A Review of the Effect of Visual Metaphor on Advertising Response

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Abstract—Visual metaphor is an indirect method of persuasion in print advertising. It mainly uses metaphors implicitly to imply advertising appeals, which is very common in advertising marketing activities. So, is metaphorical advertising more effective than non-metaphorical advertising? The answer to this question should be based on a review of the effects of metaphorical advertising literatures. This paper first sorts out the different typologies of visual metaphor in advertising. Then explores how visual metaphor engages the consumer and elicits favorable responses to the advertisements. Meanwhile, this paper summarizes the moderating factors, through the two aspects of advertising stimuli and individual differences. Finally, the future research directions and references for marketing practice are addressed in the discussion.

Keywords—advertising effectiveness; visual metaphor; metaphorical ads

I. INTRODUCTION

Enterprises put a large number of advertisements in magazines, networks, outdoor and other media to expose their products. However, traditional commercial advertising has been difficult to attract consumers’ interest; metaphors become core of the modern communication form in advertising [1]. A metaphorical advertising usually takes two dissimilar objects, Ad viewers need to discover the subtle connections to uncover the hidden advertising appeals [2], which can make consumers have a deeper impression [3]. For example, Clinique’s lipstick shows a soda, claiming that the lipstick is cool and refreshing [4]; Dexter’s shoe ad shows an image of a bed and shows that the shoe is as comfortable as a bed [5]. In recent years, the number of metaphorical advertisements like this has been increasing [6]. According to the literature data, between 1975 and 1999, the proportion of metaphorical advertising increased from 13% to 20.1% [7], and in 2014 it reached 64% [8]. Therefore, as “the best known example of a rhetorical figure, and the only one widely recognized among consumer researchers” [1], the significant effect of metaphor has been examined in marketing communication [9], such as improve Advertising recalls [3], enhance persuasiveness and generate more positive consumer attitudes [10].

But does it’s mean that metaphors are really effective persuasion devices than non-metaphors? The answer is not certain. Advertising literature has pointed out that implicit metaphorical advertising is more likely to cause audiences to generate cognitive inferences that are not in line with corporate expectations [11], and even misunderstand the information that companies want to convey [12]. In addition, as audiences become more familiar with various marketing methods, it is difficult for them to spend more time on advertising [13] when simple and straightforward advertising seems to be more effective [10]. Faced with this situation, enterprises seem to be caught in a dilemma of whether or not to use metaphors.

This article believes that the answer to the above question is not “black and white”, we need to understand the following questions: What types of metaphors are there in advertising? What’s the specific performance of metaphorical advertising effects? Why do metaphor ads produce these effects? What factors affect the effectiveness of metaphorical advertising? To this end, this paper first sorts out the categories of metaphorical advertising, on the basis of summarizing the specific performance of metaphor advertising and explaining its causes, and then inferring the influencing factors of metaphorical advertising effects from previous studies. Finally, based on the literature review of the above three aspects, this paper summarizes the results of previous research and points out the direction for further research in the future.

II. TYPOLOGIES OF VISUAL METAPHOR IN ADVERTISING

Related research on metaphor advertising has been going on for more than 20 years and achieved fruitful results. Metaphor is a rhetorical device that focuses on the style or “way” of communicating specific information, not the content or “essence” of the information, because the meaning of the information does not change with the change of rhetorical style [14]. For visual metaphors, the “methods” of metaphor often appear as different visual structures, so most scholars use this to classify metaphorical advertisements. Carroll (1994) limits visual metaphor to the fact that two objects are “fused” together [15]. But Forceville proposes different views based on visual structure and considers this “fusion” metaphor to be only a kind of visual metaphor. In fact, he divided visual metaphors into three types, including Juxtaposition, Fusion, and Replacement (see “Fig. 1”) [16]. The juxtaposition refers to the fact that the product and the
metaphor are presented separately and completely adjacent to each other. The fusion is the fusion of the two into a “mixture”, and the substitution is also called the contextual metaphor [17]. One of the objects does not appear in the visual, and needs to be understood through clues such as background, title, and copy. Forceville's classification criteria have been recognized by many scholars, and much subsequent taxonomy has been developed based on it. For example, Phillips and McQuarrie (2004) classify metaphorical advertising from the two dimensions of complexity and richness: complexity refers to the spatial structure of visual distribution, similar to the concept of Forceville (1996), divided into substitution, fusion, and Three categories; richness refers to the extent and scope of meaningful operations that can provide processing opportunities, which can be divided into associations, similarities, and vices [18]. Gkiouzepas and Hogg (2011) set two broad dimensions of representation and visual scenarios. The representation refers to the spatial location of two related objects, including juxtaposition and synthesis, while the visual scenarios dimension focuses on how to construct the scene to highlight relevance, including realistic symbiosis, replacement and artificial symbiosis. Together, these two dimensions provide a matrix for the six types of combinational mechanisms [19]. Chang divided the metaphor into implicit and explicit depending on whether or not the product's likeness is incorporated into the metaphoric picture, an explicit metaphor can clearly see the meaning of the product in the image metaphor display, but in the implicit metaphor, the product is not in the metaphor image and can be depicted in less prominent locations in the ad, such as the base corner [20].

On the other hand, some scholars also classify the degree of abstraction based on the attributes of metaphor objects. For example, Morgan and Reichert have two types of concrete advertisements and abstract advertisements. The concrete metaphor refers to the relationship between the objects can be directly perceived. Abstract metaphor advertising means that the relationship is based on intangible things. For example, when a swan appears in a watch advertisement, the similarity between the two elegances is more of a kind of abstract feature [21]. Some scholars further formed four types according to the combination of objects of different abstract levels, such as concrete to concrete, concrete to abstract, abstract to abstract, and abstract to concrete [22].

![Fig. 1. The examples of Juxtaposition, fusion, and alternative metaphor: car is a dolphin, car is muscle, car is a shark.](image)

### III. THE EFFECTS OF VISUAL METAPHOR TYPE ON COMPREHENSION

With the increasing importance of visual metaphor advertising, scholars have shifted from the early study of literal metaphor to the exploration of the comprehension process of visual metaphor [8] [23] [24]. Visual elements (such as shapes, colors, typography, materials, and symbols) can create meaning directly or subconsciously and convey it through consumer semantic processing of advertisements [25] [26]. Some scholars established the concept "visual rhetoric" to explain the persuasiveness of visual which stronger than words in advertising, and visual metaphors are incorporated into this framework [4]. As mentioned above, metaphor is a rhetorical way of expressing the similarity between two by analogy between two things that seem completely different on the surface [27]. Therefore, in order to achieve metaphorical effects, it is necessary to establish a "relationship" between two different visual elements. Scholars name them the "target" and the "source" [28]. For metaphorical advertising, target is the product in the advertisement, and source is the other thing that the product is likened to [29]. By creating an unexpected “common point” between these two different things, metaphorical advertising is to show the characteristic fit of products and metaphors in shape, attribute, function, etc., in order to emphasize the effect [30] [31].

As mentioned above, different types of visual metaphors as proposed by Forceville (1996) are expressed and reflected in different visual structures. According to Phillips and McQuarrie (2004), these different types differ in the ease of identification and understanding, which they call metaphor's visual structure complexity [5]. However, these complexities are actually the level of “comprehension difficulty” perceived by consumers. Therefore, based on their research, some people think that the growth of metaphor types from juxtaposition to fusion to “complexity” of replacement is due to consumers. The requirements for processing advertising also increase with these different types of metaphors. Specifically, replacement metaphors impose more processing requirements on consumers than fusion metaphors, and fusion metaphors in turn propose more processing requirements than juxtaposition metaphors. Phillips and McQuarrie (2004) argue that because the collocation...
metaphor sets two specific images of things, consumers can clearly define the "identity" of the two. In the case of a fusion of metaphors, the image of two things is integrated into a new image, and consumers must do more because they need the two terms of the "untie" metaphor. Finally, replacement metaphors are the most complex types and require more processing than fusion metaphors. Consumers must infer from the context that the second item is not shown visually. Identifying the missing concept and how it relates to the current concept is a more difficult task than dealing with fusion metaphors [5].

However, the above complexity seems to lead to non-linear appreciation. For example, van Mulken et al. (2014) proved the influence of metaphor complexity on the aesthetics of the audience. He found that the complexity of metaphor gradually changed from simple to mixed metaphor to contextual metaphor. The increase, while the audience's appreciation of the advertisement is in an inverted U-curve relationship and consumer's understanding of metaphor mediates the process [32]. Gaarman proposed two types of metaphors, Target integration and Source integration, according to the source or destination domain in the replacement metaphor, and arranged for juxtaposition, fusion, Target integration, Source integration and replacement according to the complexity. Appreciate the inverted U-curve [33].

IV. THE EFFECT OF VISUAL METAPHOR ON CONSUMER RESPONSES

As mentioned above, whether metaphorical advertising can be accurately understood and interpreted by consumers is the basic criterion for measuring the effect of metaphorical advertising in the early stage. However, with the deepening of scholars' research on the effect of advertising, the connotation of the effect of advertising is gradually enriched. Therefore, in recent years, researches have begun to focus on its communication effect and social effect.

Metaphorical stimulation helps to promote thinking and inspire human emotions [32]; many scholars explain the superior effects of metaphorical advertising through cognitive, emotional and motivational processes [2] [23]. First of all, the semantic association implied in metaphorical advertising needs to mobilize more cognitive resources and arise more cognitive processing. [34] At the same time, due to the limitations of cognitive resources, the remaining cognitive resources are not enough to produce irrelevant argument or rebuttal, thereby enhancing the persuasive effect of advertising information. Second, the novelty of metaphor [35] and imagination [36] increase the audience's motivation to read and process advertisements, and bring a pleasant interpretation experience, which leads to a positive attitude towards advertising. Finally, metaphorical advertising also influences attitudes toward advertisers [34], as advertisers using metaphors are considered more credible because they are assessed as highly creative [23].

On the other hand, metaphorical advertising is seen by advertisers as an important tool for changing or constructing consumer perceptions than non-metaphoric advertising that directly states advertising appeals [9], especially when metaphors are related to power and gender. It largely conveys the ideology of advertisers and has a significant impact on consumers [37, 38]. Because metaphor is also the most important cognitive way of human beings, it links the arguments contained in the information itself to form a coherent structure by providing a large number of related semantic associations [39]. Especially when a metaphor is applied in an advertisement, the characteristics of the destination domain that are very similar to the source domain of the metaphor are highlighted, and the dissimilar features are obscured [2]. Conceptual metaphor theory [40] can explain this: metaphor can use a coherent conditional network to highlight certain features of facts and obscure other features, "It has the ability to define reality."

Because of this, metaphors have a non-negligible role in helping companies establishing enterprise images [41], guide business activities [42], and help politicians explain complex political issues [43]. In summary, the essence of metaphorical advertising effects is that the cross-domain mapping process leads to changes in individual cognition and emotions, which affects their attitudes [34], choices [6], and beliefs [9].

V. MODERATING FACTORS OF VISUAL METAPHOR ADVERTISING EFFECT

As Vakratsas and Ambler (1999) argue, advertising stimuli and individual audience characteristics are important contextual variables in the study of advertising effectiveness [43]. This paper also starts from these two aspects, advertising stimulus includes the form and content of the advertisement, and the individual characteristics of the audience are mainly related to the motives and abilities of the audience in processing the advertisement.

From the perspective of advertising stimuli, studies have shown that different types of metaphor advertisements have different effects.

As mentioned in chapter 2, the different types of visual metaphor proposed by Forceville (1996) are leading consumers to different results in advertising appreciation and attitude [16]. According to Phillips and McQuarrie (2004), these different types vary with regards to the degree to which they can be easily identified and comprehended [5]. Van Mulken (2010) proved the influence of metaphor complexity on the audience's advertising aesthetics. He found that the complexity of metaphor increased from simple to mixed metaphor to situational metaphor, and the audience's appreciation of advertising was inverted U-shaped [17]. His follow-up study also found the mediating role of comprehension in this process [32].

The representational modality of metaphor is also a kind of adjustment factor, specifically referring to whether metaphors are used in the text and image information in metaphor advertisements. Forceville (2006) points out that if metaphor does occur at the level of cognitive thinking, the representational modality of metaphor is not important. At this time, whether it is represented by pictures or words, the response of audience should not be different [44]. However,
scholars from the field of semiotics believe that because the picture is more subtle than the text, the advertising information presented in the form of pictures is more openness. This open feature has fewer restrictions on the audience and will make the audience more elaborations [45]. Their follow-up experiments also proved that when advertisements use images to convey metaphors, consumers are more likely to spontaneously generate positive attitudes toward advertising content. Ang and Lim (2006) point out the advantages of pictures in attracting attention, stimulating imagination, improving memory, etc., and suggesting that if metaphor is presented in pictorial form, it is not important whether the modality of the ideology is a metaphor; The metaphor of the modality of the text can produce certain positive effects[46]. In addition to these, there are also many studies that have designed a combination of textual and visual metaphors and found that both are effective persuasion devices [47] [48] [49].

From the perspective of individual characteristics, need for Cognitive has proven to be an important factor affecting the effectiveness of advertising. The audience with High-Need for Cognition can cope with higher complexity, and easier to accept challenging mental tasks; on the contrary, audiences with Low-Need for Cognition feel that the meaning conveyed by complex information is elusive [50]. Morgan and Reichert (1999) studied from the physiological perspective, and found that audience with powerful right brain processing capability is more likely to accurately and effectively explain the meaning of metaphorical advertising [21]. Chang and Yen (2013) found that the difference in persuasive effects between dominant metaphors and recessive metaphors only occurs in audiences with high cognitive needs and interacts with product types [20]. His follow-up study investigated the effect of visual metaphor on different genders. The results show that for females, a replacement metaphor in search products ads is more effective, while a juxtaposition metaphor should use in experience products ads. Juxtaposition metaphors are more effective for males, regardless of product type [6]. At the same time, the impact of differences in individual cultural backgrounds on metaphorical advertising understanding and appreciation has also been confirmed by related research [51].

Metaphors are also affected by other environmental variables. The most widely studied moderating factor is the product type. Ang (2002) find using metaphors in headlines for symbolic products generally resulted in less favorable attitudes and behavioral intentions than non-metaphoric headlines. Cooperating with Lim, he also examined how the metaphor affects the audience's perception of the brand personality of different products types. It turns out that brands that use metaphors in advertising are considered more complex and stimulating, but not sincere and reliable[46]. Apart from this, Gaarman studied the differences in exposure time for visual metaphor advertisements of different complexity levels, results show that consumer have been most aesthetic pleasure at 100ms, at 5000ms aesthetic pleasure and interest showed an inverted U-curve[52]. Jia based on the construal level theory points out that psychological distance also affects the use of metaphor [53].

VI. CONCLUSION

Related research on metaphor advertising has been going on for more than 20 years and has achieved fruitful results. In general, early research focused on metaphor concept construction, ad classification and processing mechanisms, and in recent years has been more interested in exploring metaphor effects in different situations. By combing through the previous literature, this paper finds that metaphor advertising does not always bring the best result, which could be affected by many factors. Therefore, enterprises not only need to select the appropriate type of metaphor according to the characteristics of consumer groups, but also consider the influence of product types, advertising situations and other factors. In this respect, there is still a lot of space for exploration and improvement in existing research.

From a research perspective, existing research, conducted through both cognitive and emotional aspects, only tests the response degree of the audience and do not involve a deeper cognitive or emotional process. For example, how the consumer cognize product or service in a visual metaphor advertising, and is it the same as a verbal metaphor advertising? Do these thoughts and feelings can influence consumer follow-up behavior? In fact, in the linguistics and education fields have analyzed the cognitive processes of metaphor and find some affecting factors, such as the influence of cognitive style and psychological distance[54], these provide good idea for the unsolved problems. From the research object, most metaphor research objects are print ads.

With digital and social media becoming the main media of advertising communication, can the research conclusion of visual metaphor in print advertising be applied to these platforms? What are the characteristics of new media compared with traditional media in the use of metaphorical advertising? On the other hand, video advertising, multimedia advertising is also increasing, what kinds of effect will these metaphorical dynamic advertising produce?

How to design experiments to investigate the metaphorical elements in these new carriers? These problems have not been mentioned in the existing research, and it can help to understand how to use metaphors to enhance the effectiveness of advertising in the digital age. Finally, from the research methods, the existing research has basically adopted group experiments and collected subjective scales to reflect the problems. In the field of neuro-marketing, eye movements and ERP experiments have been developed maturely. In the future, the application of these technologies to metaphorical advertising effects will help companies learn more about the subtle mental changes and processing strategies of consumers, and to improve the communication effect.

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