ according to social distance from media and models. We confirmed that the construal level was higher as the social distance increased, as explained by CLT. This relationship was valid in terms of both advertising models and media, thus supporting the construal fit between the two social distances related to advertising factors and message abstractness. In an SNS, the participants showed the most favorable attitudes toward advertisements and highest purchase intention when a similar model delivered the advertisement in a concrete form. This was because of fit facilitated by a low level of construal. On the other hand, advertisements featuring a dissimilar model delivering an abstract message were most effective on a portal site. This results suggests that the construal boosting effect may be aroused among multiple types of social distance and message construals.

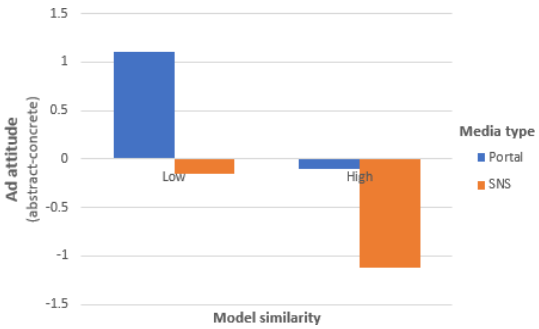
Several limitations should be considered in interpreting the results of the current study. First, social distance to the media was predicted through the presence of the social functions in this study, but many other factors could affect social distance to the media. An individual's preference for specific media or attachments could make him or her aware



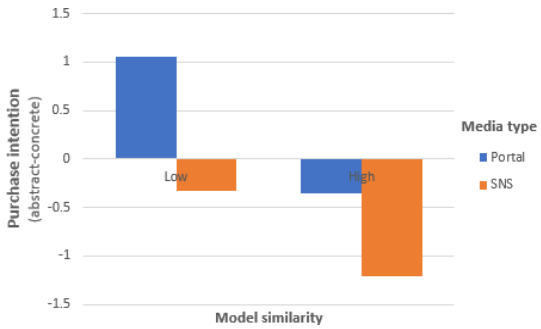
A. Results of the fit effect between ad model similarity and ad message construal



B. Results of the fit effect between media type and ad message construal



C. Results for the boosting effect of social distances of ad model & media type and message construal on attitude toward advertisement



D. Results for the boosting effect of social distances of ad model & media type and message construal on purchase intention

<Figure 1> The Construal Fit Results among Ad Model, Media Type and Ad Message

of social proximity; duration of use or experience could be another factor affecting social distance. Although the media usage period was controlled in this study, future studies could take additional factors into consideration. Second, this study explored the concept of social distance to explain the receptivity of advertising messages according to different levels of abstractness. However, social distance alone is not enough to explain psychological distance. Other dimensions such as temporal, spatial, and hypothetical distance may be important to understand the full scope. Third, the SNS subjects in our experiment were told that it was "an ad shared by your friend on an SNS." Therefore, an ad shared by a friend can be perceived as more socially close not because of the media type but because of the information source (stranger vs. friend). However, the operationalization of media type is vulnerable to contamination and care must be taken in interpreting the results. Fourth, another limitation arises from the use of student participants. However, we believe that use of these participants is not a serious threat to validity because it deals with the personal experiences on SNS and portal sites, both of which are familiar to younger generations, including college students (McKnight et al., 2002).

In spite of these limitations, this study has several important theoretical and practical implications.

From an academic viewpoint, we extend the scope of the CLT research by expanding it to media types and advertisement models. This study empirically verifies that the types of advertising media and the attributes of models in the advertisements affect social distance, which, in turn, alters people's construal levels. People perceived social distance to each medium differently. Social distance to the SNS was found to be closer than that to the portal site. On SNS, people communicate, share photos, send direct messages, discuss hobbies, and talk about common interests with those they are close to, including friends and families. These are extremely personal activities. In contrast, on portal sites, people read news articles, receive e-mails, compare product prices, get directions, or search for information. That is, they "anonymously" consume a large amount of information conveyed by the portal site or by third-party information service agents. These sources are not personal acquaintances. In other words, people engage in the portal site as a member of the public and do not expect others on the portal site to recognize them. In this way, perceptions of privacy associated with the media and perceptions of the social proximity of others they meet through the media also spill over into perceptions of the media themselves; consequently, these perceptions affect the social distance people associate with the media. This phenomenon could be explained as a "spillover effect," which refers to the degree to which the information provided in messages causes a change in beliefs about attributes not mentioned in the messages (Fishbein and Ajzen, 1981; Lutz, 1975; Mathes and Pfetsch, 1991). That is, social distance to different types of media changes because of the social distance to other users or agents that people interact with in that media format. Moreover, our results show that in online advertisements people perceived different degrees of social distance depending on the characteristics of the models. In our experiment, the participants thought that the model was socially close if he or she was similar in terms of age, region, job, daily life, and personal concerns. The social distance derived from the media and the models influence people's construal levels, as explained by CLT. The results of this research have interesting implications for practitioners. Mobile advertising on

SNS and portal sites should be differentiated by

verifying how people respond to concrete or abstract advertising messages according to social distance. Our study demonstrates that SNS advertisements are most effective when a concrete advertisement that emphasizes practicality is presented by a model similar to a target audience of ordinary people. Conversely, advertisements on a portal site have more impact if they are delivered by a dissimilar model who emphasizes an abstract message. These results mean that the impact of an advertisement can be maximized when media type, model similarity, and the abstractness/concreteness of the message are all consistent in terms of construal levels (i.e., SNS / similar model / concrete message; portal site / dissimilar model / abstract message). It partially explains the effectiveness of advertising strategies that present an everyday and easy-to-believe story using an ordinary model who seems like a friend on the SNS. We anticipate that this study will contribute to decision-making concerning effective advertisement composition and evaluation of an advertisement.

The results also suggest the preferred direction of customized advertising in a socially close medium like an SNS. For example, Facebook could use its vast amount of personal and demographic information about its members (e.g., age, region, gender, and interests) to select a model similar to the targeted consumers. In this case, it is possible to improve the effects of advertising by producing and distributing concrete and realistic messages. This is especially true if advertisers are able to use technologies, including animation, VR, and AR, that can help to construct a variety of combinations of advertising messages and models at low cost. Such combinations could improve the profitability of advertisements because it is possible to efficiently deliver advertisements consistent with the construal levels of both consumers and advertisement messages.

Our study invokes several promising avenues for future research. First, researchers might consider investigating social distance associated with various media. To date, little research has been done in information systems (IS) on CLT to link the concept of social distance to emerging media like SNS. Taking into account that the construal level has a great influence on the decision-making process, measuring psychological distance to different media or information technology devices would be an important research topic in the IS area. Second, it would be interesting to study how customers respond to personalized advertisements that use their personal information. According to CLT, personalized messages with close social distance will be effective in socially close media such as SNS. However, since users may feel displeased with messages that are too personalized, it would also be important to know how much personalization users will tolerate. Third, so far the research on the CLT has been mainly in the fields of psychology and marketing. We believe there is room for interesting CLT research in the IS field. Depending on devices such as PCs, laptops, or smartphones, psychological distance may differ because of screen sizes, physical distance from devices, input styles, and so on. If users perceive different psychological distance for each device, it would be interesting to see how these differences in psychological distance affect e-commerce or decision-making behavior.

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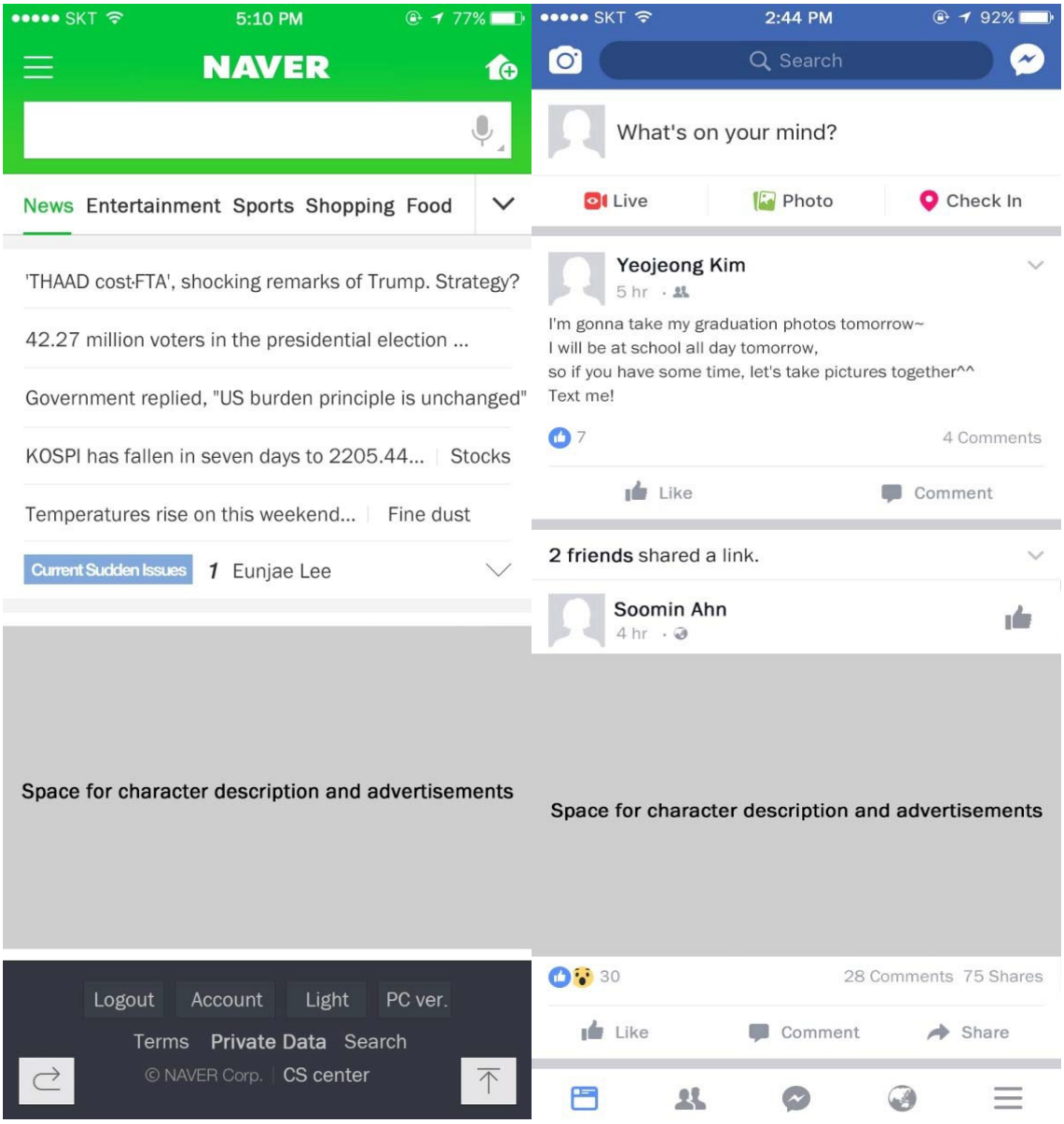
<Appendix A> Experimental Stimuli

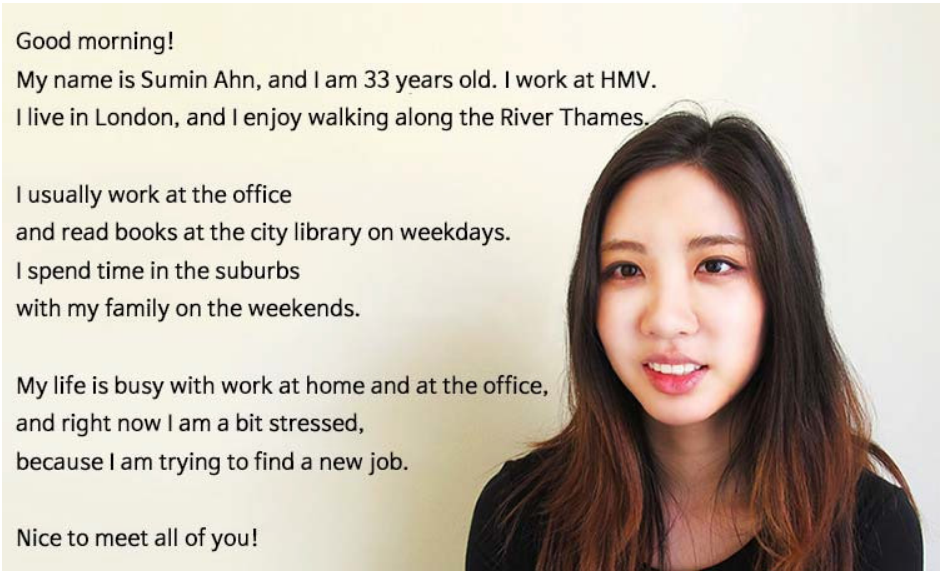
1. Advertising Media

Captured screen of mobile application of a portal site (left) and a social network service (right)



2. Model Profile

Self-introduction of a fictitious character with a low similarity (above) and with a high similarity (below)



3. Scenarios and Advertisements

3.1. Presentation of Sunglasses Advertisements

At the height of summer, it is time to buy sunglasses. After browsing for a couple of days, you see a banner ad on the portal site main screen (an ad shared by your friend on an SNS). Please read the advertisement on the screen carefully, imagine this situation, and respond to the questions.

3.2. Presentation of Watch Advertisements

Recently you became interested in watches. After browsing various products on the Internet and in magazines, one day you see a banner ad on the portal site main screen (an ad shared by your friend on an SNS). Please read the advertisement on the screen carefully, imagine this situation, and respond to the questions.

<Appendix B> Measurement

Variables and measurement items	Ref.
Manipulation check of similarity of ad model (7-point Likert scale) 1. The person presented has many similarities to me. 2. The person presented is a type of person similar to me.	
Manipulation check of the type of ad media (Yes / No) 1. The web site depicted on the screen is a portal site (social network service).	
Manipulation check of abstractness of ad message (7-point Likert scale) 1. What is the nature of the ad shown? [Concrete - Abstract] 2. What aspects of the product does the advertisement highlight? [Practicality - Feeling]	
Social distance to ad model (7-point Likert scale, reversed) 1. I feel familiar to the person presented. 2. I feel like the presented person seems close to me. 3. The presented person seems like a friend.	Kim et al. (2012a)
Social distance to ad media (7-point Likert scale, reversed) 1. I feel familiar to the media presented. 2. I feel like the presented media seems close to me. 3. If the presented media were a person, it would feel like a friend.	Kim et al. (2012a)
Attitude toward ad (7-point Likert scale) 1. The advertisement is attractive. 2. The advertisement effectively delivers the message. 3. The advertisement draws attention. 4. The advertisement is convincing.	Cho (1997)
Purchase intention (7-point Likert scale) 1. I am willing to purchase the product. 2. The product is worth purchasing. 3. I am likely to purchase the product.	Kim et al. (2012b)
Media use intensity (5-point Likert scale) 1. Which of the following is the closest to your average-use intensity of portal sites (SNS)? A. Rarely use B. More than 30 minutes ~ less than 1 hour per day C. More than 1 hour ~ less than 2 hours per day D. More than 2 hours ~ less than 3 hours per day E. More than 3 hours per day	
Product involvement 7-point Likert scale 1. Sunglasses (watches) are important to me. 2. Sunglasses (watches) are products that are related to me. 3. Sunglasses (watches) are a valuable product for me.	Sharma (2011)
Device used to respond to the questionnaire 1. Which of the following devices did you use to respond to this survey? A. PC or laptop computer B. Tablet PC C. Smartphone	
Demographic variables (Name, age, gender, and academic degree)	

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