Multimodal Discourse Analysis of Green Advertising of Electric Vehicles from the Perspective of Visual Grammar

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ABSTRACT

Based on the visual grammar, this paper analysed the multi-modal discourse of green advertisement by taking the video of Electric vehicle as an example. Through the analysis of different modes such as composition, colour, text and background, this paper deeply studied the expression forms of vocabulary, grammar, vision, and symbol in the EV ads and the mutual relationship between different modes, revealed the correlation between the mode and meaning, and explored the language features of green advertisement application and the effect of discourse transmission. This paper finds that green advertising uses image resources and colour resources to construct conceptual meaning, using font, background, and depth of field to construct emotional meaning, and using composition resources to construct social significance.

Key words*: multi-modal discourse analysis, visual grammar, green advertising*

INTRODUCTION

With the growing awareness of environmental protection, companies are taking on more and more social responsibility for environmental protection. Go-Green has become a popular business strategy (Easwar L, Bobby B.1993), and more companies have begun to use a variety of marketing methods to promote their green products and services, to establish a more responsible corporate identity.

In advertising research, the multimodal discourse analysis method is widely used. The method mainly explores the relationship between linguistic and visual elements in advertisements and the influence of the visual grammatical structure they jointly construct on the communication effect of advertisements. In the multimodal discourse analysis in the Electric vehicle advertisement, the advertisement uses a variety of visual grammatical techniques, such as perspective, contrast, colour, and other elements, to convey the theme and concept of the advertisement and produce strong emotional resonance while using the green advertisement (George M, Zinkhan C.2015). At the same time, the interaction and coordination between language and visual elements, as well as the visual grammatical structure they jointly construct, can form an intuitive and profound advertising communication effect, thus improving the communication effect and effectiveness of the advertisement.

Overall, the visual grammar features of Electric vehicle advertisements in terms of images are mainly reflected in the following three aspects: the brand positioning of Electric vehicles, the symbolism of the green colour and the treatment of advertising images. These features achieve the purpose of attracting consumers' attention, emphasising the technology and modernity of the car, and thus improving the effectiveness of advertisement communication through the means of visual grammar.

METHODOLOGY

Multimodal discourse analysis

Kress and van Leeuwen interpreted and expanded the three meta-functions proposed by M.A.K. Halliday as three functional meanings, namely, representation, interaction and composition, and proposed a theory of visual grammar based on them. The meaning of reproduction mainly explores the conceptual relations that exist in image components and the relations that exist in cultural contexts, and is divided into narrative representation and conceptual representation, which is mainly realized by the three means of image vector, participant and circumstance (Kress & Van Leeuwen, 2020). Interaction meaning consists of contact, social distance, viewpoint and modality, and it constructs the dynamic relationship between the viewers, the producer and the image. Compositional meaning refers to the overall meaning formed by the arrangement of participants according to a certain pattern, and is realized through the three elements of information value, frame and salience. The realization of representation meaning and interactive meaning is dependent on compositional meaning (Kress & Van Leeuwen, 2020). This study analyzes the green advertisement of an electric vehicle based on visual grammar theory, and focuses on how BYD company uses the three meta-functions to convey the concept of ecological 'sustainable development'. This study proposes a framework for constructing the ecological nature of green advertisements from the perspective of visual grammar, which is shown in Figure 1.

Figure 1 Framework for analyzing green advertisements based on visual grammar
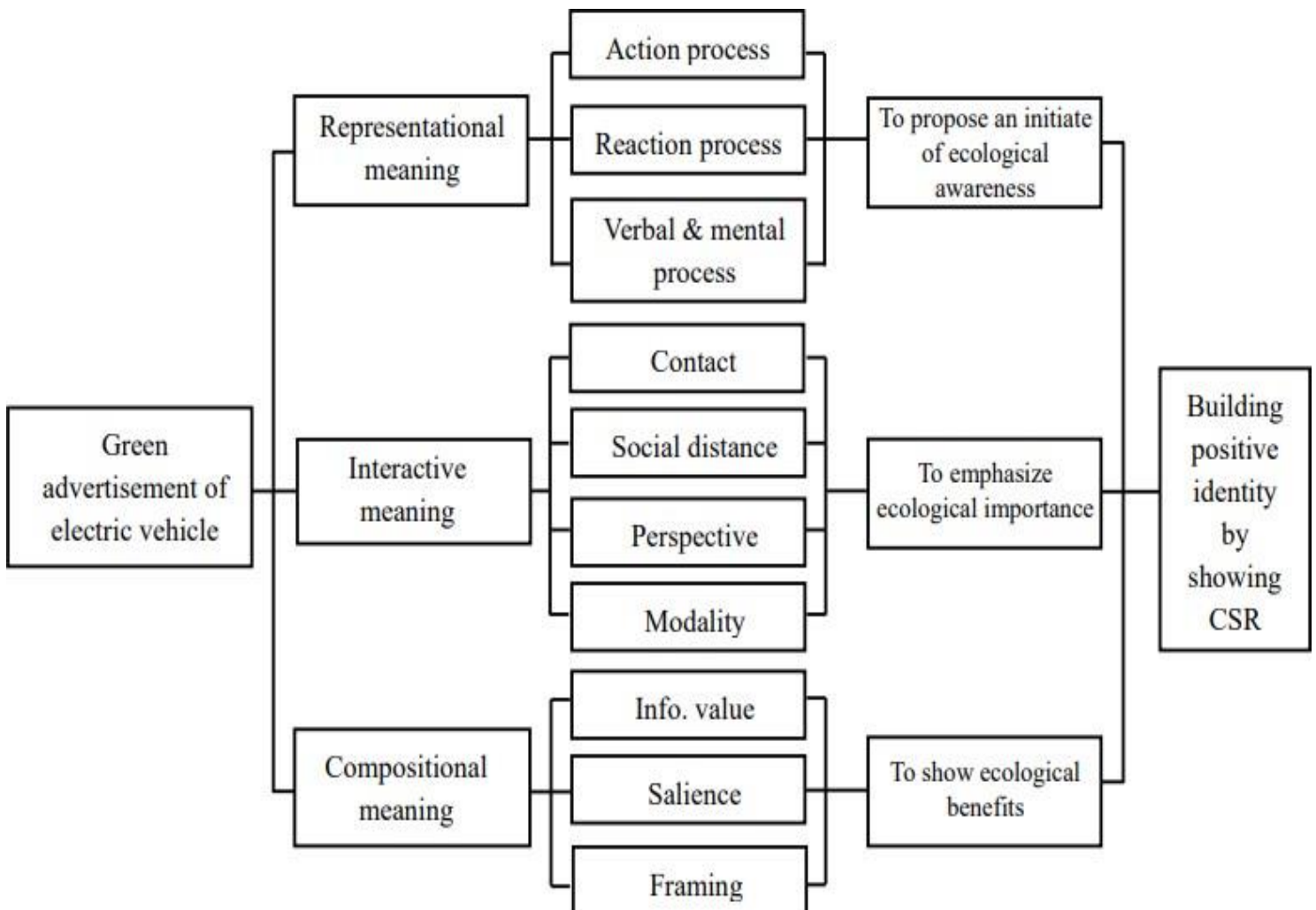
As a leader in new energy vehicles, BYD Auto has established a product system of all-power, all-electric vehicles from traditional fuel and hybrid to pure electric vehicles. Since 2015, BYD's new energy vehicles have topped the sales charts in the world for several consecutive years. According to Quest Mobile AD INSIGHT advertising insights data, the effective advertising share and brand advertising share of BYD are more advantageous compared to other new energy vehicle brands' advertisements, and people of different age groups take BYD new energy vehicles as their first choice. As an automobile company derived from China, the development trend of BYD shows obvious feasibility for research.

In March 2023, the new energy vehicle advertisement *Qianshancui* (*Thousand Miles of Lush Mountains*) produced by BYD Auto Company was released on several video websites, which was well received by the viewers. It is a typical representative of green marketing advertisements for new energy vehicles. The length of the advertisement is 2 minutes, and this study intercepts the advertisement by using the smallest unit of video work, 'frame', and obtains a total of 2880 frames, which is used to establish a database to provide a basis for constructing discourse meaning expression in the field of visual grammar. The purpose of building the database is to provide researchers with multimodal resources of reference value, so as to provide a reasonable choice of modal resources for the study of the ecological construction of electric vehicle advertisements. In addition, when collecting the research corpus, this study screened the image resources based on the theory of visual grammar, removed the invalid and repetitive screenshots with no reference value, and finally obtained 220 valid screenshots. This study takes the female protagonist of the video advertisement, a dancer, and an electric car as the main objects of observation, and a traditional fuel car as the reference object. Within the research framework in Figure 1, it refines the multimodal image resources based on the characteristics and realization of the three functional meanings of representation, interaction, and composition, in order to study the meaning potential of the advertisement.

RESULTS

Reproducing Meaning Constructs

In this theoretical framework, in systemic functional grammar, the reproduced meaning is consistent with the conceptual function. (Feng DZ, 2011) Representational semantics is a method used to describe the relationship between people, objects, and places. By analyzing the promotional video, the image is attributed to the narrative category. As it is clear from the image that the image is expressing the meaning of the image through the relationship between the characters. In the following, we will analyze it from the two aspects of action process and reaction process respectively.

Action Process

The action process refers to the actions and behaviours presented in the image, which is composed of an action operator, a vector, and a scene. In this short advertisement film, there are three clips in this short film. The first thing you see is the colour element in the video, the large dark green composition, and the distant echo with the bamboo forest in the background, which can make people actively associate adjectives like natural, deep, and powerful with Qianshancui . This is the situational component of the image.

Figures 1 and 2 appear one after another, with the camera sweeping from left to right across the car's taillight, followed by the same pattern on the face and taillight of the woman in the video, linking the figure to the car through such camera language and giving the car a humanised character.

Figure 2 Lighting design of the rear of the car

Figure 3 Close-up of the character in the advertisement

In Figure 3, the character and the car appear together in the same frame, the hard, tough external image of the car combined with the woman's soft yet powerful movements, giving the viewer outside the image a sense of both strength and softness, highlighting the combination of natural environmental protection and high performance of the *Qianshancui*.

Figure 4 Figure in the advertisement covered with a veil

Reaction Processes

The reaction process is also composed of vectors, which are made up of the direction of the gaze of one or more participants in the image. The gaze of the character in Figure 4 is not directly through the screen, it is blocked by a layer of veil, but you can still feel the hot gaze of the character behind the veil, mysterious in a

hazy way, as if the shape and structure of the car will be slowly presented under the veil.

Figure 5 Composition of cars and people

Going back to Figure 3, the character's eyes and gaze look straight towards the camera at this point, not as mysterious and hazy as before, with a firm and confident stance towards the viewers in front of the screen.

In a comparative analysis with traditional non-green automobile advertisements, it is found that such advertisements usually use rational appeal to present the 'Unique Selling Proposition' of the product. In terms of the use of representational meaning, traditional advertisements usually focus on the car as the main part of conceptual expression, with the camera mainly on the performance, appearance and interior decoration of the car. Objectively, this is more conducive to interpreting the characteristics of the car. However, without the participation of characters, the advertisement cannot well reflect humanistic care, which may reduce the attractiveness of the advertisement and make the viewers lose interest and desire to buy.

Interactive Meaning Construction

Interactive meaning corresponds to the interpersonal function in the functional grammar of the system, which is an interaction expressed by four factors: contact, social distance, attitude, and mood.

Contact

Contact means that the participant of an image and the viewer of the image make eye contact and thus form an imagery. According to the presence or absence of eye contact, contact can be divided into *asking* and *offering*. Images in which there is eye contact between the participant and the viewer of the image are referred to as the former category, while images in which there is no eye contact between the participant and the viewer of the image are referred to as the latter category.

The advertisement video selected for this paper is more of providing class of images, and communication class is supplemented, because the final service of Electric vehicle advertisement is for the purpose of sales. There is a very clever composition in the video, as shown in Fig. 5. The camera's viewpoint is extended from inside the car to the outside, as if the viewer himself is sitting in the car, giving people a sense of immersion. On the one hand, it shows the spatial layout of the car for the viewers, and on the other hand, it combines the viewers with the car, driving this electric vehicle of *Qianshancui* , shuttling between the bamboo forests, enjoying the natural scenery, and at the same time, it is also making its own contribution to the preservation of this beautiful natural scenery.

Traditional non-green automobile advertisements tend to present an 'asking for' rather than an 'providing

with' approach to contact. In these advertisements, viewers are very sensitive to the persuasive intent of the advertiser. Once consumers catch the persuasive intent, their acceptance of the advertising message may be greatly reduced. In addition, if the persona looks directly at the viewer in the advertisement, it may make the viewer feel that he or she is a passive object of communication, and thus become bored.

Figure 6 Extended view of the interior of the vehicle towards the exterior

Social distance

Social distance refers to the distance between the participant and the viewer in an image. Depending on the proximity of the viewer, social distance can be categorised as personal proximity and personal distance, social proximity, and social distance. Social Distance and Social Distance. Only the head is seen as personal proximity, and the waist and above is personal distance; only the whole body of the character is included as social proximity, and the whole body of the character and the surrounding environment is included as social distance. Social proximity reflects the closeness between the participant and the viewer.

The following diagrams (Figures 6-8) are selected from the near, middle, and far views of the *Qianshancui* Electric vehicle, and are composed as personal proximity, personal distance, social distance, and a social distance with an ultra-far viewpoint, respectively. It shows the shape and structure of the electric vehicle from inside to outside, from top to bottom. In Figure 9, the car blends in with the background environment and the car runs recklessly on the avenue, forming a spiritual communication with the viewers.

In traditional non-green advertisements, close-up lenses and medium-range lenses are usually used to show the rich details of the car body. However, it is seldom to present the scene when the car is traveling with the telephoto lenses, and even if there is, it is only a glimpse, failing to integrate the car with the environment well, ignoring the humanistic spirit of harmonious coexistence of man and nature.

Figure 7 Interior seat view

Figure 8 Front-end design (center view)

Figure 9 Elevation view of the body

Figure 10 Visionary composition of the car

Perspective

Perspective is the point of view chosen by the author when creating a picture, and there are horizontal and vertical points of view. Horizontal viewpoint can be divided into front viewpoint and side viewpoint, which can reflect the intimate relationship between the participant and the viewers. Vertical viewpoints can be categorised into flat, up, and down viewpoints, and different viewpoints can reflect different power relationships.

Three images (Figures 10-12) were captured in the video for three viewpoints: frontal, overhead andelevated. The frontal image in Figure 11, a kind of speed and passion comes to the face, giving a sense of cramped tension, reflecting the high performance of the Electric vehicle, although it is electric, the speedwill not be inferior to the ordinary petrol car, which is also responding to the consumer's questions about the performance of electric vehicles. The upward and downward views represent the high and low power respectively. Although the two perspectives appearing in the video at the same time seems contradictory, itis precisely the fusion of the two perspectives that makes people feel that the electric vehicle is difficult to grasp while at the same time giving people a sense of ease, smallness, and can be conquered.

Figure 11 Visionary composition of the car

Figure 12 Visionary composition of the car

Figure 13 Visionary composition of the car

Mood

Mood is a realistic reproduction of the image, starting from the coding orientation of the senses and based on the saturation of the colours. Mood can be classified as high, medium, or low according to its constituent elements.

Based on the above images, it can be noticed that throughout the video, dark green is used as the compositional colour, with an overall low saturation. From the contextualisation analysis, the low saturation compositional colour gives a deep and tense sensory experience. In particular, the overall dark green of the

body and the dark green of the bamboo forest are coexisting with each other, as if the content and the picture are integrated. Complemented by the background music from slow to fast tempo transition, gradually jumping from the mysterious and unknown situation, the picture from the close-up to the distant view of the stretch, the whole picture from the low-saturation composition back to the bright big background.

In non-green advertisements, cars are usually brightly coloured in red, orange, or other saturated ones to emphasize the high-profile and cool features of the product itself. They seldom use medium or low intensity colour schemes, which can hardly convey a sense of comfort that blends in with the environment.

Compositional meaning construction

Compositional meaning analysis can also be understood as layout, which corresponds to the discourse function in Systemic Functional Grammar. Compositional meaning is expressed by the three levels of information value, highlighting and boundary, which is the unity of expressiveness and interactivity.

Information Value

Information value refers to the information carried by each element in the image at different points. In the left and right categories, the left is known information, and the right is unknown information; in the up and down categories, the top indicates ideal, and the bottom indicates actual; in the central and edge categories, the centre is the focus or focal point of the information, and the edge is the auxiliary information or specific information. In Li Zhanzi's view, *ideal* is an idealisation or generalisation of the information, thus making it the most important part of the information. (Li Zhanzi, Lu Danyun.2012) *Real* refers to more specific information, such as details, that is, more realistic information, more "down to earth" information.

When it comes to social distance, the central message of Figure 6 is the BYD Han series, which is the key message that the viewers is trying to get. So, throughout the promotional video, you can actually see that the electric vehicle is located at the centre of the composition, and a row of small letters is located at the bottom left of the view, which is the second level of information prompt.

Highlighting

Convexity refers to a certain way to highlight certain components of the image, mainly size, location, angle, colour contrast. Figure 13 is the end of the promotional video. In the text, four big words are located in the upper part of the image, belonging to people's first visual area, and in the four words, there is also a difference in size. The characters of "Han" and "Guan" are bigger. 'Han' refers to the series of this EV, *Qianshancui*; "Guan" focuses on the performance. This promo highlights the shape of the car and the features of the internal structure, which can be seemed as an abstract summary of the whole video.

In traditional automobile advertisements, product, brand name and logo are always prominently featured by maximizing fonts or product images to ensure that viewers get a clearer understanding of the most significant message of that product. Compared with green advertisements, the environment is used as a backdrop, and it is usually relegated to a secondary position or simply ignored.

Figure 14 Background image of the end of the advert

Intermodal relations

According to Zhang Delu (2009), in a typical multimodal discourse, when one modality is not enough to fully express all the meanings of the discourse, there must be another modality to complement it, and this kind of intermodal relationship is called "complementary relationship", while the others are called "non-complementary relationship". This relationship between modalities is called "complementary", while the others are called "non-complementary". Complementarity can be categorised as augmentative and non-augmentative. In an augmentative relationship, one mode is dominant and the other is complementary to strengthen it. Enhancing relationships can be classified into three categories, namely salience, primary and secondary, and extension. Non-enhancement relationship means that these two modes are complementary to each other.

Combining the above image analysis, it can be found that in terms of colour element analysis, green is the most common colour in Electric vehicle advertisements, with a high frequency of appearance. The use of green is mainly to convey green concepts such as environmental protection and sustainability, and to create a green, healthy, and high-tech image by combining it with product and brand images. Colour elements play an important role in Electric vehicle advertisements. Through the use of different colours, it expresses the enterprise's green concept and product image, and achieves the effect of attracting consumers.

Green advertisements often use images of natural environments, such as mountains, water, forests, etc., in Electric vehicle ads, to emphasise the environmental performance of the product and the social responsibility of the enterprise. (William E. Kilbourne.2013) Secondly, through the use of specific colour combinations and image composition styles, green advertisements have successfully created a certain brand image in Electric vehicle ads, for example, by using highly saturated green tones to strengthen the performance effect of green advertisements. (Desiree S Jorg M, Brigitte N, Maren B.2017) In addition, the green ads also strengthen the technical characteristics and superior performance of the Electric vehicle products through the image representation of the Electric vehicle products, for example, by highlighting the shape design and power system of the Electric vehicle. The Electric vehicle adverts use a variety of visual expressions, including simple and clear text and images, as well as dynamic sound effects and music.

The interplay of these multimodal expressions makes the advertisements more vivid, imaginative, and in-depth, and the effect of the ads is more persuasive. Therefore, in-depth exploration of the multimodal discourse characteristics of electric vehicle ads not only helps to improve the effectiveness and efficiency of advertisement dissemination, but also helps ads designers to discover more excellent promotional strategies.

DISCUSSION

Taking Electric vehicle advertisements as an example, this paper conducts a multimodal discourse analysis of them at three levels: conceptual, symbolic and image, revealing the process of advertisements' use of symbolic resources such as words, language, and colours to convey information, and also analysing the important role of non-modal resources in conveying the green concept. It is found that the advertisements use image resources to convey the green concept and interact with the viewers through multidimensional interaction.

Firstly, in the multimodal interaction of Electric vehicle advertisements, it is easy to find that with the progress of the times, human communication is not only carried out through language and words, but also using visual, auditory, and other symbolic resources to achieve interaction with others and the world. Electric vehicle advertisement is a typical multimodal advertisement, which is presented in a variety of forms, including text, images, sound, and other symbolic resources.

Secondly, the Electric vehicle advertisements play a very good role in demonstrating the transmission of the

green concept. By analysing the multimodal discourse of the advertisements, this paper argues that based on multimodal interaction, the advertisements make full use of multiple symbolic resources, such as text, image, sound, and space, to convey the green concept. On this basis, this paper further explores how image resources convey the green concept and how image resources can be used to achieve interaction with the viewers. Different from other disciplines, this paper argues that Electric vehicle advertising is not only a means of information transmission, but also a multimodal discourse.

Finally, in the selection and construction of image resources in Electric vehicle advertisements, "image" is the most important visual resource in advertisements, which can help consumers understand product information. For Electric vehicle advertisements, images can convey information on three levels, namely, concepts, symbols, and images. Firstly, it is a visual resource, the carrier of visual content, which can help consumers understand the product information. Secondly, it has certain semantic attributes that can help consumers identify the brand. Finally, it has a strong visual impact and infectious force, which can attract the attention of the viewers and stimulate their interest. (Khan T, Andrea V.2016)

To conclude, the above analyses show that image as a visual resource can help the viewers understand the product information. In green advertisements, the selection and construction of image resources are mainly manifested in the following two aspects: modal resources such as text and colour; non-modal resources such as characters, space, and distance.

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