

The Influence of Art Infusion in Advertising on the Effectiveness of Advertisements

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Background/Objectives: This study aims to empirically investigate the influence of art infusion in advertisement on memory and judgment, from the consumer's information processing perspective. **Methods/Statistical analysis:** This study empirically analyzed the difference in recall and diagnosis related to memory according to the usage of famous painting and frequency of exposure. The results were verified through experimental studies, and two-way MANOVA analysis was conducted using factorial design between 3 artwork utilization methods and 2 artwork exposure frequencies. The experiment of this study was conducted through an online questionnaire. **Findings:** In the case of recall according to the artwork exposure frequency, the recall of advertisement with low-exposure artwork was higher than that of high-exposure artwork. Furthermore, the high-exposure artworks showed more positive results than the low-exposure artworks for the product diagnosticity and the advertisement attitude toward a product. For the advertisement diagnosticity, however, the low-exposure artworks showed more positive results than the high-exposure artworks. When the interaction effects were compared for the advertisement diagnosticity, the results of product diagnosticity of advertisement were completely opposite to the results of recall effect. The advertisement with simply-infused high-exposure artwork showed the most positive product diagnosticity. On the other hand, the advertisement with the reinterpreted low-exposure artwork showed relatively low product diagnosticity. This implies that an advertisement with high recall is not always helpful for assessment of a product. **Improvements/Applications:** The analysis of implicit results of this study shows that an advertisement with reinterpreted artwork has a high advertisement recall value.

Key words: *Art Infusion advertising, Recall, Diagnosticity, Simple infusion, Transformation infusion, Re-interpretation infusion.*

Introduction

Nowadays, income levels have increased, and work life balance is improving. Furthermore, as the number of people pursuing happiness and beauty in their lives has increased, so has the interest and consumption of culture and the arts. Reflecting this trend, art infusion is popular in marketing. Companies use art infusion marketing in a variety of forms, such as using famous artworks in advertisements, supporting artists, or operating art galleries. Through such marketing, companies try to ensure market competitiveness and improve their corporate or brand image. Meanwhile, owing to the popular use of art infusion, consumers can easily find artworks (formerly seen only at galleries) on umbrellas, cell phone cases, and even milk cartons. As such, marketing using famous artworks has become popular and consequently interest has been growing in how consumers perceive and judge the advertisements or products using artworks.

The effectiveness of art infusion may vary depending on the associated product's attributes, or the consumer's or artwork's characteristics. Therefore, there is a need to systematically develop a method of utilizing famous artworks and investigate how the effectiveness of advertisement changes according to the market exposure frequency of artwork. When a consumer concentrates on an advertisement, he/she can remember and recall the advertisement information easily and there is a high chance that this will lead to the consumer's purchasing behavior. Furthermore, because there is a time gap between the advertisement exposure and the purchasing behavior, the consumer makes a purchase decision based on the information in memory. Even for the consumers exposed to the same advertisement, the effectiveness of advertisement may vary depending on the product (involvement) and the respective consumer's characteristics (information processing level). Therefore, this should be taken into consideration when analyzing the effect of art infusion.

Accordingly, this study aims to empirically investigate the influence of art infusion in advertisement on memory and judgment, from the consumer's information processing perspective.

Theoretical Background and Research Questions

Art Infusion Marketing

It is not an overstatement to say that the 21st century is the era of culture, since "culture" has deeply penetrated our lives. Furthermore, the present society has entered the information age based on technological progress. The emotional capital of the consumer is the most important element for corporate profit generation, and the paradigm of corporate competitiveness has transitioned from the physical domain of the past to the cultural domain. In fact, world-renowned futurologists are stressing the importance of cultural

production.

Recently, companies have begun to think about how to satisfy “values” that consumers pursue through products or brands, and have started to show interest in cultural values rather than focusing on functional parts. Companies have begun to use art as a part of marketing in order to approach consumers more closely. It is easy to find art infusion that has combined art and marketing in various methods, such as advertisements using artworks, product design collaboration with a renowned designer, or an art gallery or music library managed by a company. In the background of using art infusion in marketing and stressing its importance, there are changes of economic standard and “value-pursuing” phenomenon of consumers.

Satisfaction of aesthetic desire is a reason for using artworks in advertising. Particularly, an artwork that evokes pleasure by affecting the vigilance state, i.e., attention, caution, or excitement state, at a personal level (Berlyne et al., 1981). Furthermore, art infusion in advertisement is a useful way of expressing consumers’ own self-concept (Belk, 1988). Consumers show a more favorable response towards a brand when the self-congruity is high, and it has been proven that this behavior affects their purchasing behaviors (Aaker, 1999). People sometimes hang famous paintings in their houses or visit art galleries even when they lack knowledge or interest in art. Kelly (1987) explains that this is because the consumers want to produce symbolic evidence of their pre-eminent social status through cultural life and consumption behavior (Kelly, 1987). Hagtvedt and Patrick (2008) have validated empirically that consumers prefer art infused products or advertisements to regular designs or advertisements. This result is a manifestation of the art infusion effect, i.e., the appearance of “luxurious” characteristics possessed by an artwork in a product or advertisement that infused the artwork (Hagtvedt and Patrick, 2008).

Recall and Diagnostics

Advertisement effect varies depending on how easily the consumers can recall the information from their memory of the advertisement they were exposed to (recall); and how helpful the information is in the judgment process of the product based on that information (diagnosticity) (Keller, 1987). Accessibility refers to how easily the information stored in memory can be recalled, and diagnosticity refers to whether the recalled information is sufficiently helpful when making a judgment (Greeta et al., 1995). According to Ahluwalia and Gurhan-Canli (2000), whether certain information is used in decision-making is determined by the accessibility of information in memory and the perceived diagnosticity of information. Here, the accessibility of information can be defined as a concept similar to that of the ease of recall. Furthermore, the accessibility of information in memory is called “recall” in this study (Rohini and Zeynep, 2000).

According to McQuarrie and Mick (1999), the recall effect of advertisement is relatively high when the advertisement's visual image is expressed metaphorically or expressed differently from that anticipated by consumers (McQuarre, 1999). The diagnosticity plays an important role of providing useful answers when a consumer tries to solve a certain task or to make a choice. In other words, diagnostic information should be helpful when consumers evaluate a product and differentiate it from other alternatives (Berger and Andrew, 1989). The factors determining the diagnosticity of information are not as clear as the factors that determine the accessibility (recall) of information. Nevertheless, it can be viewed that in an information retrieval circumstance, the involvement of the individual consumer and constraint of information processing time are factors determining the diagnosticity level of information (Dick et al., 1990).

Research Questions

Recently, advertisements using artworks have become common. Accordingly, this study attempts to test their effects, i.e., the judgment of consumers regarding an art infused product or advertisement. If a famous artwork is frequently exposed in the market due to popular use in art infusion, the "scarcity" and "luxurious" characteristics of that artwork will be diluted, and this may lead to negative advertisement effects. Suppose a famous artwork that people have already seen many times in the market is used. The art infused advertisement will feel fresher if the artwork is reinterpreted in a new way or transformed in accordance with the context of the advertisement, rather than simply infused in advertisement. In other words, the advertisement effect will vary depending on how many times the artwork has been exposed and how the artwork is utilized.

Furthermore, consumers exposed to art infused advertisement undergo a series of information processing procedures related to the original artwork, and it seems that the utilization type of artwork affects the recall with respect to the advertisement information. For example, a consumer who has accessed a newly reinterpreted advertisement will spend relatively more time retrieving the original information of the infused artwork from memory. In other words, it is highly probable that the consumers exposed to the art infused advertisement will pay attention to thoughts such as "the picture I saw in this ad is similar to an artwork I probably saw somewhere" or "how is this artwork related to the product?", thereby strengthening the motivation for information processing and increasing the recall of the advertisement. These characteristics may vary depending on the degree of product involvement.

Hence, this study aims to empirically analyze the differences appearing in the recall related

to memory and the diagnosticity of information in memory based on the artwork utilization method (simple infusion vs. transformation vs. reinterpretation) and the artwork exposure frequency (high vs. low exposure). The independent variables are classified in two dimensions: three types of artwork utilization methods (simple infusion, transformation, and reinterpretation) and two categories of artwork exposure frequency (high-exposure and low-exposure). In addition, recall and diagnosticity were set up as dependent variables.

Research question no. 1: What are the differences, in terms of recall, between the artwork utilization methods (simple infusion, transformation, and reinterpretation) of advertisement?

Research question no. 2: What are the differences, in terms of diagnosticity, among the artwork utilization methods (simple infusion, transformation, and reinterpretation) of advertisement?

Research Method

Experimental Design

This study empirically analyzed the difference in recall and diagnosis related to memory according to the usage of famous painting and frequency of exposure. The results were verified through experimental studies, and two-way MANOVA analysis was conducted using factorial design between 3 artwork utilization methods and 2 artwork exposure frequencies.

Experimental Procedure

The experiment of this study was conducted through an online questionnaire. Experimental products were selected as fictitious coffee. Subjects were randomly assigned to three conditions, namely, the use of an artwork utilization method and artwork exposure frequency, according to the coffee products. The selected subjects were sent a mobile URL containing the experiment and questionnaire to participate in the experiment. Subjects were provided a brief explanations and precautions about the experiment by accessing the site for the online experiment and consented to the participation of the experiment. Only the subjects who agreed to the experiment were tested. First, they were encouraged to see advertisements using the famous paintings according to the exposure frequency of the famous paintings. Experimental irritants were exposed for about two minutes to fully view, evaluate and remember the advertisement. The experiment was then terminated after responding to questions related to mastery familiarity, memory information, and diagnostics.

Measurement of Variables

Recall is information that an individual sees a famous advertisement and stores product and advertisement-related information in his memory to retrieve it through cognitive elaboration. Therefore, this study encouraged users to fill out the information they remember in product advertising. The recall of the product led me to watch the commercials of the camera or coffee product, and then fill in everything I remember about the individual characteristics of the product. Recalls about advertisements encouraged me to freely enter what I thought or felt about advertisements after seeing the famous advertisements (Open-ended format). In this study, the recall information of memorized information about products and advertisements is combined into one recall information segment. The final coding was used for analysis by open-coding by adding the recall number of the memorized contents of the product and the advertisement.

Diagnosticity is a measure of how much the recalled memory information about products and advertisements helped the consumer to understand and evaluate the product and how helpful it was to make a purchase decision. Responsive questions about product and advertising were answered on a seven-point scale for product diagnostics and advertising diagnostics.

Results

227 subjects participated in the experiment; 66 for simple infusion of artwork utilization methods and 75 for transformation. 86 were assigned to reinterpretation and 116 were assigned to high-exposure art infusion in terms of artwork exposure frequency and 111 to high-exposure art infusion.

First, reliability analysis was performed. The internal consistency (Cronbach α) for two items of 'product diagnosticity' was 0.92, and the internal consistency (Cronbach α) for two items of 'ad diagnosticity' was also very high (0.91). The internal consistency (Cronbach α) of five items of advertisement attitude was also high as 0.93. Therefore, since the internal consistency of all items was high without any low reliability items, the average value was used for analysis according to each of these variables.

MANOVA analysis was carried out using Myeonghwa car utilization and exposure frequency as independent variables and recall, product diagnosis, advertisement diagnosis, and advertisement attitude as dependent variables. Before analyzing this, the descriptive statistics of each dependent variable are summarized in Table 1.

Table 1: Descriptive Statistics

Dependent Variable	Artwork utilization method	Artwork exposure Frequency	Mean	Std.Deviation	N
Recall	Simple infusion	High exposure	2.14	1.56	35
		Low exposure	2.87	1.73	31
	Transformation infusion	High exposure	2.43	1.77	40
		Low exposure	3.06	1.83	35
	Reinterpretation infusion	High exposure	2.63	1.81	41
		Low exposure	5.69	1.47	45
Product diagnosticity	Simple infusion	High exposure	5.04	0.89	35
		Low exposure	3.74	1.39	31
	Transformation infusion	High exposure	3.39	1.45	40
		Low exposure	3.67	1.34	35
	Reinterpretation infusion	High exposure	3.76	1.49	41
		Low exposure	2.99	1.42	45
Advertising diagnosticity	Simple infusion	High exposure	3.80	0.93	35
		Low exposure	5.42	0.76	31
	Transformation infusion	High exposure	3.29	1.34	40
		Low exposure	3.51	1.24	35
	Reinterpretation infusion	High exposure	3.66	1.55	41
		Low exposure	3.00	1.27	45

Multivariate Tests through MANOVA analysis in Table 2 were used to examine the statistical significance. First, the main effect on the first independent variable, artwork utilization method (simple infusion vs. transformation vs. reinterpretation), was statistically different with Wilks' Lambda value of .65 ($F = 12.79$, $df = 8$, $p < .01$). The second independent variable, artwork exposure frequency (high vs. low exposure). The main effect on the Wilks' Lambda was .63 ($F = 31.73$, $df = 4$, $p < .01$). Finally, the interaction effect on these two independent variables also showed a significant difference in Wilks' Lambda value of .55 ($F = 18.65$, $df = 8$, $p < .01$).

Table 2: Research of ANOVA

Main Effect	MANOVA		df	recall	ANOVA	
	Wilks' Lambda	F			Product diagnosticity	Advertising diagnosticity
A: Artwork utilization method	.65	12.79*	8	22.04**	11.66	23.99
B: Artwork exposure Frequency	.63	31.73*	4	42.16**	10.77**	5.77
AxB	.55	18.65*	8	13.12	6.32*	15.97

Note : *p<.05, **p<.01

The difference between independent and dependent variables through post hoc ANOVA analysis is as follows. As shown in Table 2, the main effects of recall, product diagnosis, advertisement diagnosis, and advertisement attitude according to the first independent variable artwork utilization were statistically significant. The second independent variable, artwork exposure frequency, was also statistically significant in recall, product diagnosis, advertisement diagnosis, and advertisement attitude. Finally, the interaction effect on these two independent variables showed significant differences in all dependent variables, recall, product diagnostics, advertising diagnostics, and advertising attitude. Through these results, we verified the research questions about coffee product advertisement.

First, the main effects of the artwork utilization method of Research Question 1 are as follows. Post hoc ANOVA analysis of the main effects of the artwork utilization method (simple infusion vs. transformation vs. reinterpretation) shows that the dependent variables recall ($F = 22.04$, $p < .01$) and product diagnosticity (Pre: $F = 11.66$, $p < .01$), Advertising diagnosticity (Are: $F = 23.99$, $p < .01$) showed statistically significant difference.

Recall had the highest recall of reinterpretation ($M = 4.23$, $SD = 2.24$), followed by transformation ($M = 2.72$, $SD = 1.81$) and simple infusion ($M = 2.48$, $SD = 1.66$). Scheffe verification also showed that the reinterpretation of the coffee product art infusion recalled the most, and that transformation and simple infusion performed relatively low recall (recall: reinterpretation > simple infusion = transformation).

For product diagnosticity, simple infusion ($M = 4.44$, $SD = 1.31$) was the most positive. The diagnostics of transformation ($M = 3.52$, $SD = 1.39$) and reinterpretation ($M = 3.35$, $SD = 1.99$) were relatively low. Simple infusion was the most positive in the art infusion product diagnosticity of the coffee products (Scheffe verification).

For advertising diagnosticity, simple infusion ($M = 4.56$, $SD = 1.17$) was the most positive. The diagnosticity of transformation ($M = 3.39$, $SD = 1.29$) and reinterpretation ($M = 3.31$, $SD = 1.43$) was relatively low. In the results of Scheffe's test, simple infusion was the most positive in art infusion Advertising diagnosticity of coffee products.

In conclusion, the main effect of the artwork utilization method on the coffee product was that the reinterpretation recalled the most information. However, the product diagnosticity and advertising diagnosticity were the most effective in determining and evaluating the purchase of a product or advertisement because of the positive diagnosticity of simple infusion, but the diagnosticity of transformation and reinterpretation was the lowest. Attitude toward advertisement also showed that art infusion advertising using simple infusion forms a positive attitude.

Next, the main effects of the Myeonghwa exposure frequency of Research Question 2 are as follows. As a result, the post hoc ANOVA analysis on the main effect of the artwork exposure frequency (high vs. low exposure) showed that the dependent variables recall ($F = 42.16$, $p < .01$) and Product diagnosticity (Pre: $F = 10.77$, $p < .01$) and Advertising diagnosticity (Are: $F = 5.77$, $p < .05$) showed statistically significant differences.

Specifically, recall showed that low-exposure art infusion ($M = 4.07$, $SD = 2.12$) was more recalled than high-exposure art infusion ($M = 2.41$, $SD = 1.71$).

Product diagnosticity showed that high exposure low exposure ($M = 4.01$, $SD = 1.48$) positively assessed product diagnosticity over low exposure art infusion ($M = 2.98$, $SD = 1.42$).

As for the advertising diagnosticity, the low exposed art infusion ($M = 3.83$, $SD = 1.51$) showed more positive evaluation of the advertising diagnosticity than the high exposed art infusion ($M = 3.57$, $SD = 1.31$).

In conclusion, the main effect of the artwork exposure frequency (high vs. low exposure) on coffee products was that the low exposure art infusion was remembered more than the high exposure art infusion in the case of recall, which has a positive effect on advertising diagnosticity. However, product diagnosticity was positively evaluated and judged by high exposure art infusion advertising compared to low exposure art infusion advertising.

Conclusion

The recall of reinterpreted advertisement was the highest among the recalls of different methods of artwork utilization. Furthermore, in the results of product and advertisement diagnosticity, according to the artwork utilization methods, the simple transformed advertisement showed the most positive effect.

In the case of recall according to the artwork exposure frequency, the recall of advertisement with low-exposure artwork was higher than that of high-exposure artwork. Furthermore, the high-exposure artworks showed more positive results than the low-exposure artworks for the product diagnosticity and the advertisement attitude toward a product. For the advertisement diagnosticity, however, the low-exposure artworks showed more positive results than the high-exposure artworks.

In the comparison results of interaction effects for the recall of advertisement, the reinterpreted low-exposure artwork infused advertisement showed the highest recall. Because the advertisement with reinterpreted artwork required more time and effort for retrieving the information from memory compared to the other types, the recall was high. In other words, the high recall was because the consumers processed the information deeply to identify the original artwork used and to interpret the advertisement.

When the interaction effects were compared for the product diagnosticity, the results of product diagnosticity were completely opposite to the results of recall effect. The advertisement with simply-infused high-exposure artwork showed the most positive product diagnosticity. On the other hand, the advertisement with reinterpreted low-exposure artwork showed a relatively negative product diagnosticity. This implies that an advertisement with high recall is not always helpful for assessment of a product.

The results of this study clearly demonstrate that the art infusion methods and the artwork exposure frequency have an impact on the effectiveness of advertisement, and the effectiveness may vary depending on the product involvement. The analysis of implicit results of this study shows that an advertisement with reinterpreted artwork has a high advertisement recall value.

The consumers exposed to an advertisement with reinterpreted artwork spend a lot of time and effort trying to understand the context of art infused advertisement. In other words, an elaborate process occurs, and the recall effect increases, because the advertisement that reinterpreted an artwork is implicitly expressed in the visual aspect, as compared to the advertisement that simply infused an image of artwork. In general, the information



processing takes place in a broader range for an image that consumers could not think of, as compared to an ordinary image. Advertisements that use reinterpreted artworks by adding new unconventional elements are more effective for attracting the attention of consumers than regular art infused advertisements that simply use artwork images.

Furthermore, the effect of intensifying the attention is helpful in the information processing procedure of consumers, and ultimately, high recall is shown. Furthermore, it should be recognized that easily recallable information in memory is not always assessed diagnostically. Although the advertisement with reinterpreted high-exposure artwork showed the highest recall, it showed the lowest product/advertisement diagnosticity; rather, the advertisement with simply-infused artwork showed the highest product/advertisement diagnosticity. Consequently, a good recall result does not necessarily coincide with a high diagnosticity result. Therefore, factors like product involvement should be considered in the relationship of recall and diagnosticity.



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