

Print ISSN: 1738-3110 / Online ISSN 2093-7717
<http://dx.doi.org/10.15722/jds.15.7.201707.25>

The Effect of Advertisement Vividness and Regulatory Focus on Consumer Choice

Kikyong Park*

Received: May 15, 2017. Revised: June 8, 2017. Accepted: July 15, 2017.

Abstract

Purpose – This study aims to explore how a combination of the advertisement presentation vividness and consumers' regulatory focus affects choice. In addition, it seeks to the understanding for the psychological process by using consumers' response with experimental designs.

Research design, data, and methodology - This research conducted two experiments based on the scenario. Specifically, Experiment 1 used a 2 (vividness of advertisement presentation: picture vs. word) x 2 (regulatory focus: prevention focus vs. promotion focus) between-subjects design. Experiment 2 used a 2 (vividness of advertisement presentation: detailed description vs. less detailed description) x 2 (regulatory focus: prevention focus vs. promotion focus) between-subjects design.

Results - Two studies showed that prevention-focused individuals, when presented with a vivid presentation, were more likely to choose the advertised option compared with advertisements presented less vividly appearance. In contrast, promotion-focused individuals showed no difference in choice shares regardless of advertisement presentation vividness. In addition, these effects were mediated by the imagery toward the advertised information.

Conclusions - The current research found how consumers' inherent motivation affects the extent of imagery in a purchase decision and a new perspective to previous studies with regards to regulatory focus. Further, this research suggested new advertisement strategies to corporations.

Keywords: Imagery, Vividness, Advertisement Presentation, Regulatory Focus, Processing Style, Advertisement Strategy.

JEL Classifications: M31, M37, M39.

1. Introduction

We often imagine how we will feel about the consequences of our choices before deciding to buy or not. If we smoothly visualize advertised information, we would likely form a higher preference toward that information. Seeing beautiful scenes in colorful photos or concrete descriptions in a travel guide books, we want to travel there than when we are presented with a simple typographical advertisement. When we read the restaurant's menu with detailed descriptions or vividly-expressed pamphlets, we feel an appetite for advertised foods. A number of corporations or organizations, therefore, produce vivid emotion-evoking advertisement on TV commercials and print visualized

advertisements to urge individuals to purchase their products or participate in their campaigns. The extent of imagining the consequence of said choice, termed as 'imagery', plays a central role in preferences and has influenced the stimuli positively (Lee & Qiu, 2009; Petrova & Cialdini, 2005). In particular, vivid presentations, such as photos or pictures described with various colors and detailed descriptions elicit rich emotions and sensible processing, which results in higher preference to products (Childers & Houston, 1984; Lutz & Lutz, 1977).

However, does everyone always show a similar response toward advertised information evoking high imagery drawn from high vividness? Several researchers have argued that the extent of imagery should be different depending on the individuals since they show differences in visualizing objects (Petrova & Cialdini, 2005; Seiler, Newman-Norlund, & Monsma, 2017). Architecture studies have also addressed that aesthetic beauty is originated from the way which

* BK21+ Research Professor, Division of Business Administration, Chosun University, Gwangju, Korea. Tel: +82-62-230-6832, E-mail: ramnin@naver.com

observers think (Lynch, 1960).

Hence, this research predicts that the tendency of individuals' motivation can affect their imagery to an advertised information. Specifically, this research aims to explore how imagery effects change depending on individuals' regulatory focus. According to the theory of regulatory focus, people have two types of goal orientations for pursuing their purpose: prevention-focus and promotion-focus (Higgins, 1997). Due to the differences of motivational tendency, prevention-focused individuals have a repetitive and systematic processing style, whereas promotion-focused individuals have a flexible and relational thinking style (Zhu & Meyers-Levy, 2007). Imagery is associated with elaboration ability and resolving uncertainty from events (Lee & Qiu, 2009). It is, therefore, expected that regulatory focus is a factor to influence the extent of imagery and the resultant response to the advertised information. If the results regarding differences in motivational tendency can affect the perceived imagery of consumers, existing research of imagery can be extended to suggest new advertisement strategies to corporations.

To achieve the purpose of this research, this research seeks to enhance the understanding of the psychological processes that unfold in consumers' response to imagery using experimental designs based on the scenarios. Through these experiments, this research investigates the underlying mechanisms behind the interaction effects of consumers' regulatory focus and presentation way toward advertised information to achieve an internal validity. In addition, this research discriminates imagery and emotion drawn from presentation way of advertisements. Finally, the paper concludes with directions for theoretical implications and future research.

2. Literature Review

2.1. Antecedents of Imagery

Imagery means that people can activate the sensory images of the stimulus and making a judgment that is visualization (Paivio, Yuille, & Madigan, 1968). That is, an image is merely a visual appearance of objects, whereas imagery is the ability to evoke concrete appearances toward target objects. Generally, when individuals see objects or purchase products, they evoke mental images that have not been directly experienced before and the extent of that imagery leads to sustain their positive emotions (Lee & Qiu, 2009). These imagery effects are approached in view of two perspectives as follows.

First, the presentation type of stimuli influences individuals' imagery. Mostly, imagery is elicited by the vividness of the stimulus. Vivid information is emotionally arousing, interesting, concrete and easier to provoke sensory

information (Keller & Block, 1997; Nisbett & Ross, 1980; Petrova & Cialdini, 2005). Vivid representations, such as pictures and photos, evoke images of paired associations and dual coded mechanisms (Paivio & Csapo, 1969). For instance, a visual image or a picture is encoded as imaginal code and verbal code simultaneously, which has a more powerful impact on individuals' response toward the objects (Paivio & Csapo, 1969). Therefore, memory codes in pictures are more plentiful than words and play a central role in memory as a various retrieval vehicle (Childers & Houston, 1984). As for word expression, the level of vividness exists. Verbal statement evoking high imagery creates more visual images than verbal statements with low imagery (Unnava & Burnkrant, 1991). Words delivering high imagery make a lot of imagination better than words delivering low imagery, which lead to improve memory (Lutz & Lutz, 1977; Paivio & Csapo, 1969). Easily activated words, such as a table or an apple, lend itself to easily retrievable images and well memorized, which lead to more powerful impacts on imagery than abstract words, such as freedom or happiness (Lutz & Lutz, 1977).

Second, individuals' processing style can also influence their imagery. Independent to the representation of objects, individuals' ability to generate images is another factor leading to the ease of imagery. Automatic imagery of individuals became a mediator influencing emotion about stimuli (Holmes, Mathews, Mackintosh, & Dalgleish, 2008). That is, individuals' dispositional tendency to pay attention to their internal state in judgment and their processing style is likely to influence imagery (Childers, Houston, & Heckler, 1985; Fenigstein, Scheier, & Buss, 1975). Aesthetic beauty is driven from the interaction between landscape and the observer's own interpretation. Namely, it is emphasized that the free thinking and interpretation of observers' views on the objects is important (Lynch, 1960; Zhu & Meyers-Levy, 2007). Lynch (1960) addresses the responses of individuals toward city circumstances are based on imagery, which come from the experience, memory and emotion of observers.

2.2. Regulatory Focus

Regulatory focus refers to the basic motivational orientation that individuals pursue their goals, categorized in two qualitatively different ways (Higgins, 1997). According to this theory, these two types of goal orientation operate in different ways depending on their approach or level of avoidance strategy: promotion focus and prevention focus (Higgins, 1997). Promotion-focused individuals tend to choose means which enable an approach to their goals and are sensitive to the presence of positive results, such as hope, achievement and aspiration, whereas prevention-focused individuals try to avoid negative aspects related to their goals and consider responsibility and duty as important (Higgins, 1997).

Individuals who embrace regulatory foci induce different types of processing style. Prevention-focused consumers avoid negative results around their circumstances and pursue their goals in a vigilance strategy. When they confront a difficult task, they have the propensity to give up on a tough task and to keep the current state in order to avoid the possibility of failure (Crowe & Higgins, 1997; Liberman, Idson, Camacho, & Higgins, 1999). This propensity leads them to avoid circumstances that threaten them and engage in a vigilant processing style. In particular, they stick to the information saved in their memory and show a conservative propensity in recognition tasks and inflexible processing styles (e.g., Friedman & Förster, 2001). These propensities lead to an item-specific processing style (Zhu & Meyers-Levy, 2007). On the other hand, promotion-focused consumers have a response bias based on hit rate and not on accuracy (Friedman & Förster, 2001; Zhu & Meyers-Levy, 2007). They do creative or difficult tasks similarly well under cognitive load (Roskes, De Dreu, & Nijstad, 2012). Furthermore, these individuals have a propensity to think for themselves to make good decisions when they rely on intuitive or emotional responses (Florack, Friese, & Scarabis, 2010). They do efficient and flexible processing styles with little effort and cognitive resource and do not differ in processing styles regardless of the importance of task, task characteristics, or the volume of cognitive resource (e.g., Roskes et al., 2012).

3. Hypotheses Development

Drawing upon the above-mentioned theoretical background, this research proposes that regulatory focus is expected to play a moderating role in determining the effects of presentation vividness toward the advertised information and their resultant choice. The specific hypotheses are constructed as follows.

First, it is predicted that prevention-focused consumers will choose the advertised product when a product is presented in a vivid way compared to a less vivid way. Prevention-focused consumers have a propensity to avoid committing errors and are not sensitive to omission errors that avoid missing positive results, which leads them to retrieve only concise information based on their memory (Crowe & Higgins, 1997; Friedman & Förster, 2001). Due to this propensity, they pursue a vigilant processing style and have difficulty thinking in varied and creative ways (Friedman & Förster, 2001). Thus, prevention-focused consumers will imagine based on the content of the advertisement and prefer certainty to uncertainty in choice. Since vivid advertisements include specific descriptions and clear images (MacInnis & Price, 1987), they would be regarded to contain more certain information than less vivid information to prevention-focused individuals. Prevention-focused individuals

can easily imagine how they will feel the consequences of their choice with the help of detailed, vivid descriptions. However, when advertised information is presented in a less vivid way, prevention-focused individuals cannot visualize it concretely by themselves, because a less vivid description does not offer sufficient information. On the other hand, prevention-focused individuals are sensitive to post regret and try to maintain their current position rather than moving toward a better position (Chernev, 2004). Hence, prevention-focused individuals think that their freely imagery has no grounds to guarantee the core characteristics of the advertised information and do not intentionally put effort to imagine a relationship which may not exist. This propensity results in less preference toward information being presented in a less vivid manner.

In contrast, it is predicted that promotion-focused consumers will show no difference in choice shares regardless of the vividness of presentation in advertised information. Promotion-focused consumers have the propensity to avoid errors of omission, which think of objects with an explorative processing style and can visualize various relationships among the objects (Crowe & Higgins, 1997; Friedman & Förster, 2001). These individuals think about objects in various and creative ways (Friedman & Förster, 2001). Since promotion-focused consumers are not afraid of committing errors in doing something, they can find out hidden images among suggested factors freely (Zhu & Meyers-Levy, 2007). Although advertised information is presented in a less vivid way, promotion-focused individuals can imagine stimuli in creative ways and visualize various relationships in the presenting information without clear images. Moreover, although promotion focused individuals do not have enough cognitive resource, they are more likely to solve creative tasks with a flexible thinking style than prevention-focused individuals (Roskes et al., 2012); would like to commit gains in spite of potential losses and try to pursue a better position rather than their current and stable position (Chernev, 2004). Thus, promotion focused individuals will generate specific and various images of products or services for consumption by themselves, regardless of how the information is presented in. Following the above logic establishes the hypotheses:

- <H1> Advertisement presentation vividness and individuals' regulatory focus will yield an interaction effect on the choice likelihood toward advertised information.
- <H1a> Prevention-focused individuals will choose the advertised information when advertised information is presented in a highly vivid manner compared to information presented in a lowly vivid manner.
- <H1b> Promotion focused individuals will show no differences in choice likelihood regardless of the vividness of advertised information.

<H2> The interaction effects of advertisement presentation vividness and the regulatory focus will be mediated by imagery.

4. Methodology

4.1. Experiment 1

4.1.1. Design and Participants

This study used a 2 (vividness of presentation: picture vs. word) x 2 (regulatory focus: prevention focus vs. promotion focus) between-subjects factorial design. A total of 76 undergraduate students in South Korea participated in the experiment (35 female (46.1%) and 39 male (51.3%), 2 unreported) to receive a participation gift. All participants were undergraduate students from Korea University in South Korea. The study took place in a computer lab at the university and the students received course credit in return for participating. Their ages ranged from 19 to 29 (Mage = 22.5, SD = 2.18, 3 unreported). They were randomly assigned to one of the two conditions because regulatory focus was measured and vividness of presentation way was manipulated.

4.1.2. Procedure

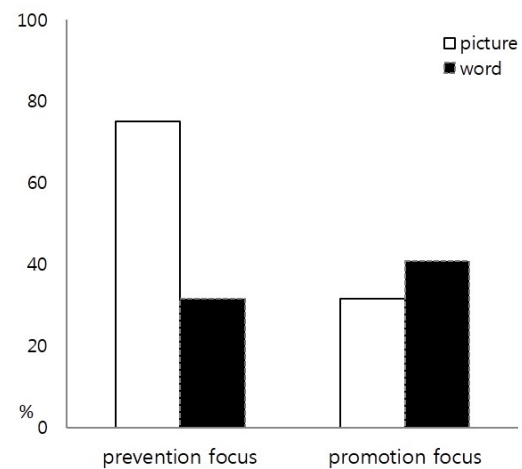
Experiment 1 was conducted based on a scenario related to the donation campaign. Participants were told to imagine that they have done charitable deeds for protecting bears that live at the North Pole. Vividness of campaign information presentation was manipulated in a method where information about a polar bear was presented. In the conditions of low vivid presentation, participants were asked to read a description of a mother polar bear sleeping with a baby polar bear (shown in Appendix). Participants in both conditions were asked to choose whether they would participate in the donation campaign and measure emotion toward advertised information (not pleased at all / bad feeling / not happy at all (1) – pleased / good feeling / happy (7); Cronbach's $\alpha = .92$) (Chaudhuri & Holbrook, 2001). Lastly, they assessed their regulatory focus indexes. Regulatory focus was measured as 10 items based on Haws, Dholakia, and Bearden (2010) and was split in the middle of mean of the measure and a binary variable was made as an independent variable (over 0: promotion focus, below 0: prevention focus).

4.1.3. Results

Charitable Behavior

A logistic regression analysis was conducted using vividness of advertising presentation, regulatory focus, and their interaction term as independent variables (word: -1, photo: +1, prevention focus: -1, promotion focus: +1).

Reported donation of participations was used as the dependent variable (0: no participation, 1: participation). According to the results, the main effects of both regulatory focus ($\beta = -.37$, Wald's $\chi^2(1) = 2.13$, $p > .10$) and vividness of advertising presentation ($\beta = .37$, Wald's $\chi^2(1) = 2.13$, $p > .10$) were not significant. As expected, the interaction effects were significant ($\beta = -.57$, Wald's $\chi^2(1) = 5.14$, $p < .05$). To explore the specific results, a z-test was conducted. According to the results, participants with a prevention-focus showed a higher likelihood to donate in the picture condition than in the typographical condition (Word = 31.6% vs. Picture = 75.0%; $z = -2.86$, $p < .005$, one-tail), whereas those with a promotion-focus showed no difference between the conditions (Word = 40.9% vs. Picture = 31.6%; $z = .62$, $p > .25$) (shown in <Figure 1>). Thus, <Hypothesis 1> was supported.



<Figure 1> The Likelihood of Donation (%) in Experiment 1

4.1.4. Discussions

Experiment 1 showed that donation behavior was affected by the interaction between individuals' regulatory focus and the presentation vividness of the advertised stimuli. However, it remains a possibility that vividness and emotion to the advertised information are associated with each other. The current research suggests that the effect of vividness is caused by consumers' motivational tendency, not emotion. Therefore, for ruling out the explanation that this study may be based on emotion, this research analyzed participants' emotions to the advertised stimuli. As the result, emotion to the advertised stimuli did not show any effects. The main effects ($F_s < 1$) and interaction effect ($F < 1$) both of regulatory focus and advertisement presentation vividness were not significant. Therefore it can be concluded that a combined effect of presentation way and regulatory focus is not related with emotion. However, it should be testable that these results were caused by perceived imagery. Hence, the following experiment was conducted to explore the

mechanism that induced the interaction between regulatory focus and advertisement presentation vividness. In addition, experiment 2 was conducted in a marketing context, which would offer more practical implications.

4.2. Experiment 2

4.2.1. Design and Participants

This study used a 2 (vividness of presentation: detailed description vs. less detailed description) x 2 (regulatory focus: prevention focus vs. promotion focus) between-subjects factorial design. A total of 94 undergraduate students in South Korea participated in the experiment (41 female (43.6%) and 52 male (55.3%), 1 unreported) to receive a participation gift. All participants were undergraduate students from Korea University in South Korea. The study took place in a computer lab at the university and in on-line websites. Students received course credit or a participation gift in return for participating. Their ages ranged from 18 to 28 ($M_{age} = 23.3$, $SD = 2.18$). They were randomly assigned to one of two conditions the same as Experiment 1.

4.2.2. Procedure

Experiment 2 was based on a scenario of a travel agency advertisement of a seascape and the vividness of presentation type was manipulated by the extent of detailed description within the type of word presentation. The overall procedure of Experiment 2 was identical to that of Experiment 1 with one exception. The manipulation of vividness of advertising presentation was accomplished through the level of detailed description in advertised information. High vividness conditions were described as more sensory and specific expressions about a seascape whereas low vividness conditions were described in less sensory and specific expression (shown in Appendix). The regulatory focus was measured based on Haw et al. (2010) similar to experiment 1. After reading the scenario, participants were told to choose whether they would travel to the seascape or not. Then, they were asked to rate the perceived imagery and indicate the extent of their agreement with respective items, each anchored with 1 (very unlikely) and 7 (very likely). Each of the items were followed by; "I can imagine the seascape easily", "I can enjoy a feeling of imagery when I read the description of the seascape" (Cronbach's $\alpha = .67$) (Petrova & Cialdini, 2005). Perceived vividness as a manipulation check was measured with 2 items as followed; These responses ranges from 1 (not vivid at all / not concrete at all) to 7 (very vivid / very concrete) (Cronbach's $\alpha = .80$) (Keller & Block, 1997). Emotion toward the advertised information was measured using the same items as Experiment 1 (Cronbach's $\alpha = .89$). Lastly, they assessed their regulatory focus index same as Experiment

1.

4.2.3. Results

Manipulation Check

To confirm manipulation of vividness, independent sample t-test was analyzed. As a result, participants in the detailed description conditions were perceived to be more vivid expressions of advertising compared to participants in less detailed description conditions ($M_{more\ detailed} = 4.73$, $SD = 1.04$ vs. $M_{less\ detailed} = 4.01$, $SD = 1.44$; $t(92) = 2.80$, $p < .01$). Therefore, the manipulation check of advertising presentation vividness was succeeded.

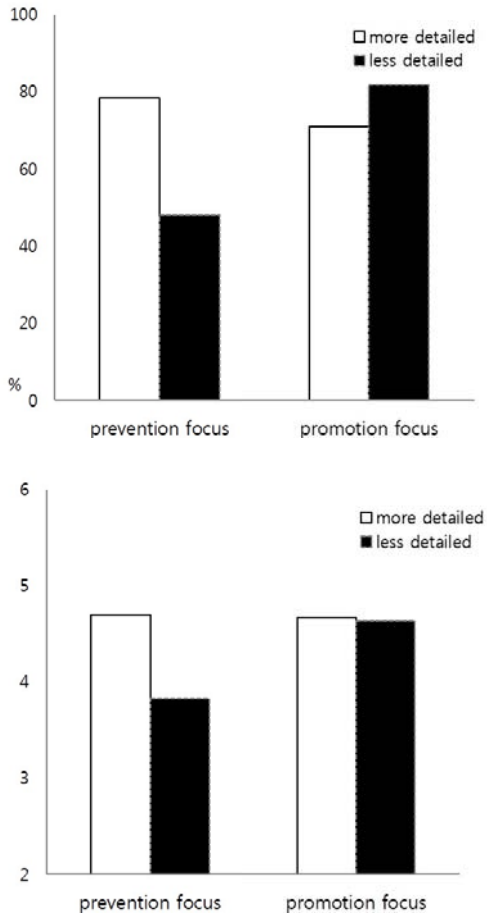
Likelihood of Travel

Logistic regression analysis was conducted as similar to experiment 1 (less detailed presentation: -1, more detailed presentation: +1, prevention focus: -1, promotion focus: +1) and reported the likelihood of travel used as a dependent variable (0: no choice, 1: choice). According to the results, the main effects of regulatory focus ($\beta = .30$, Wald's $\chi^2(1) = 1.54$, $p > .20$) and presentation type ($\beta = .19$, Wald's $\chi^2(1) = .60$, $p > .40$) were not significant. As expected, their interaction effect was significant ($\beta = -.49$, Wald's $\chi^2(1) = 4.24$, $p < .05$). According to the results of the z-test, participants in the prevention-focus condition showed a higher likelihood of travel in a more detailed presentation than those in the a less detailed presentation (Less detailed condition = 48.0% vs. More detailed condition = 78.3%; $z = 2.30$, $p = .01$, one-tail). Those participants in the promotion-focus showed no difference between conditions (Less detailed condition = 81.8% vs. More detailed condition = 70.8%; $z = -.89$, $p > .15$) (shown in <Figure 2>).

Imagery

Before conducting a mediating analysis, imagery was conducted with a full-factorial ANOVA model. The main effect of regulatory focus was not significant ($F(1, 90) = 2.26$, $p > .10$, $\eta^2 = .02$). The main effect of the presentation way of advertised products was marginally significant ($F(1, 90) = 3.33$, $p = .07$, $\eta^2 = .04$), in which participants in the detailed description condition showed a higher imagery compared to participants in less detailed description condition ($M_{more\ detailed} = 4.66$, $SD = 1.09$ vs. $M_{less\ detailed} = 4.17$, $SD = 1.39$). The interaction effects of the two independent variables were marginally significant ($F(1, 90) = 3.17$, $p = .08$, $\eta^2 = .03$). Since specific comparisons among the conditions are more important, a planned contrast was conducted. A planned contrast revealed that prevention-focused participants perceived higher imagery in more detailed description condition than those in the condition of a less detailed description ($F(1, 90) = 6.65$, p

= .01; $M_{\text{more detailed}} = 4.70$, $SD = .90$ vs. $M_{\text{less detailed}} = 3.78$, $SD = 1.37$). Promotion-focused participants showed no difference between the conditions ($F(1, 90) = .001$, $p > .95$; $M_{\text{more detailed}} = 4.61$, $SD = 1.31$ vs. $M_{\text{less detailed}} = 4.63$, $SD = 1.27$).

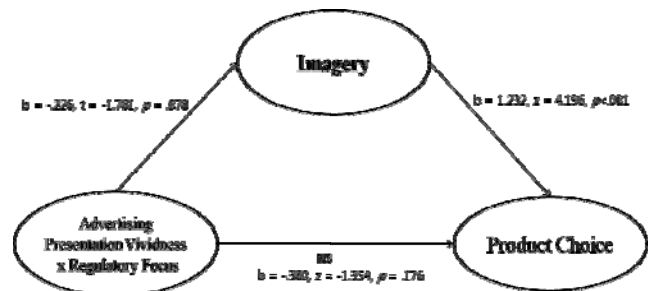


<Figure 2 & 3> Product Choice (%) and Imagery in Experiment 2

Mediating Role of Imagery

This research sought to test the mediating role of perceived imagery on preferences toward advertised travel scenes of a seascape. To examine whether the interaction of the extent of vividness of advertised product and regulatory focus are affected through perceived imagery, a bootstrapping analysis for a mediated moderation analysis was conducted following Preacher, Rucker, and Hayes (2007). According to the results used by model 8, the two-way interaction effect between presentation and regulatory focus on imagery was marginally significant ($b = -.23$, $t = -1.78$, $p < .10$) and the effect of imagery on choice shares toward advertised travel scenes was also significant ($b = 1.23$, $z = 4.20$, $p < .001$). At this time, the direct effect

of both independent variables was not significant ($b = -.38$, $z = -1.35$, $p > .15$) and the mediating role of imagery toward the vividness of the advertising presentation were significant with a 90% confidence interval (CI) (90%, $b = -.278$, CI $[-.631 \sim -.005]$). Thus, participants' imagery played a mediating role in the effect of advertisement presentation vividness and regulatory focus on the choice likelihood of travel. Thus, <hypothesis 2> was partially supported in the two-way interaction effect between advertisement presentation vividness and regulatory focus (shown in <Figure 4>). However, after selecting only prevention-focused participants, the author executed the bootstrapping method (model 4). According to the results used by model 4, the main effect of advertisement presentation vividness on imagery was significant ($b = .92$, $t = 2.71$, $p < .01$) and the effect of imagery on the choice likelihood toward advertised travel scenes was also significant ($b = 1.17$, $z = 2.93$, $p < .01$). The main effect of presentation vividness was not significant ($b = .61$, $z = .81$, $p > .40$) and the mediating role of imagery toward the choice likelihood of travel was significant with a 95% confidence interval (CI) (95%, $b = 1.07$, CI $[.165 \sim 2.798]$). Thus, following the hypotheses logic described in the hypotheses development section, it can be concluded that <hypothesis 2> is supported.



<Figure 4> Mediating Role of Imagery in Experiment 2

4.2.4. Discussions

Experiment 2 showed that travel preference was affected by individuals' regulatory focus and the presentation vividness of the advertised seascape. That is, <hypothesis 1> and <hypothesis 2> were supported. However, with regard to the mediating analysis results, some researchers may argue that this result could be attributed to emotions toward the advertised information, and not imagery. As a result of this critique, the author analyzed the participants' emotional response. According to the results, the main effect of regulatory focus was significant ($M_{\text{prevention focus}} = 4.34$, $SD = 1.20$ vs. $M_{\text{promotion focus}} = 5.12$, $SD = 1.02$; $F(1, 90) = 11.06$, $p < .01$, $\eta^2 = .11$), the main effect of presentation vividness ($F(1, 90) = 1.08$, $p > .30$, $\eta^2 = .01$) and the interaction effects were not significant ($F < 1$). Hence, Experiment 2 confirmed that this result is caused by imagery

toward the stimuli, not by emotion. Furthermore, this result showed perceived imagery and emotions toward the advertised stimuli were not the same. Again, it can be concluded that the manipulation of vividness of advertised information did not confound emotions and vividness of advertising information did not have any affect on their emotions in this study.

5. Discussion and Conclusions

This research explored how perceived imagery affects consumers' preference toward products depending on their own regulatory focus. According to the results of this research, prevention-focus participants showed a higher preference to products when they were represented with a higher vivid presentation compared to a lower vivid presentation (<hypothesis 1a>). In contrast, participants with a promotion-focus showed no difference in preferences regardless of conditions (<hypothesis 1b>). In addition, these effects were attributed to the perceived imagery of the advertised information, and not emotional responses (<hypothesis 2>). This research has extended on previous studies on the basis of imagery processing.

The current research has several implications. First, this research found how consumers' inherent motivation affects the extent of imagery in a purchase decision. Although existing studies have explored how processing style affects imagery, they tend to ask participants in an experiment to imagine the presented stimuli as their tasks (e.g., Petrova & Cialdini, 2005). However, this research explored naturally evoked imagery of consumers with a particular focus on processing style. In other words, this research looked at the differences in the dispositional imagination among consumers. Furthermore, in regulatory focus-relevant research, processing style has been explored in the context of consideration set formation, creative task, and brand extension (Friedman & Förster, 2001; Roskes et al., 2012; Yeo & Park, 2006; Zhu & Meyers-Levy, 2007). Going a step further, this research investigates the mechanism of imagery on the basis of processing style of regulatory focus.

Second, this research suggested an alternative finding to previous studies in regards to regulatory focus. According to Greifeneder and Keller (2012)'s study, prevention-focused individuals are not affected by emotional factors, whereas promotion-focused individuals are sensitive to their internal state of emotional factors. Following this study result, prevention focused consumers should show no differentiated response to the advertised information whereas promotion focused consumers should show the differentiated response to that in this study. However, this research proved the opposite results from Greifeneder and Keller (2012)'s study. According to this research, even if prevention focused people do not respond emotional factors, they can imagine

freely when they feel confident about their judgments. On the other hand, this research suggests that promotion focused consumers do not respond different responses due to their flexible processing style. From the standpoint of imagery, this study results in academic expansion by presenting contradictory results to earlier studies. Hence, this finding leaves the potential for expansion into areas of future research.

Third, this research has several practical implications. Based on the research findings, companies with prevention focused traits, such as health care or insurance should keep in mind the effects of advertisement vividness. For instance, products having more prevention-focused traits should avoid using abstract expressions and use more vivid expressions in their advertisements. That is, companies should use a colorful photo or a graphic copy of the advertisement when they promote their products. And when companies suggest products that tend to be a highly prevention focused, they should give time for consumers to imagine the future benefits of the product. When start-up companies release products, they should use a vivid product description because they have a high degree of uncertainty about product performance.

Limitations and Future Research

Based on this research finding, future work related to practical implications are needed. First, this study needs to explore more mechanisms and other independent variables. Although this study found perceived imagery to be a mechanism behind the effects of this research, there can be other mechanisms. For instance, prevention-focused individuals may feel certainty toward more detailed descriptions of advertised information since they are sensitive to certainty of content (Greifeneder & Keller, 2012). That is, feeling certainty toward advertised information may play an antecedent mediating role, in the case of prevention focused people. At the first stage, prevention focused consumers will judge the certainty of their product performance and at the next stage, they can imagine product performance based on feeling certainty or confidence. Hence it would be nice to clarify the relationship between feeling certainty and imagery in future research. On the other hand, a cognitive resource may influence the effects of this study. Prevention focused people may tend to use their cognitive resources when processing information, whereas promotion focused people use flexible processing styles less influenced by cognitive resources. Thus, considering cognitive resource as another independent variable, there can be a three way interaction effect among regulatory focus, the vividness of presentation appearance and cognitive resources.

Second, this study found that the vividness of information determined consumers' imagery. However, other factors can be considered as influencing variable. For instance, the fit


between product trait and consumers' regulatory focus can also influence imagery. According to the relevant study, regulatory fit provides consumers with confidence in the target judgment for information processing (Avnet & Higgins, 2006). If the results of the prior study is applied to the study, consumer's imagery is likely to increase under conditions where regulatory fit occurs. Or, the results of the advertising information vividness may occur under the regulatory nonfit because consumers will need more certainty

or confidence of information.

Third, it is valuable to pursue situations where less vivid advertisements are more attractive to consumers. In the real world, a movie which dramatizes an original novel sometimes do not appeal to audience more than the original novel would. That is, a word sometimes results in more vivid imagery than a picture. There can be moderating factors to this situations.

APPENDIX.

Stimuli of Experiment 1

High vividness condition (picture)	Low vividness condition (word)
 <p>Source: Andy Rouse's photo, Rex Features. http://blog.naver.com/pmsil/20086173854</p> <p><i>Please take part in our Donation Campaign, which protects living environment for North Pole bear!</i></p>	<p>"White snow fell last night and makes the world white. A white and brown speckled mother polar bear is sleeping peacefully in the hills like snow bedclothes. A baby bear with soft fur is lying down next to mother bear and sleeping. The baby bear resembles the mother bear and is looking peaceful and comforting the mother bear. All the trees surround and keep the mother and child bear well."</p> <p><i>Please take part in our Donation Campaign, which protects living environment for North Pole bear!</i></p>

Stimuli of Experiment 2 (Seascape description)

High vividness condition (more detailed description)	Low vividness condition (less detailed description)
<p>"While looking down, you see the blue sea, and feel like grabbing a fish and sea glass. A White wave is coming at you from far away. The White waves are being broken on the rock. A red light house is seen far away, A fishing boat vessel comes back after being in operation and coming close to you in peace."</p> <p>The sea in summer is like a painting</p>	<p>Blue Sea, White Wave, Rock, Light House, A fishing boat vessel</p> <p>The sea in summer is like a painting</p>

References

- Avnet, T., & Higgins, E. T. (2006). How regulatory fit affects value in consumer choices and opinions. *Journal of Marketing Research*, 43(1), 1-10.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Chernev, A. (2004). Goal orientation and consumer preference for the status quo. *Journal of Consumer Research*, 31(3), 557-565.
- Childers, T. L., & Houston, M. J. (1984). Conditions for a picture-superiority effect on consumer memory. *Journal of Consumer Research*, 11(2), 643-654.
- Childers, T. L., Houston, M. J., & Heckler, S. E. (1985). Measurement of individual differences in visual versus verbal information processing. *Journal of Consumer Research*, 12(2), 125-134.
- Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior and Human Decision Processes*, 69(2), 117-132.
- Fenigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology*, 43(4), 522-527.
- Florack, A., Friese, M., & Scarabis, M. (2010). Regulatory focus and reliance on implicit preferences in consumption contexts. *Journal of Consumer Psychology*, 20(2), 193-204.
- Friedman, R. S., & Förster, J. (2001). The effects of promotion and prevention cues on creativity. *Journal of Personality and Social Psychology*, 81(6), 1001-1013.
- Greifeneder, R., & Keller, J. (2012). Habitual self-regulatory orientation and ease-of-retrieval: Regulatory focus qualifies the impact of subjective experiences in judgment. *Motivation and Emotion*, 36(3), 338-348.
- Haws, K. L., Dholakia, U. M., & Bearden, W. O. (2010). An assessment of chronic regulatory focus measures. *Journal of Marketing Research*, 47(5), 967-982.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280-1300.
- Holmes, E. A., Mathews, A., Mackintosh, B., & Dalgleish, T. (2008). The causal effect of mental imagery on emotion assessed using picture-word cues. *Emotion*, 8(3), 395-409.
- Keller, P. A., & Block, L. G. (1997). Vividness effects: A resource-matching perspective. *Journal of Consumer Research*, 24(3), 295-304.
- Lee, Y. H., & Qiu, C. (2009). When uncertainty brings pleasure: The role of prospect imageability and mental imagery. *Journal of Consumer Research*, 36(4), 624-633.
- Liberman, N., Idson, L. C., Camacho, C. J., & Higgins, E. T. (1999). Promotion and prevention choices between stability and change. *Journal of Personality and Social Psychology*, 77(6), 1135-1145.
- Lutz, K. A., & Lutz, R. J. (1977). Effects of interactive imagery on learning: Application to advertising. *Journal of Applied Psychology*, 62(4), 493-498.
- Lynch, K. (1960). *The Image of the City*. Cambridge, MA: MIT Press.
- MacInnis, D. J., & Price, L. L. (1987). The role of imagery in information processing: Review and extensions. *Journal of Consumer Research*, 13(4), 473-491.
- Nisbett, R. E., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice Hall.
- Paivio, A., & Csapo, K. (1969). Concrete image and verbal memory codes. *Journal of Experimental Psychology*, 80(2p1), 279-85.
- Paivio, A., Yuille, J. C., & Madigan, S. A. (1968). Concreteness, imagery, and meaningfulness values for 925 nouns. *Journal of Experimental Psychology*, 76(1p2), 1.
- Petrova, P. K., & Cialdini, R. B. (2005). Fluency of consumption imagery and the backfire effects of imagery appeals. *Journal of Consumer Research*, 32(3), 442-452.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185-227.
- Roskes, M., De Dreu, C. K., & Nijstad, B. A. (2012). Necessity is the mother of invention: Avoidance motivation stimulates creativity through cognitive effort. *Journal of Personality and Social Psychology*, 103(2), 242-256.
- Seiler, B. D., Newman-Norlund, R. D., & Monsma, E. V. (2017). Inter-individual neural differences in movement imagery abilities. *Psychology of Sport and Exercise*, 30, 153-163.
- Unnava, H. R., & Burnkrant, R. E. (1991). An imagery-processing view of the role of pictures in print advertisements. *Journal of Marketing Research*, 28(2), 226-231.
- Yeo, J., & Park, J. (2006). Effects of parent-extension similarity and self regulatory focus on evaluations of brand extensions. *Journal of Consumer Psychology*, 16(3), 272-282.
- Zhu, R., & Meyers-Levy, J. (2007). Exploring the cognitive mechanism that underlies regulatory focus effects. *Journal of Consumer Research*, 34(1), 89-96.

