

The Impact of Metaphorical Visual Images on Advertising Effectiveness - A Case Study of Sensitivity Toothpaste

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Abstract

Visual metaphors are a common technique used in advertising design to present visual imagery. In addition to designing the ad copy, creative teams also carefully consider the metaphors used in the visuals, hoping to enhance the effectiveness of the advertising message and improve consumer affinity and purchase intent for the product. However, different consumer markets have different target audiences. Accordingly, the transmission of visual and textual messages varies based on market segmentation. Due to differences in life experiences and cultural backgrounds, consumers may interpret these messages differently, leading to misunderstandings in communication. As a result, not all high brand awareness advertisements using visual metaphors are equally memorable. The findings indicate that: (1). A brand's high level of recognition does not necessarily lead to better advertising effectiveness. (2). Regardless of a brand's level of recognition, advertisements using visual metaphors tend to be more effective than those using direct statements.

Keywords: Visual Image, Metaphor, Advertising Effectiveness.

1. INTRODUCTION

Advertising must accomplish two tasks: to attract attention and to convey meaning. To generate a better persuasive effect, advertising agency creatives deliver messages to consumers through advertisements, influencing consumer actions. The combination of headlines and images in advertisements, whether concise and understandable, is a critical factor in determining whether an advertisement is appealing. Some overly abstract image combinations or overly complicated advertising concepts are not easily understood by the public, leading to a lack of feedback and response. By incorporating visual information such as images, videos, and colors, advertisements enhance the message delivery effect to increase consumer perception value and purchase intent. Hetsroni (2000) points out that by creating different advertising appeals, advertisers can capture consumer attention to the advertising message, allowing consumers to understand the content of the advertisement. Visualizing the promise of a product to consumers is primarily aimed at conveying and presenting the content it carries. The meaningfulness of the image is crucial because the degree of interpretation of the image's meaning by viewers and the gap between creatives determine the strength of the advertisement's effectiveness.

Metaphor is a common technique in visual graphic communication in advertising design. What is the allure of metaphorical advertising? The visual metaphor uses clever deviations in rhetorical angles to express people's expectations, juxtaposing the "subject" of product characteristics with the "vehicle" of images, text, or situations, creating a metaphorical process that attracts the attention of audiences. The resulting inconsistency is one of the factors that attract attention (McQuarrie & Mick, 1996). However, different consumer markets have different target audiences, so different images and textual messages are conveyed for market segmentation. The interpretation does not vary due to differences in consumer experiences and cultural backgrounds, and advertising plays a crucial role. Some advertisements lack clear similarities at the metaphorical level, leaving room for interpretation. McQuarrie and Mick (1999) believe that using

metaphor as a form of advertising has many advantages. Metaphors can capture consumers' attention, stimulate deep thinking, and create interest. In order to achieve better persuasive effects in product advertising, creative personnel of advertising agencies focus not only on designing headline copy but also on emphasizing metaphorical imagery in expressing advertising designs. They aim to enhance the effectiveness of the message in advertisements to increase consumers' preference and purchase intention towards the product. Therefore, when viewers invest more attention in processing advertisements, they inadvertently engage in deeper reflection on the advertisement description, experience interest after comprehension, and form a positive impression.

Studies like the one mentioned above have found that the use of metaphorical techniques in advertising can have a positive effect on advertising persuasiveness. However, different consumer markets have different target audiences, so the transmission of visual and textual messages varies based on market segmentation, and does not result in different interpretations due to differences in consumers' life experiences and cultural backgrounds. Advertisements play an important role in this process. Some advertisements do not have very clear similarities at the "metaphorical" level, so there is a lot of room for interpretation. However, based on research by relevant scholars, the mechanism of metaphor involves pairing two entities, and through the reasoning and thinking about the relationship of similarity, they project their relationship and context to generate new combinations and understandings, acting as a bridge between what is known and what is hoped for (Warren, 2000). Therefore, this study approaches the topic from the perspective of whether there are metaphorical advertisements or not, exploring the impact of the commonly used metaphorical advertising techniques in print media on advertising effectiveness. The research results show that the relationship between high brand awareness and high advertising effectiveness is not significant. This conclusion suggests that for advertising designers, further evaluating the description of image symbols in advertising and conducting deeper thinking, while emphasizing the transmission of image symbol information to consumers and their affinity for the brand, is important.

2. KEY THEORETICAL CONCEPTS AND HYPOTHESES DEVELOPMENT

2.1 Metaphor and Advertising Techniques

Forceville (1996) believes that the difference between metaphors in advertisements and in language or other arts, such as painting, lies in the fact that advertisements serve a specific purpose. Ortony (1993) argues that a metaphor interprets or elucidates the characteristics of a subject through the concept of a vehicle, where the subject and vehicle belong to different conceptual domains. The "subject" refers to the objects in the target space, while the "vehicle" is the objects in the source space. The metaphorical meaning arises through comparison between these two distinct concepts. The form of expression in advertising can generally be divided into language, including headlines and copy, and non-language, focusing on visual images. In the field of advertising research, there is often an emphasis on rhetoric. By interpreting the use of rhetoric in visual images from a textual rhetoric perspective (Tom & Eves, 1999), the emphasis on the use of rhetorical techniques in advertising message design leads to higher advertising effectiveness. Studies on metaphorical advertisements focus on exploring the effects of metaphorical advertising (Morgan & Reichert, 1999; Ottati, Rhoads & Graesser, 1999; Roehm & Sternthal, 2001) examining the current usage of metaphorical advertisements (Leigh, 1994; Phillips & McQuarrie, 2002), and classifying metaphorical advertisements (Forceville, 1996).

The essence of metaphorical advertisements involves two parts: metaphorical content and creative techniques. Regarding metaphorical content, Gentner and Markman (1997) proposed three types: surface similarity, literal similarity, and relational similarity. When it comes to the form of metaphorical print advertisements, most studies primarily use the classification method established by Forceville (1996). Scholars note that the unique aspect of metaphors in advertisements lies in their specific purpose. Metaphors have a character of subverting tradition and breaking conventional thinking, guiding meanings from one level to another by disrupting certain semantic constraints, thereby establishing a relationship between them.

In Forceville's (1996) categorization study of metaphorical advertising forms, advertisements are divided into two main blocks. The first block categorizes advertisements based on the form of metaphorical presentation of images and texts, dividing them into three categories: image metaphor, image-text metaphor, and text metaphor. The second block focuses on the area of the primary creative expression in advertisements. Using the performance form of image metaphor, it is classified into replacement, fusion, and juxtaposition. This article primarily focuses on the creative expression techniques of metaphorical advertising types.

2.2 Measuring Advertising Effectiveness

Advertising effectiveness can be divided into two types: communication effectiveness and sales effectiveness (Kotler, 1999). Communication effectiveness refers to the extent to which the advertising message is accepted by consumers and leads to changes in their attitudes and behaviors. Sales effectiveness is measured based on the actual increase in sales of the advertised product after the advertisement. Advertising is not the only factor that affects sales effectiveness, so most social science research focuses on communication effectiveness (Prasad, 1976; Dianoux & Herrmann, 2001). Broadly speaking, there are two indicators to evaluate whether an advertisement achieves communication effectiveness: (1). whether the target consumers like the advertisement, and (2). whether consumers believe the message conveyed in the advertisement. However, advertising effectiveness should be evaluated from multiple perspectives. The further evaluation of advertising communication effectiveness can be based on three indicators: "attitude towards the advertisement", "attitude towards the brand", and "purchase intention". Most print advertisements are composed of three basic elements: visual, language, and brand name. Consumers' attitude towards the advertisement will directly affect their attitude towards the brand, and their brand attitude will directly affect their purchase intention.

The main purpose of this study is:

- 1) To explore the relationship between visual imagery, brand awareness, and their impact on advertising attitude, brand attitude, and purchase intention.
- 2) To examine the impact of different metaphorical techniques used in product imagery and brand awareness on advertising effectiveness.

The study will focus on everyday consumer products and investigate whether there are differences in advertising effectiveness for the ideal brand when metaphorical techniques are used or not.

We proposed two hypothesis (H) for the present study.

H1: Brands with high brand awareness have better advertising effectiveness than those with low brand awareness.

H2: Advertising for well-known brands with metaphorical techniques is more effective in advertising attitude, brand attitude, and purchase intention compared to advertising for well-known brands without metaphorical techniques.

3. DATA & METHOD

The main purpose of this study is to explore the impact of different metaphorical advertising techniques and non-metaphorical advertising, as well as high/low brandawareness products, on advertising attitude, brand attitude, and purchase intention. The research methods used include establishing a complete research model and verifying this framework, as well as using statistical analysis methods to test hypotheses and analyze the data collected from the formal experiment. The purpose of this stage is to determine the product category to be used in the subsequent experiments. Since the target participants for the formal experiment are university students, a product that is familiar to them and commonly used in daily life, without gender differences, is selected. The study chose toothpaste as the product category. Specifically, the study selected the top 10 popular sensitive toothpaste brands in Taiwan in 2023. The well-known local brand "Sensodyne" was chosen as the high-awareness brand, and the less familiar

imported brand " Korean 2080 BASIC Anti-Sensitivity Toothpaste " was chosen as the low-awareness brand, to serve as the experimental samples. Therefore, the choice of brands before and after represents high and low-awareness products.

3.1 Participants

The study used a sample of design students from a university in Taiwan as the target group. The main purpose was that these students, who have received professional design training, would be more sensitive to visual images compared to the general public. They would be able to express their complete thoughts and opinions based on the questionnaire scale, which would help with in-depth analysis for this research. A total of 120 participants (53 women and 67 men) aged between 19 -23 took part in this study.

3.2 Materials and Procedure

In terms of the types of experimental stimuli, this study utilized print advertisements as the manipulation method. Compared to television advertisements with constraints in production techniques and costs, the characteristics of print ads enable a more thorough presentation of the visual structure of graphics and text (Pechmann & David, 1990).The sampling method used purposive samples, and the four sets of questionnaires were randomly distributed to each participant. The testing duration lasted 10-15 minutes. There were 30 participants in each scenario, totaling 120 participants in the experiment.

3.3 Experimental Design

In this research, the questionnaire design was based on modifying scales previously designed by scholars (Zhang & Zinkhan, 2006; Mackenzie, Lutz & Belch, 1986). There were a total of 15 items using a 7-point Likert scale (1=strongly disagree, 7=strongly agree) for questionnaire preparation. The experiment in the study included two scenarios, each with two advertisements. The design of the image samples featured a mouth shape distorted by toothache, with the toothpaste product placed below. The study employed a 2 (high/low brand awareness) x 2 (direct/metaphorical technique) factorial design (TABLE 1). The original advertisement content for the toothpaste brand "Sensodyne " was modified by removing unnecessary text, presenting only the "brand headline" and "advertisement metaphor" to enhance the reliability and validity of the entire experiment.

| Brand Awareness | Advertising Technique | |
|-----------------|-----------------------|--------------|
| | Direct | Metaphorical |
| High | Sensodyne | Sensodyne |
| Low | 2080 BASIC | 2080 BASIC |

TABLE 1: The Allocation of Visuals and Text for Advertising Metaphorical Techniques and Brand Awareness.

The first set is high brand awareness/direct advertising technique, the second set is high brand awareness/metaphorical advertising technique, the third set is low brand awareness/direct advertising technique, and the fourth set is low brand awareness/metaphorical advertising technique. For the contents of the advertisements, see FIGURE 1.



High brand awareness/direct advertising technique High brand awareness/metaphorical advertising technique.



Low brand awareness/direct advertising technique Low brand awareness/metaphorical advertising technique.

FIGURE 1: Examples of sensitivity toothpaste ads used in experiment.

3.4 Analysis on Reliability

After collecting the questionnaires, they were coded, and data analysis was conducted using by SPSS 19. The results are: advertisement attitude $\alpha=.910$, brand attitude $\alpha=.911$, and purchase intention $\alpha=.906$. Cronbach's α values of the three aspects are all more than 0.70, proving that the data conducted by this research has high reliability.

4. ANALYSIS AND FINDINGS

4.1 Sample Means and Standard Deviations

The participants in this study were divided into four groups based on brand familiarity (high/low) and advertising approach (direct/metaphorical) to examine their impact on advertising effectiveness, including advertising attitude, brand attitude, and purchase intention. After conducting relevant descriptive statistics using statistical software, the results of the mean and standard deviation of each variable concerning the dependent variables are presented in Table 2. The test results showed slight differences in advertising effectiveness in terms of "advertising attitude," "brand attitude," and "purchase intention" between high and low brand awareness. Contrary to expectations, high-awareness brand did not have a significant advantage due to their high familiarity; instead, there were differences in the average values. However, in terms of "brand attitude," high and low brand awareness showed converging trends, suggesting that participants did not consistently show favoritism based on the brands' awareness (Figure 2).

| Brand Awareness | Advertising Technique | Advertisement Attitude | | Brand Attitude | | Purchase Intention | | Advertising Effect | |
|-----------------|-----------------------|------------------------|-------|----------------|-------|--------------------|-------|--------------------|-------|
| | | M | SD | M | SD | M | SD | M | SD |
| High | Direct | 4.019 | 0.901 | 4.073 | 0.863 | 3.688 | 1.422 | 3.971 | 0.864 |
| | Metaphorical | 4.758 | 0.684 | 4.819 | 0.712 | 4.134 | 0.950 | 4.653 | 0.686 |
| | Total | 4.388 | 0.876 | 4.446 | 0.870 | 3.911 | 1.219 | 4.312 | 0.847 |
| Low | Direct | 3.966 | 0.678 | 4.260 | 0.695 | 3.944 | 1.017 | 4.060 | 0.692 |
| | Metaphorical | 4.985 | 0.791 | 4.866 | 0.948 | 4.244 | 1.606 | 4.797 | 0.922 |
| | Total | 4.476 | 0.893 | 4.563 | 0.879 | 4.094 | 1.341 | 4.428 | 0.890 |

TABLE 2: Means and Standard Deviations of Brand Awareness and Advertising Technique on Advertising Effectiveness.

4.2 The Impact of Brand Awareness and Advertising Technique on Advertising Effectiveness

In order to understand the influence of brand awareness on advertising technique, this study used ANOVA testing to test hypothesis one (H1): "Higher brand awareness leads to better advertising effectiveness than lower brand awareness." The test results showed that the F value of "brand awareness" was 0.641, $df=1$ ($p=.425$), indicating that this construct did not reach statistical significance ($p > .1$). Therefore, (H1) was not supported by the result.

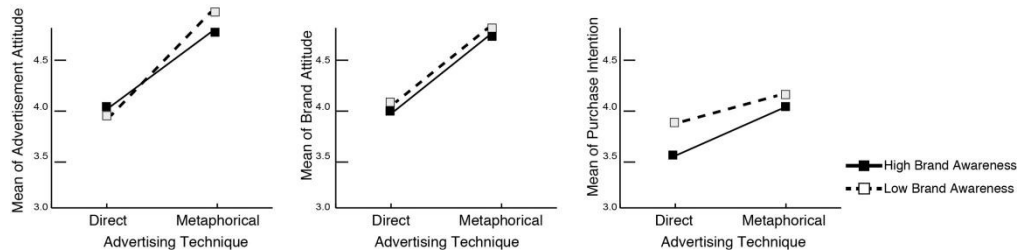


FIGURE 2: Influence of Variables to Advertisement Attitude, Brand Attitude, and Purchase Intention.

Testing the second hypothesis of this study (H2): "Well-known brands with metaphorical advertising techniques have better advertising effectiveness in terms of advertising attitude, brand attitude, and purchase intention compared to well-known brands without metaphorical advertising techniques." The test results showed that the F value for "advertising technique" was 23.727, $df=1$ ($p=.000$), indicating that this construct reached statistical significance ($p < .1$). Hypothesis two of this study was supported. As shown in FIGURE 2, well-known brands with metaphorical advertising techniques demonstrated significant differences in "advertising attitude" compared to those without metaphorical advertising techniques. Similarly, in "brand attitude," well-known brands with metaphorical advertising techniques also showed notable differences compared to those without. The "advertising effect" generated under the "metaphorical advertising technique" revealed a gradual decline in "purchase intention" for "low brand awareness," approaching stabilization ($M_{high\ brand/metaphorical}=4.134$, $M_{low\ brand/metaphorical}=4.244$). However, regardless of high or low brand awareness, both direct and metaphorical advertising techniques displayed significant differences in their means ($M_{high\ brand/direct}=3.971$, $M_{high\ brand/metaphorical}=4.653$), ($M_{low\ brand/direct}=4.060$, $M_{low\ brand/metaphorical}=4.797$) (FIGURE 3). (H2) of this study was confirmed.

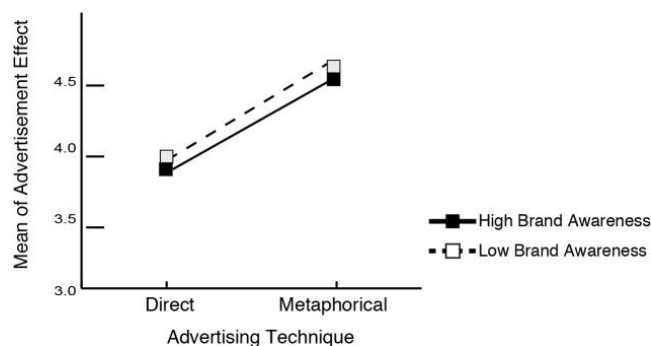


FIGURE 3: The interactive impact of brand awareness on advertising technique.

5. DISCUSSION

The experimental sample in this study involves anti-allergy toothpaste, a product that consumers consider purchasing when the need arises. Although the "Sensodyne" brand of anti-allergy toothpaste is more well-known than the "Korean 2080 BASIC Anti-Allergy Toothpaste," consumers do not show significant differences in behavior between high and low brand

awareness products. Surprisingly, the overall advertising effectiveness of the lower brand awareness product surpasses that of the higher brand awareness product. The study hypothesizes that the participants, mostly university students aged between 19 - 23, have a relatively low level of brand perception for the high-profile anti-allergy toothpaste. When consumers are uncertain about the quality of a product or service, their hesitance towards making a purchase increases. This information asymmetry creates uncertainty in consumers' minds, ultimately affecting their willingness to buy or their actual purchasing behavior (Sheeraz et al., 2016). Further research is needed to clarify these results. However, based on the empirical findings of this study, it is evident that consumers exhibit significantly better advertising effects with metaphorical advertising techniques than with explicit advertising techniques, irrespective of the product's level of brand awareness.

5.1 Conclusion

The primary objective of this study is to investigate the impact of metaphorical advertising techniques on the advertising effectiveness of anti-allergy toothpaste. With the refinement of the population, anti-allergy toothpaste has become a commonly used product in daily life. Due to the characteristics of anti-allergy toothpaste, consumers easily project emotions onto the content of the product through personal experiences and advertising, leading to a noticeable enhancement in advertising effectiveness. By incorporating metaphorical advertising techniques in advertising, it is easier to reflect consumers' self-experiences, thereby achieving successful product sales. This research discovered that the advertising for anti-allergy toothpaste goes beyond visual representation and is based on marketing strategies that focus on addressing the genuine needs of consumers for such products, especially in the creation of visual advertisements. When there is a genuine demand, it attracts the attention of the target consumer audience. Due to limitations in the sample size, each group only collected data from 30 individuals. Gathering more sample data is believed to enhance the overall reliability and validity. Comparing this type of product with the older age population and understanding the differences in advertising effectiveness based on consumer reactions are potential areas for future in-depth exploration.

In this study, it was found that the advertisement for anti-allergy toothpaste not only involves visual and textual elements but also operates within the context of product marketing strategy, emphasizing the resolution of consumers' genuine needs for such products. This approach is reflected in the graphic and textual composition of print advertisements. When there is a real consumer need, the focus is on capturing the attention of the target audience. For products with high brand familiarity, traditional thinking suggests that advertisements composed of visual elements, colors, and other visual information are crucial in enhancing consumer perceived value and purchase intention. In this context, the selection of metaphorical materials and the target audience play significant roles in advertising effectiveness.

Due to limitations in sample size, each group in this study collected data from only 30 participants. Gathering a larger sample size would likely improve the overall reliability and validity of the findings. The participants were young students, and their awareness of products like anti-allergy toothpaste, which are more commonly used by older age groups, may be limited. In future studies, comparing the responses of different age groups, particularly older consumers, could provide insights into the differences in advertising effectiveness between the two demographics. This would be a valuable and exploratory direction for further research.

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