

Multimodal Analysis and Meaning Construction of Olympic Mascots in the Framework of Visual Grammar

Fei Mo

Journalism and Communication, Jinan University, Guangzhou, China

Abstract: *The mascot of the Olympic Games embodies the designer's unique views on the concept of activities, shows the long-term and profound cultural connotation of the host country, and is the symbolic expression of national cultural symbols. According to the visual grammar framework of Kress and van Leeuwen, this paper compares the meaning construction mechanism of Bing Dwen Dwen and Fuwa mascots from the perspective of reproduction, interaction and composition, and discusses the application of visual representation, the mechanism of cultural identity and the transformation of Olympic concepts in China.*

Keywords: *Mascot; Meaning construction; Visual grammar framework*

1. Introduction

The Olympic Games, which originated in Greece more than 2000 years ago, is a bright pearl in human history. Since entering the modern society, the scale, form and value extension of the Olympic Games have undergone great changes. However, its world-famous nature and the spirit of advocating peace have been deeply rooted in the hearts of the people. It has become a media ceremony that seeks the unity of individual freedom, national identity and world peace in the wave of globalization. The word mascot originates from Mascotte in Provence, France. The French dictionary is Mascotte and later evolved into English mascot. It means a person, animal or thing that can bring good luck and good luck. The mascot of the Olympic Games is designed by the host city and country according to the characteristics of their own country or region. It is a kind of animal shape, character shape or abstract meaningful artistic image that has been processed by art.^[1] Since the first appearance of the Munich Olympic Games in 1972, the mascot has remained a tradition for more than 50 years, and the design concept and visual symbol have become more mature. It also witnessed that the Olympic Games has become a media, sports and culture complex under the background of world globalization and network digitization.

In recent years, social media and Internet of things have connected the global public communication field, and shaped a new situation of global real-time interactive communication of the Olympic Games online. In fact, the image trend of audio-visual integration has been staged on a large scale in the mass media, and it is difficult for us to exist alone without image, video and audio; at the same time, visual communication relies on and benefits from social media in the mass media, and develops a variety of visual presentation methods. Today, charts, images, sounds... Important news information and recent events are presented in a multi-modal manner. In addition to daily life, digital multimodality, as an important topic of visual communication, is gradually entering the discourse world from daily life.

In 2022, the Beijing Winter Olympic Games will be presented through the media, forming a media landscape of national jubilation. The grand opening ceremony performance is also the publicity and expression of the mainstream ideology and core ideas of the society to a certain extent. As an important part of the opening ceremony, the mascot of the Olympic Games is actually a concrete visual symbol of the discourse power and national ideology, which is a cultural representation practice. As the first double Olympics city in history, the 14 years have not only changed the ever-changing economy, but also the concept design and innovation dissemination of mascots in the Internet era. The change and innovation of the concept are highly concentrated in the symbol of external communication - the Olympic mascot. Therefore, this paper will make a comparative study of the mascot "Bing Dwen Dwen" of the 2022 Beijing Winter Olympic Games and the mascot "Fuwa" of the 2008 Beijing Olympic Games. We can analyze and find out how the Chinese Olympic mascot uses the visual symbol

representation mechanism to form representative and special appearance factors to effectively convey the theme and connotation of the event and convey cultural identity.

2. Research methods

Multimodal discourse refers to a discourse that integrates multiple modes of communication (such as sound, text, image, etc.) and uses various sensory channels such as hearing, vision and touch to convey information.^[2] According to the classification of relevant studies, multimodal discourse has two definitions, namely static multimodal discourse and dynamic multimodal discourse.^[3] Static multimodal discourse is often the expression system of non-verbal features, which includes single symbol system and multi symbol system multimodal discourse. There are static images and dynamic animation videos and audio-visual materials about mascots. Here, we mainly discuss its own, that is, the multimodal discourse use of official images. From this point of view, this paper focuses on the visual modal use of mascots, starting from the multimodal discourse of multi symbol system, and using the visual grammar theory to analyze the language and image symbol systems involved in mascots. At present, there are not many researches on mascots in the academic circles at home and abroad, mainly focusing on the communication function, connotation value and design specification of mascots.

Nowadays, the social symbolism of language has extended from the language features to the multimodal communication activities based on the vision, hearing, touch and other senses. In the 1990s, Halliday proposed three meta functions of language in his Systemic Functional Grammar: ideational function, interpersonal function and textual function.^[4] The language used by people in the diachronic description of events is the object of discussion on the function of concepts. People use language to describe people and things in the objective and subjective world, the time and place involved, and the real-time events are constructed from abstract to concrete; Interpersonal function refers to the communicative function of language in human social activities; Discourse function is rarely seen in daily life. It focuses on the process of organizing linguistic elements into discourse based on the semantic level.

To sum up, this paper will use the visual grammar framework theory and Halliday's theory on functional grammar, namely, the three meta functions of concept, interpersonal and discourse. The theoretical analysis framework of visual grammar framework proposed by the scholar Kress & Van Leeuwen can systematically describe the meaning potential of symbol resources and the interaction between different symbol systems.^[5] Halliday's Systemic Functional Grammar Theory is applied to images in this theoretical framework, and images can become social symbols.

3. Multimodal analysis "Bing Dwen Dwen"

The prototype of "Bing Dwen Dwen" is a young panda. The northern snack ice sugar gourd is the inspiration of its ice crystal shell. The combination of the two reflects the characteristics of winter ice and snow sports. This paper will use multi-modal discourse analysis to integrate and comprehensively analyze the reproduction, interaction and constituent meanings of various communication modes in the mascot, excavate all the information that can be effectively used in the "Bing Dwen Dwen" discourse, and explore its function mechanism in the process of meaning exchange, so as to interpret the overall meaning more comprehensively and accurately.

3.1. Reappearance

The object in the image, the receiver of the image and the environment in which the image propagates present the reproduction significance through vision. To a certain extent, the use and collocation of elements will affect the interpretation of the meaning of image reproduction. The meaning of reproduction is divided into narrative reproduction and conceptual reproduction. In narrative reproduction, each element of an image interacts to produce a "vector", and the interactive participants (designers and Readers) and the reproduction participants (things represented by the image) interact with each other through vectors.^[6] The action, reaction and psychology of the participants will have a corresponding effect through the prominent diagonal line vector, which is formed by the elements in the image. If the vector is only composed of the gaze direction or gaze of the participants in the figure, the "responder" and "phenomenon" will emerge as the times require, then this process can be called a reaction process.^[7] The mascot of the Olympic Games is often presented in a static image. In terms of visual design, the "vector" is generated by the individual's action lines and eye direction. In the

static image, it can also interact with the audience to show enthusiasm and friendship and convey the spiritual significance of the Olympic Games.

Take "Bing Dwen Dwen" as an example. Its left arm is lifted upward obliquely, implying a greeting; the right arm naturally hangs down, and an oblique vector is formed between the two arms. For itself, this vector enhances the dynamic and active sense in the static picture. The eyes of Bing Dwen Dwen looking at the world constitute a vector and reflect the reaction of the people, that is, without specific discrimination, all athletes who come to participate in the Olympic Games are welcomed equally and enthusiastically. The five Fuwa are different in shape, and their movements are different due to the differences in the nature of the representative animals: Beibei and Jingjing open their arms and look straight ahead, embracing audiences around the world, and appear generous and magnanimous; Jingjing represents a gentle and lovely panda, and tilts her head and hugs her chest to show her curiosity; Yingying jumps to the left and runs towards the audience to form an action vector with infinite vitality; Nini is a gentle smile and a natural relaxed posture. The vectors formed by the two types of mascots are all reactions and interactions with the viewers through their eyes or actions, while the vectors of the five blessings only form "reactions" and "phenomena". Other action designs are more complex and incorporate the details of animal habits, which interferes with the interaction between the viewer and Fuwa; Bing Dwen Dwen is more orderly and concise, and also more lovely and generous. The obvious vector movement formed by the arm is the full integration of the head and body lines, which highlights the dynamic of the vector. Besides the waving arm, other body parts remain in normal state, and the expression of smile is more prominent.

The interaction of vector composition can also be judged from such aspects as size, position in the composition, contrast with the background, color saturation or saliency, degree of focus and 'degree of psychological prominence.^[7] Compared with Wufu, Bing Dwen Dwen uses black and white achromatic ribbons with 0 saturation and significant colorful ribbons as head decoration, and properly omits vectors, although the arms of vector parts are relatively thin; There is also a heart on the top of the raised left arm. The contrast between red and black is to absorb sunshine for the vector.

Of course, the design team of the mascot of the Winter Olympic Games also cooperated with the development of cultural and creative industries to design more abundant sports images that combine the real athletes' physiques, such as ice skating and skiing. Due to the limited energy of the author, I will only discuss the original image and action of Bing Dwen Dwen.



Figure 1: Bing Dwen Dwen



Figure 2: Fu Wa

3.2. Interactive significance

The interactive meaning involves the three participants in the process of image generation and dissemination, i.e. the image maker, the object represented by the image and the receiver of the image. The designer establishes the relationship among the three through the image, and prompts the receiver of the design attitude and concept when viewing the object represented.

3.2.1. Gaze

When viewing an image, the image receiver will make eye contact with the subject of the image and build an imaginary relationship in this way, which is also a physical "contact". However, not all image subjects will face the viewer directly when designing. Whether or not they look directly at the audience determines the classification of contact relationship, that is, demand type and supply type: when the image subject looks directly at the audience, this is demanding. Direct eye contact conveys an inviting attitude, that is, the image subject requires the audience to join, participate or intervene in the ongoing activities of "it".

Bing Dwen Dwen and Wufu both look directly at the audience and seek active contact and recognition. However, the difference is the strength of the imaginary relationship between them. In the visual design of Bing Dwen Dwen, the bright halo of the "ice ribbon" symbolizing the flow of the national speed skating hall and the natural highlight of the face are skillfully used to emphasize the eyes on the panda's face, especially in the goggles, so that the audience is more likely to have eye contact and interaction with Bing Dwen Dwen, And the setting of Bing Dwen Dwen's magnifying eyes makes it difficult for people to look away. Focusing the overall visual focus on the eyes will undoubtedly greatly enhance the audience's acceptance and love of the mascot from the perspective of psychology. In a relatively short time, the audience will deeply feel the initiation and healing of Bing Dwen Dwen, that is, improve the communication effect and efficiency, and reflect the sincere and warm invitation of the host of the Olympic Games; Wufu is also asking for images, but when the number of five Fuwa is large and distracting, the facial features, especially the eyes.

3.2.2. Social distance

Social distance depends on the size ratio of the image subject and the image, which is related to the viewing distance of the receiver. The frame size of the lens framing, forming different scenes such as near, middle and far, also determines the different social relations between the image subject and the receiver to a large extent. The distance that the face or head is enlarged and can be clearly seen is the proximity distance; What can be seen clearly is the social proximity; Social distance refers to the whole person and the space around him; And the distance between at least 4 to 5 people is called the public distance.^[8] The official images of Bing Dwen Dwen released to the public are complete and close to the society. The one-to-one communication gives people a sense of intimacy, which shows the designer's subjective hope that the audience can integrate into it and feel the same; the five Fuwa need to appear in the poster at the same time, which belongs to the medium and long social distance. It needs more time to identify and get familiar with it, and it also provides an overall perspective of objective appreciation.

3.2.3. Attitude

When the image receiver normally observes the image, the position angle formed with the image subject in the horizontal direction and the vertical height can form a different relationship, affecting the attitude between the two. In terms of vertical height, if the image subject needs to emphasize authority and give people a feeling of condescension and oppression, it is necessary to raise its height and force the viewer to look up; On the contrary, when the audience position needs to be higher than the perspective of the image subject, the height between the two will form the former overlooking the latter; If the difference between the two horizontal positions is not large, it means that the audience and the image subject have reached an equal position. In the horizontal relationship, at the angle of the horizontal front, the viewer can relatively easily enter the environment where the image is set, while the communication between the image and the viewer is not too direct at the angle of the inclined side. The positions of Bing Dwen Dwen and Fuwa relative to the spectators are relatively horizontal and vertical, and the mascots are purposely inclined to the body or face to make the image more three-dimensional and vivid. This ensures that the spectators have a reasonable perspective and can more appreciate the mascot's own design. At the same time, it also conveys the Olympic spirit of advocating the people of the world to participate in the Olympic Games on an equal and friendly basis and to be fair and just.

3.3. Compositional meaning

When the reproducing meaning and interactive meaning in the image are integrated, the two are closely integrated into a composition meaning, which represents the information value and significance of the image or text as a whole.

3.3.1. Information value

The main body of an image is often composed of a plurality of elements or components, and the positions or sizes of different elements have different information values. Kress & Van Leeuwen believes that the information on the left side of the image is known information, and the information on the right side of the image is strange information; The position in the middle of the image is the visual center of gravity, and the information placed here can provide core value; And the information placed on the edge assists the core information expression. In addition, the information values conveyed above and below the image are also different: in the case of the same element, the information above is the most significant part; the lower part is more practical and conforms to the law or general cognition.

Taking Fuwa as an example, it can be seen that the headdress of Fuwa is relatively complex, representing fish and waves, natural creatures, flames, antelopes and kites respectively, and all of them are carefully painted and located above the eye-catching vision, which also aims to highlight the aesthetic outlook and cultural history of Chinese culture; Compared with the trunk, arms, legs and feet vertically below, the head is larger and more eye-catching, and also carries the expression of meaning. The lower part of the image is the trunk of normal cartoon characters, which is relatively common. The mascots of the two Olympic Games also print the relevant symbols of the Olympic Games, such as the emblem and the year, in the middle of the body in the form of artistic characters. The whole picture emphasizes the visual information of the Olympic Games.

Through detailed analysis of Bing Dwen Dwen, it can be found that his exaggerated eyes occupy most of his face, which is very obvious and easy to observe; the raised left hand is on the right side of the audience, and a remarkable love expresses the friendly attitude of the Winter Olympics to connect the world with love.

3.3.2. Framing

The design of different orientations and sizes of information values can attract the receiver to watch and appreciate. Among them, the effect of attracting attention is saliency, which is related to the size, contrast, foreground background and color brightness of the main body in the picture, and also related to the degree of attraction of the audience. The composition significance of the mascot is relatively reduced from the center to the surrounding. In general, the mascot should be placed in the center of the picture to focus on its overall information value. Fuwa often stand side by side, the same size, evenly distributed in the horizontal direction in the middle of the screen, and the sequence is arranged in the colors of the Olympic rings. It is full of creativity, symbolizing the participation of people from all continents in the Olympic Committee. However, the attention of the audience is easily focused on the "Huanhuan" with high saturation, that is to say, the vision is condensed in the center of the picture; Bing Dwen Dwen first continues to use the panda image. To a certain extent, the panda conforms to Pierce's "statute symbol", and has become the world's association with China, peace loving, and affinity. Although there is only one mascot, Bing Dwen Dwen uses a pure white background plate to form a contrast, ensuring that more viewers will see the harvest.

In addition, in terms of lines and colors, Wufu uses thick and obvious lines to outline the patterns and maintain the distance between the pictures before each other. The colors are relatively rich and bright; Bing Dwen Dwen's sense of line is not clear. It mainly shows the different colors of the body area. Although the color is single, it absorbs a lot of sunshine with the background plate. The mascot image and the viewer have a specific relationship through the specific "language" of the image. Under the framework of visual grammar, the composition meaning combines the reproduction meaning and interactive meaning of the picture, so that they are well interwoven, and finally form a meaningful whole. It expresses the Olympic concept and national identity that the mascot is to display to the maximum extent, and realizes the popularity of the Olympic mascot.

4. Conclusions

From the midsummer of 2008 to the end of winter of 2022, the great changes in the past 14 years are reflected in the Olympic Games, which can be condensed into a small mascot. Through the analysis

of the visual voice frame, it can be found that from Fuwa to Bing Dwen Dwen, the visual narrative changes from the expression of "I" to the unity of "we", and from the presentation of national characteristics to the win-win cooperation of the community with a shared future for all mankind. Both Fuwa and Bing Dwen Dwen have successfully completed their missions. It is worth mentioning that Bing Dwen Dwen is deeply affected by the animation images in the Meng culture series. A great deal of attention has been paid to turning online popularity into offline media consumption, and the sales volume has far exceeded that of other mascots of the previous Olympic Games. This is also sufficient to show that the additional symbol value, cultural spirit and image value of "Bing Dwen Dwen" are widely recognized, and its visual representation and cultural identification mechanism are very effective.

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