

The Image of China at the Opening Ceremony of Beijing 2022 Winter Olympics Based on Multimodal Analysis

Cai Tianrun¹⁾, Chen Yipei²⁾, Mao Jiarui³⁾, Chen Jiahua⁴⁾, Chen Ruihan⁵⁾
^{1,2,3,4,5)}Guangdong University of Foreign Studies

*Corresponding Author
Email: 20200100197@gdufs.edu.cn

Abstract

This study aims to promote the communication and cognition of China's national image in the world by investigating the utilization of multimodal metaphors at the Opening Ceremony of Beijing 2022 Winter Olympics and the national image that the multimodal metaphors indicate. This paper utilizes the multimodal corpus that contains multiple media types such as texts, audio and images to conduct multimodal analysis and to investigate how to achieve effective transmission from three perspectives (the cognitive, emotional, and behavioral aspects). Further, in order to confirm the effectiveness of this transmission, data analysis is carried out based on the comments about the opening ceremony of Beijing Winter Olympics on YouTube. Based on the results of data analysis and discussion, the study concludes four images of China from the Opening Ceremony: a major country with firm cultural self-confidence, with the endeavor to build a human community with a shared future, with advanced science and technology, and with persistence of sustainable development

Keywords : *Beijing 2022 Winter Olympics, Multimodal Analysis, National Image*

INTRODUCTION

China has been growing up comprehensively with higher international status. Over the past 100 years, China has stood tall, become prosperous, and grown in overall national strength, achieving a historic leap from insufficient necessity supply to moderately prosperous in all respects. On April 8, 2022, President Xi delivered a speech at the summary and commendation ceremony of Beijing 2022 Winter Olympics and Winter Paralympics. It is said in the speech that the strong foundation and the most solid guarantee for this successful hosting of Beijing 2022 Olympic Games comprises not only the extraordinary organizational mobilization ability, the overall coordination ability, and the implementation ability of the socialist system, but also the solid economic, scientific, and technological strength as well as the comprehensive national power of China. As China moves further into the center of the world stage, the construction of the national image is becoming much more of importance.

The Beijing 2022 Winter Olympics is a global sports event whose successful hosting is conducive to "telling China's stories and conveying China's voice". According to statistics, the rating of its opening ceremony has reached a record high at home and abroad, with 316 million viewers in Chinese mainland, and 500 million viewers worldwide, which is by far the highest among all the other Winter Olympic events. Such mode of live broadcast with topic-central focuses and high ratings from all over the world provides a platform and opportunity for better construction and dissemination of China's image (Xue, Zhang&Hu, 2022).

According to Zhang (Zhang, 2022), the national image, constructed by different dimensions, such as society, politics, economy, culture, science and technology, is rich in connotation and is a comprehensive judgment and evaluation of a country from cognitive, aesthetic, and emotional aspects. Therefore, as an important part of the country's soft power, the national image is of great significance for enhancing the country's international status and comprehensive national power. Meanwhile, it also plays a key role in the process of cross-cultural communication.

Further, it is feasible to shape and construct the national image through various methods. Many countries have already effectively used new media to enhance the recognition from the public and the reputation of their national images. For instance, the video of London's 2012 Olympic for bidding has successfully broken the stereotype and prejudice of "an old-fashioned, arrogant and haze" image of Britain. From the perspective of visual culture communication, it successfully reflects the concept of Olympic and the spirit of advocating fitness for all in an ingenious way and it also displays the unique urban charm and the cordial image of humorous British people (Tang, 2009). Moreover, the analysis of Japan's national image propaganda film reflects that Japan is a country characterized by rapid economic development and rich cultural heritage, with compatibility between Chinese and Western culture from the perspective of narration in 4 aspects: narrative plots, narrative characters, narrative environment, and auxiliary narrative symbols (Hu, 2016).

To sum up, in terms of the researches on the construction and communication of national image, most of them pay more attention to the analysis of the propagating methods from the perspective of communication study, and draw conclusions about the corresponding target questions. However, the conduction of the study on the national image from the perspective of discourse is relatively fewer, and even fewer from the perspective of multimodal metaphor. Therefore, based on the theory of multimodal metaphor, this study analyzes the national image of the opening ceremony of the Beijing 2022 Winter Olympics through extracting programs and modes by classification. After presenting a clear reflection relationship with detailed and powerful analysis, this study finally summarizes a more objective and vivid image of China.

According to Zhang Delu (Zhang, 2009), multimodal discourse refers to the phenomenon of the application of multiple senses such as hearing, vision, and touch to communicate through various ways and symbolic resources such as text, images, sounds, and actions. Therefore, the multimodal metaphor is widely used and quickly accepted in that it can use the multiple senses of people to attract the attention of the recipient, and the practice of multimodal together with metaphors is on the rise. In addition, with the popularization of multimodal in the information age under globalization, the importance of multimodal metaphor research has become increasingly prominent (Zhao, 2011). Therefore, multimodal metaphors are also an important way for countries to construct and communicate their images.

Further, many scholars have studied and analyzed the importance of using multimodal metaphors in communication. Lan Chun and Cai Ying (Lan&Cai, 2013) take the advertisement of Head & Shoulders as an example, conducting cognitive linguistics research on multimodal metaphors in TV advertisements. Besides, Sun Yi (Sun, 2012) applies multimodal discourse meaning construction on the emblem of the 2011 Xi'an World Horticultural Expo. With "Spider-Man 3" and "Operation Red Sea" as examples, Li Wanrong (Li, 2021) conducts a multimodal metaphor analysis to compare Chinese and American heroic movie posters. Moreover, Xi Yayun and Liu Liang (Xi&Liu, 2023) focus on a multimodal discourse study of the documentary "Years of Mountains and Rivers".

This study takes the opening ceremony of Beijing 2022 Winter Olympics which has a wider and greater influence as the research object. Based on the theory of multimodal metaphor, it systematically expounds and analyzes this event. Instead of limiting to the study of each modality, the interpretations and constructions of the image of China are studied between multiple modalities.

Under multi-modality, some studies have analyzed propaganda materials, such as political documentaries and national publicity film, and have contributed to the construction and publicity of national image. For instance, Zhai Yalin (Zhai, 2021) analyzes the propaganda video of the 14th national sports meeting of China from the perspective of multimodal critical discourse

analysis, and discovers an international metropolitan city image with enthusiasm, vitality, and technological innovation through the combination of sound and visual modes.

However, there are many new materials about national image which can better display the latest idea of the national image. Among them, the opening ceremony of Beijing 2022 Winter Olympics presents many wonderful programs with Chinese characteristics, which is an important stage for the construction and communication of the image of China. Therefore, this study investigates the multimodal metaphor employed in the opening ceremony of the Beijing Winter Olympics. To some degrees, it also provides ideas and suggestions for a better usage of multimodal metaphor to shape the image of China and spread it to the world.

Based on the analysis of Liu (Liu, 2002), mass communication is ubiquitous, which can make the audience accept the facts and information in a subtle way. It is a vital channel for a country's image to be accepted by the international community. Meanwhile, Fan (Fan, 2013) emphasized the effectiveness of "systematic communication" in the communication of national image. In other words, it is necessary to use multi-media communication methods and carry out diversified communication activities.

The above two literatures analyze the effects of mass communication and "systematic communication". In the era of widespread use of new media, a variety of media can make the audience have emotional resonance in different aspects and improve the communication effect. Therefore, our paper analyzes the communication effectiveness of the Beijing Winter Olympics from three aspects: emotion, cognition and behavior.

To sum up, based on the multimodal metaphor theory, this study systematically analyzes the opening ceremony of the Beijing Winter Olympics, and tries to construct a framework for the study of national image from multiple perspectives and aspects, which could be used to supplement the research on the shaping and dissemination of national image in large-scale stage performances from a multi-modal perspective.

RESEARCH METHODS

Multimodal metaphorical communication plays a crucial role in national image communication, and the key to construct a communication model is to study the way of national image communication from the perspective of multimodal. Multimodal analysis is widely used to explore the interaction between different cultures, languages and symbols, which can help us better understand the cultural differences and the diversity of language symbols, so as to build an effective and practical communication model. This process requires a large amount of objective data and a complete theoretical system. Based on this, we take the opening ceremony of the 2022 Beijing Winter Olympics as the research object and propose the following research methods for model construction:

A multimodal corpus is a corpus that contains multiple media types, such as text, audio, video and image. Since the metaphorical analysis of multimodal discourse requires the use of a large amount of corpus data, in this study, we collected corpus of the opening ceremony of the 2022 Beijing Winter Olympics by taking screenshots, and established this multimodal corpus, which includes images, music, actions, words, etc. We will extract data from the constructed corpus and carry out multimodal metaphor analysis, so as to analyze the positive significance of multimodal discourse to the construction of national image.

Metaphor has always been regarded as a linguistic phenomenon and a rhetorical mode which only exists in language. In essence, metaphor is to explain and explain one kind of things to another kind of things, thus extending the meaning of things themselves. In addition, Lakoff suggests that metaphors are often mapped from a relatively familiar, easily understood, concrete

source domain to another relatively unfamiliar, difficult to understand, abstract target domain. This mapping is unidirectional and irreversible (Lakoff, 1980).

Based on the statement of Forceville (Forceville, 2009), modals are “symbolic systems that can be interpreted using specific perceptual processes.” From this point of view, the modal is essentially a symbolic system, readers can use a variety of sensory organs to interpret the modal.

Forceville (Forceville, 1996) divides metaphor into unimodal metaphor and multimodal metaphor. In multimodal metaphor, the source and target domains of the metaphor need to be realized through more than one mode, such as image symbols, written symbols and music. For instance, the cartoons and short videos we usually see are expressed through multimodal metaphors.

Just like the opening ceremony of the Beijing Summer Olympic Games in 2008 and the opening ceremony of the Beijing Winter Olympic Games in 2022, the Chinese government can make good use of these opportunities to promote China's excellent culture and tell good Chinese stories to the world. Due to the characteristics of sensibility, cross-culture and precision of multimodal metaphor, more people with different cultural concepts can better understand China.

Therefore, we need to pay attention to the understanding and research of multimodal metaphor, fully analyze its propaganda effect, and provide theoretical reference for the better dissemination of China's image in the future.

In the book *“Image Metaphor in Advertising”*, Forceville (1996: 109—164) divides pictorial metaphor into the following four types: only one source domain and one target domain is present, and the other is absent; Integration of source domain and target domain; Concatenation of source domain and target domain; Word-image metaphor. Figure 1 summarizes the Forceville quadrangle into three categories: the presence of either source domain or target domain, the co-occurrence of source domain and target domain, and text-image metaphor.

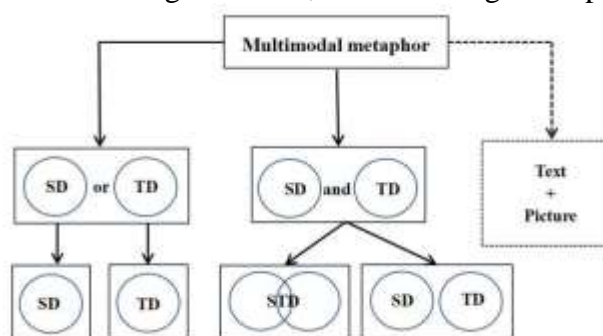


Figure1. Type of Pictorial Metaphor

Based on the above, we raise the following two questions:

- 1. What are the multimodal metaphors in the opening ceremony of the Winter Olympics?**
- 2. What images of China are generated through multimodal metaphors?**

The solution of these two problems will further help us to understand the metaphorical and symbolic meanings in the opening ceremony more comprehensively, and let us better understand the multiple levels and pluralism of Chinese culture, so as to build a complete set of Chinese image communication model based on multi-modal analysis, and promote the international communication and cognition of Chinese image.

In addition, we will take the theories of multimodal metaphor as the theoretical basis for the research, and conduct the following research on the metaphors behind different modalities in the opening ceremony of the 2022 Beijing Winter Olympics from the perspectives of corpus perception and discourse transmission

RESULT AND DISCUSSION

Multimodal Discourse Analysis of the Opening Ceremony

a. Pictorial Modality

The opening ceremony of the Beijing Winter Olympics used huge LED screens, advanced image processing technology, lighting effects and stage Settings to showcase elaborate programs. For example, the show “*Olympic Rings in Ice*” shows the integration of science and technology with excellent traditional Chinese culture. In the presentation of “the water of the Yellow River”, AI technology deconstructs and reshapes traditional Chinese ink painting, simulates the unique brush strokes and ink colors of this traditional painting style, and presents the dynamic portrait of “the water of the Yellow River” created by artificial intelligence in real time, bringing unique visual feelings to the audience. At the same time, the venue's ultra-high-definition LED three-dimensional stage and Ice Cube played an important role in the visual presentation. The application of these technologies enables the audience to not only feel the charm of traditional Chinese culture, but also experience the visual feast brought by science and technology during the process of enjoying the program.

b. Textual Modality

Language is divided into two categories: pure language and adjoint language (Zhang, 2009). Here, the textual modalities mainly refer to the subtitles in the “24 Solar Terms” countdown video program, that is, the text in pure language.

In the process of cultural communication, the communication subject needs to use the language that the audience can understand to communicate and exchange, so as to improve the audience's affinity for the communication content (Yang& Zhou, 2021).

For example, in the countdown video of “24 Solar Terms” reflecting “White Dew”, the Chinese verse “露从今夜白，月是故乡明” (meaning: Dew turns into frost since tonight; The moon viewed at home is more bright.) is presented at the bottom of the screen, with English subtitles “White Dew”. The English subtitles simplify the context of the Chinese verse, making it easier for the audience to understand the message the scenes are trying to convey. The textual modality and the pictorial modality complement each other and enhance the expression of emotion.

c. Auditive Modality

The auditive modalities in the opening ceremony of Beijing Winter Olympics mainly refer to the music appearing in different programs. As a cross-border ideographic language (Yang& Zhou, 2021), music not only resonates with audiences from different countries, but also enhances the appeal of the program's thought expression.

At the same time, the combination of auditive modality and pictorial modality played a mutually reinforcing role in the opening ceremony. Music can give emotion and energy to the visual images created by the organizers, making them more vivid and three-dimensional. In addition, the music used in the opening ceremony will combine music rich in Chinese elements with Western classical music and popular music, increase the audience's understanding and recognition of the excellent traditional Chinese culture, and promote the exchange and integration of different cultures.

d. Color Modality

The color modality in this article refer to the color symbols appearing in the program. Color symbols mainly involve a single hue or a variety of color combinations, and have rich metaphorical meaning and cultural significance (Zhong& An, 2023).

During the opening ceremony of the Winter Olympics, different colors also represent different meanings. The use of these color symbols in different programs has a common feature —— it can make the audience from all over the world have a common feeling, and will not cause misunderstanding due to different ethnic groups' different understandings of the same color or differences in cultural backgrounds.

Through these universally accepted color symbols, audiences around the world can get a common emotional experience, thereby promoting the dissemination of Chinese images in a more objective form.

The Image of China Based on Multimodal Metaphor

a. The Image of China with Cultural Power and Confidence

Analyzing the Beijing 2022 Winter Olympic Games Opening Ceremony from the perspective of multimodal metaphors, the first image of China is “The Image of China with Cultural Power and Confidence”. Chinese culture is the common spiritual home of the Chinese nation, the unique spiritual identity of the Chinese nation and an important perspective for the world to know and observe China.

A large number of modal representations involving traditional Chinese culture appeared in the Beijing 2022 Winter Olympic Games Opening Ceremony. They are the original bases for the construction of the metaphorical scenarios of traditional Chinese culture (Zhong&An, 2023), such as the program “Countdown: Beginning of Spring” and “Olympic Rings in Ice”, which contain a lot of Chinese cultural elements. According to the context of knowledge, the “24 Solar terms” is a significant representative of “fine traditional Chinese culture”. Therefore, the program is apparently interpreting the “24 Solar terms”. In fact, it maps the theme of the program “Fine Traditional Chinese Culture is profound and has a long history” through metaphors. As a result, the multimodal metaphorical mapping relationships between the two shows (“Countdown: Beginning of Spring” and “Olympic Rings in Ice”) and Chinese traditional culture are shown in Table. 1.

| Modality | Program | Image | Mapping | | Time | |
|-----------|---|--|---|---|---|-----------------------------|
| | | | Source Domain | → Target Domain | | |
| Pictorial | Countdown: Beginning of Spring | An ice-snow athlete looks out at the moon in the distance | Looking out at the moon in the distance | → | Chinese people's feeling of homesickness | 00:37:45-00:37:47 |
| | | People light up the antique lanterns | Lanterns | → | Chinese people's inheritance of Fine Traditional Chinese Culture | 00:37:49-00:37:50 |
| | | A huge full moon hangs over the skyscrapers in the city and people are enjoying it | People in the city are enjoying the moon | → | The combination of traditional customs and modernization in the Mid-Autumn festival | 00:37:50-00:37:56 |
| | | Skiers leap to the moon in a jumping position | Jumping | → | Chinese people will overcome different hurdles and head for a brighter future | 00:37:50-00:37:56 |
| | Olympic Rings in Ice | The Yellow River winds down from a high mountain and flows eastward | The Yellow River | → | Chinese people's enthusiasm and hope for the future | 00:48:16-00:48:48 |
| | | 24 laser beams engrave "Ice Cube". | 24 laser beams | → | 24 Winter Olympic Games | 00:49:30-00:51:10 |
| | | | Engraving "Ice Cube" | → | Recording this history and time | |
| | Olympic Rings "break the ice" in the Ice Cube | "Breaking the ice" | → | China's good intentions to break down barriers, resolve conflicts and understand each other | 00:51:10-00:52:10 | |
| | Textual | Countdown: Beginning of Spring | "Dew turns into frost since tonight; The moon viewed at home is more bright." | The moon | → | The feeling of homesickness |
| Auditive | Olympic Rings in Ice | The Yellow River winds down from a high mountain and flows eastward | Impassioned folk and symphonic music | → | The surging Yellow River | 00:48:00-00:48:30 |
| Color | Olympic Rings in Ice | The main color is blue | Royal blue | → | Winter; the history and glory of the Beijing 2022 Winter Olympic Games | 00:48:00-00:48:30 |

Table. 1 Metaphors about Culture

In terms of Pictorial Modality, the program "Countdown: Beginning of Spring - White Dew" presents the classic imagery of the "White Dew" season and the moon. "White Dew" is near the Mid-Autumn Festival, so the clip also shows the Chinese custom of lighting lanterns and enjoying the moon during the Mid-Autumn Festival. Ice-snow athletes are looking out at the moon and all of the Pictorial Modality reflects homesickness. In addition, the lanterns symbolize the exquisite craftsmanship of traditional handmade items, reflecting ancient Chinese aesthetics. The application of the Pictorial Modality metaphorically demonstrates the Chinese people's commitment to the preservation and development of Fine Traditional Chinese Culture.

In “Olympic Rings in Ice”, the Pictorial Modality of “Yellow River”, which is known as “the cradle of the Chinese nation's spirit”, is used as the entry point. The Yellow River is the mother river of China and is mapped onto the “Chinese people”.

In the Textual Modality, the poem “Dew turns into frost since tonight; The moon viewed at home is more bright” appears in “Countdown: Beginning of Spring”, which complements and interacts with the Pictorial Modality. It is mapped onto the target domain of “Chinese people’s feeling of homesickness”.

In terms of Auditive Modality, the background music of “Olympic Rings in Ice” adopts traditional Chinese folk music as the cushion and orchestral music as the dominant, spreading out like a wave of water in a generous and impassioned manner. The Auditive Modality of folk music and symphony in the source domain are mapped onto the “the surging Yellow River”.

Concerning Color Modality, the entire scene of the “Olympic Rings in Ice” is dominated by royal blue which symbolizes winter and is the main color of the Opening Ceremonies of the previous Winter Olympics. The royal blue color has its unique origin and meaning in Chinese so it is a traditional Chinese color and utilized to reflect the history and glory of the Beijing 2022 Winter Olympic Games.

These typical Chinese cultural images shown through multimodal metaphors are the cultural deposits constructed by the national image. The utility of multimodality and the interaction and combination of different modalities highlights that China is a cultural powerhouse with cultural confidence and diversity. At the same time, it lets the world know that China has done great contributions to the splendid civilization of mankind.

b. The Image of China with Endeavors to Build a Shared Future

Analyzing the Beijing 2022 Winter Olympic Games Opening Ceremony from the perspective of multimodal metaphors, the first image of China is “The image of China with Endeavors to Build a Shared Future”. Peace and Development is the theme of the times and the common aspiration of all mankind. Promoting a Community with a Shared Future for Mankind is the Chinese Approach that responds to the expectations of people from all countries. “Through ceremonies, the world of existence and the world of imagination merge with the help of a set of symbolic forms and become one world, constituting spiritual consciousness.” (Guo, 1999) The Opening Ceremony uses pictorial and other multimodal metaphors to construct cultural ceremonies, such as the shows “Forming a Snowflake” and “Tribute to the People”, which present a variety of modalities focusing on the communication between the Chinese people and the people from other countries. The combination of the Chinese culture and the different cultures in the world with the specific mapping relationships is shown in Table. 2.

| Modality | Program | Image | Mapping | | Time |
|-----------|-----------------------|--|---|-----------------|---|
| | | | Source Domain | → Target Domain | |
| Pictorial | Forming a Snowflake | The guides gather in the center, holding small snowflakes with the names of the participating countries | Small snowflakes with the names of the participating countries gathering | → | All countries getting together 02:02:00 - 02:07:40 |
| | | The backdrop of the first sunshine showers down on the earth as the set | The sunrise | → | The hope of the global village 02:05:20 - 02:07:42 |
| | | Small snowflakes gather to become a big snowflake | A big snowflake with the name of each country written on it | → | A Community with a Shared Future for Mankind 02:05:03 - 02:05:16 |
| | | The snowflakes are held together by olive branches | Olive branches | → | Peace 02:05:16 |
| | Tribute to the People | Dozens of young people from all over the world march side by side | Young people from all over the world marching side by side | → | The unity of people around the world 02:27:25 - 02:29:00 |
| | | Images of people's lives around the world and athletes' efforts unfold after the young people walk by | Images of people's lives around the world | → | Ordinary lives of the people containing extraordinary power 02:27:25 - 02:29:00 |
| | | On both sides of the image is a Chinese knot pattern that gradually changes to the slogan "Together for a Shared Future" as the scroll unfolds | A Chinese knot pattern becoming the slogan "Together for a Shared Future" | → | Chinese people's call for the unity and love of people around the world 02:28:45 |

| Modality | Program | Image | Mapping | | Time | |
|----------|-----------------------|--|---|-----------------|--|---------------------------|
| | | | Source Domain | → Target Domain | | |
| Auditive | Forming a Snowflake | The background music of “Forming a Snowflake” | A blend of bel canto, children’s chorus, popular singing style, natural singing style, folk singing style | → | The world gathering in Beijing at this very moment. | 02:02:00 |
| | | | A blend of cultural elements from China’s 56 ethnic groups | → | Chinese sound and Chinese power | - 02:07:40 |
| | | | The crescendo passages having a powerful cascade of vocals | → | Cultural Confidence and National Confidence | |
| | Tribute to the People | The background music <i>Fill the World with Love</i> | Song lyrics | → | The connection of all people in the world; the theme of the times: Peace and Development | 02:27:25 - 02:29:00 |
| Color | Forming a Snowflake | The blue and white color | Blue and white | → | Romantic, beautiful, white and pure | 02:02:00 - 02:07:42 |
| | | The large snowflakes fall to the ground and emit a golden light that illuminates the earth | A beam of golden light | → | The power of human solidarity | 02:06:32 - 02:06:40 |
| | Tribute to the People | Colorful clothes on the youth | Colorful clothes | → | People from different countries | 02:27:25 |

Table. 2 Metaphors about Solidarity

In terms of Pictorial Modality, the show “Forming a Snowflake” features a scattering of small snowflakes with the names of the participating countries, which gradually converge and eventually weave together into a large snowflake through an olive branch, conveying the fact that the ties between countries and their dependence on each other are more frequent and closer than ever. It implies China’s hope for the building of a Community with a Shared Future for Mankind.

In the show Tribute to the People, regarding Pictorial Modality, the image of young people from different countries walking side by side metaphorically expresses the solidarity of all human beings. As they walk by, an image unfolds of moments in the lives of people from all over the world, metaphorically presenting the great power of the people in their ordinary lives.

In terms of Auditive Modality, the singing style of the dance music of “Forming a Snowflake” incorporates bel canto, children’s chorus, popular singing style, natural singing style and folk singing style. They metaphorically express that the world gathers in Beijing at this very moment through music.

In the field of Color Modality, the different clothes that the young people are wearing in the show “Tribute to the People” are mapped onto people of different races and regions.

The multimodality of these two shows is combined, expressing the cultural connotation of the Chinese nation that transcends countries and ideologies by means of metaphors. It reflects

China's cultural deposits like "Peace under Heaven" and shows the image of China of "Upholding the Spirit of Agreeing to Disagree, Promoting a Community with a Shared Future for Mankind".

c. The Image of China with Advanced Science and Technology

From a multi-modal metaphorical analysis of the opening ceremony of the Beijing Winter Olympics, the third image of China was constructed as "The Image of China with Advanced Science and Technology". China has made significant strides in technological advancements and innovation, which has led to high-quality development both socially and economically. The Beijing Winter Olympics' opening ceremony was a true spectacle that used cutting-edge technology to deliver a breathtaking audio-visual feast for the audience. During the performance of "Olympic Rings in Ice" and "Forming a Snowflake," technological elements were seamlessly integrated into the choreography, providing an immersive experience for the audience's visual, auditory, and other senses. This perfect fusion of science and technology with artistic expression showcased China's impressive scientific and technological prowess, and helped to shape the country's image as a global leader in these fields. Table 3 displays the exact mapping relationships.

| Modality | Program | Image | Mapping | | Time | |
|-----------|----------------------|--|---|-----------------|---|-------------------|
| | | | Source Domain | → Target Domain | | |
| Pictorial | Olympic Rings in ice | Yellow River Coming from the Sky | Dynamic image of "Yellow River Water" created by artificial intelligence in real-time | → | The Strength of Chinese Technology | 00:48:00-00:48:48 |
| | | Olympic Rings "break the ice" in the Ice Cube | The biggest 3D stage with ultra-high-definition LED lighting in the world. | → | China's Technological Innovation Strength | 00:51:10-00:52:10 |
| | doves of peace | Snowflakes will be generated wherever the child walks with a white dove model. | The AI technology captures live interactions of people on the screen in real-time. | → | China's technological boom | 02:41:46-02:45:00 |
| Auditive | Olympic Rings in Ice | Olympic Rings "break the ice" in the Ice Cube | Electro, Symphony | → | The excitement of "breaking the ice" and the dynamism of China's science and technology innovation | 00:51:10-00:52:10 |
| | doves of peace | Children's chorus song "Snowflake" | Childish voice | → | The character of the people is improving. China's "future" rests on the children, echoing the theme "Together for a shared future". | 02:41:46-02:45:00 |
| Color | Olympic Rings in Ice | The main color is blue | Royal blue | → | Technology, purity, winter and the history and glory that the Beijing Winter Olympics hold | 00:48:00-00:49:30 |

Table. 3 Metaphors about Science

In terms of Pictorial Modality, the program "Olympic Rings in Ice" employs artificial intelligence to produce the captivating real-time image of "Yellow River Coming from the Sky". This is complemented by the world's largest high-definition LED three-dimensional stage, providing viewers with an unparalleled visual experience.

The program known as "Doves of Peace" incorporates advanced AI technology to capture and engage with a vast audience of over 600 individuals in real-time on screen. The technology generates snowflakes beneath the actors' feet, which vary in posture and shadow, resulting in a mesmerizing and interactive effect. This groundbreaking development represents China's rapid

progress and prosperity in the field of science and technology, particularly in regards to large-scale real-time interactive effects based on AI.

In terms of Auditive Modality, the "Snowflake" children's choir in the "Doves of Peace" program produces a highly infectious sound that metaphorically represents China's future being in the hands of its children. This echoes the Winter Olympics theme, "Together for a shared future."

These two video clips showcase the integration of advanced technology into Chinese culture, highlighting the rich cultural heritage and the seamless combination of modern technology. The metaphorical representation demonstrates is a testament to the Chinese government's unwavering commitment to build the country as a world leader in the field of science and technology, while simultaneously celebrating the nation's unique cultural identity. By showcasing the latest advancements in science and technology, China aims to demonstrate its continuous breakthroughs in this field to the rest of the world, solidifying its position as a forerunner in the realm of technological innovation.

d. The Image of China with Persistence of Sustainable Development

When analyzing the opening ceremony of the Beijing Winter Olympics with a focus on multi-modal metaphors, one of the images that stands out is "The Image of China with Persistence of Sustainable Development". The concept of "uniting human and universe," which is deeply ingrained in Chinese civilization, serves as a reminder of the importance of maintaining a harmonious relationship between humans and nature. As such, the adoption of green development practices has gained significant momentum in China and around the world. The Opening Ceremony of the Beijing Winter Olympic Games was centered on the theme of environmental protection, showcasing China's unwavering dedication to green development and its cultural principles of upholding nature. Through the skillful implementation of multi-modal elements, China's stance as a formidable supporter of sustainable development was effectively communicated. A detailed mapping relationship, as outlined in Table 4, was employed to achieve this portrayal.

| Modality | Program | Image | Mapping | | | Time |
|-----------|-----------------------|--|---|---|--|-------------------|
| | | | Source Domain | → | Target Domain | |
| Pictorial | Eco-friendly ignition | The Olympic Flame Burns | Burning Olympic Flame | → | The Living Olympic Spirit | 02:58:19-02:59:02 |
| | | The Olympic flame is transformed into a small, holy flame like a snowflake. | "Micro-fires" instead of large fires | → | The concept of environmental protection and low-carbon sustainable development; the green concept of running the Olympic Games | |
| | | The torch has a sleek design that resembles nature, hovering upwards. | Torches resemble plants in nature, as they also grow upwards. | → | Green development | |
| Auditive | Eco-friendly ignition | (Narrator) "It practices the creative principles of simplicity, splendor, and sustainable use." | The narration | → | Sustainable development | 02:58:19-02:59:02 |

Table. 4 Metaphors about Environment

Concerning Pictorial Modality, the Olympic fire, a symbol of strength and endurance, has been transformed into a small flame in China's efforts to promote low carbon and environmentally friendly practices. This sends a message of China's dedication to green development, conserving resources, and protecting the environment. The "micro-fire" represents the vitality of the Olympic spirit, even in its smaller form.

In the field of Auditive Modality, the narration accompanying the visual states, "Its practice of the creative principles of simplicity, splendor, and sustainable use," which shows China's dedication to advancing worldwide sustainable development and using their knowledge and power to build a prosperous, clean, and beautiful world.

By utilizing different methods and effectively implementing their interactions, the program symbolically showcases China's dedication towards environmental protection, and their active pursuit of the principle of "Sustainable Development". This demonstrates China's image as a leading nation committed to green environmental protection, while also highlighting the contribution they have made towards the global environment.

Analysis of Communication Effectiveness

According to communication expert DenisMcQuail's book *Audience Analysis*, "The interactive and composite nature of new media has not only expanded audience behavioral patterns but has also led to the emergence of new representations that differ from traditional media

environments in terms of cognitive and communication styles.” The communication technology utilized during the opening ceremony of the Beijing Winter Olympics exemplifies this notion.

This study aimed to analyze the effectiveness of communication during the Winter Olympics Opening Ceremony. To do this, a corpus of comments was collected from social media platform YouTube and analyzed for data. The results showed that the Winter Olympics Opening Ceremony had a positive impact on communication effectiveness. According to communication science theory, "communication effect" refers to the changes in knowledge, emotion, attitude, and behavior that occur after receiving information. This concept measures the extent to which communication activities achieve the communicator's intention or purpose. (W.Schramm&W.E.Porter, 1984)

Here's a selection of YouTube comments and their analysis in Table5:

| Serial Number | Commentary |
|---------------|---|
| 1 | This was for me the most beautiful Opening Ceremony of Olympic games (until now it was London :-D). I cried many times with a joy when I watched it, loved children's choirs and this song Snowflakes. Olympic anthem is soooooo difficult to sing and these children were amazing! Bach had great speech (and during closing ceremony is was great too). I loved all the simple but very important symbols - doves, olive branches, this beautiful snowflake, children, heart... China, thank you for this amazing experience. I will have it in my heart for all my life! |
| 2 | OMG! SO SO SO BEAUTIFUL! Thanks so much for everyone did such a great job for Beijing Olympic! I really enjoy the Ceremony, every moment in the show, really fantastic! Unbelievable, it looks like an art film, the best show ever. |
| 3 | Wow this moment took my breath away! So mesmerizing, elegant, and romantic! This opening ceremony is very different from the one in 2008. The Beijing 2008 ceremony was about China, and China's history/culture. The director was making the statement that China finally arrived on the world stage. 14 years later, the Beijing 2022 ceremony is about the world, and the earth/the water/the air/the seasons, and a shared future of all mankind. It is at a whole new level, even though it might not appear as grand as the 2008 one |
| 4 | This is a love song from Chinese to all Chinese and people around the world. I just keep back my tears now. |
| 5 | The opening ceremony has many profound cultural connotations. Even for the Chinese people, it is also a cultural feast. I also like the final main torch design, low- carbon and environmental protection, and embodies the concept of global village! We are same, we can go into the future hand in hand! |
| 6 | The first time I watched it, I woke up late and only saw the final torch lighting segment, and I was a bit confused. However, after watching the whole thing, I am really glad Zhang, Yimou and the team took the more abstract and conceptual storytelling approach to this Winter Olympics ceremony. It is certainly quite different from the 2008 opening ceremonies which was also directed by him. Overall, it is a very thoughtful show, especially how the large snowflake was made. This ceremony also reminds me of his first wuxia film, "Hero", which focused on a more simplistic and poetic aesthetics. |
| 7 | the countdown, and the water pouring down from heaven... just beyond imagination! so beautiful, so creative and so culturally rich! |
| 8 | My favorite is the countdown. Growing up, I always have a romantic interpretation of the 24 seasons. They often appear in poetry, precisely describing the time and its environment, full of romantic feelings. Also, the 24 seasons create a cycle as a whole, which gives an interesting philosophical view of life. |
| 9 | When the music against war-Imagine)sounded When the children waved the doves of peace and formed a heart, they hugged the big snowflakes of the olive branch |
| 10 | This opening ceremony was the most fantastic show I have ever seen and the snowflake sculpture made the perfect Olympic cauldron and it was beautiful and I was blown away by the song the kids did before the Olympic flame came and during the cauldron lighting. |

Table. 5 YouTube Comments and Their Analysis

a. Analysis of communication effects at the cognitive perspective

As per its definition, the cognitive perspective of communication effect refers to how external information affects a person's perception and memory systems, resulting in either an increase in knowledge or a change in the way they understand things. Cognition is the fundamental mental process of individual knowledge and understanding, including attention, sensation, perception, and memory. During communication, the Winter Olympics Opening

Ceremony's profound Chinese cultural references initially capture the audience's attention. Then, through the audience's perception and memory, effective communication is achieved.

Firstly, attention is the act of focusing one's mental activity or consciousness on a certain object. The increase in audience attention to the opening ceremony of the Winter Olympics is reflected in the fact that at the beginning of the ceremony, spectators from different national regions around the world began to allocate their attention resources to the opening performance.



Figure 2. Keyword Cloud Map

Additionally, the research sample was broadened by examining the word cloud of nearly 2,000 comments gathered from the comment database. The findings revealed that expressions of positive and agreeable emotions were prevalent, with overall assessments such as beautiful, amazing, awesome, wonderful, excellent, fantastic, and elegant being the most frequent.

Thirdly, perception is the cognitive process by which the human brain interprets the collective properties of external stimuli that directly interact with the sensory organs, and is formed on the foundation of sensory input. When evaluating a chair, individuals tend to first consider its color, shape, and function before forming a holistic perception of the object as a whole. This perception then allows them to make a final judgment on whether or not the object is indeed a chair. The overall evaluation of the Winter Olympics opening ceremony is often shaped by people's perceptual reflection. As the host, China infused its own cultural characteristics into many of the programs, all rooted in the excellence of Chinese culture. Thus, the setting effect of perception implies that the audience's preexisting perceptual framework of Chinese culture will lead to a relatively uniform and stable stereotype, thereby influencing their perception of the opening ceremony. The innovative program design of this year's Opening Ceremony appears to have left a lasting impression on a broader audience, potentially reshaping their perception of China. Feedback gleaned from our comment database revealed one audience member likening the spectacle to "an art film" — a glowing review that speaks to the ceremony's ability to captivate and impress on a sensory level.

However, we couldn't gather more information regarding the viewer's previous evaluations due to the comments' nature, which highlights the constraints of this particular part of the analysis. Likewise, the study doesn't delve deeper into the memory aspect of perception due to the limitations of the research methodology.

In terms of cognitive communication effectiveness, the Winter Olympics opening ceremony was highly successful in garnering positive attention and evaluation. This indicates the ceremony's proficiency in communication strategies.

b. Analysis of the effect of empathy at the emotional level

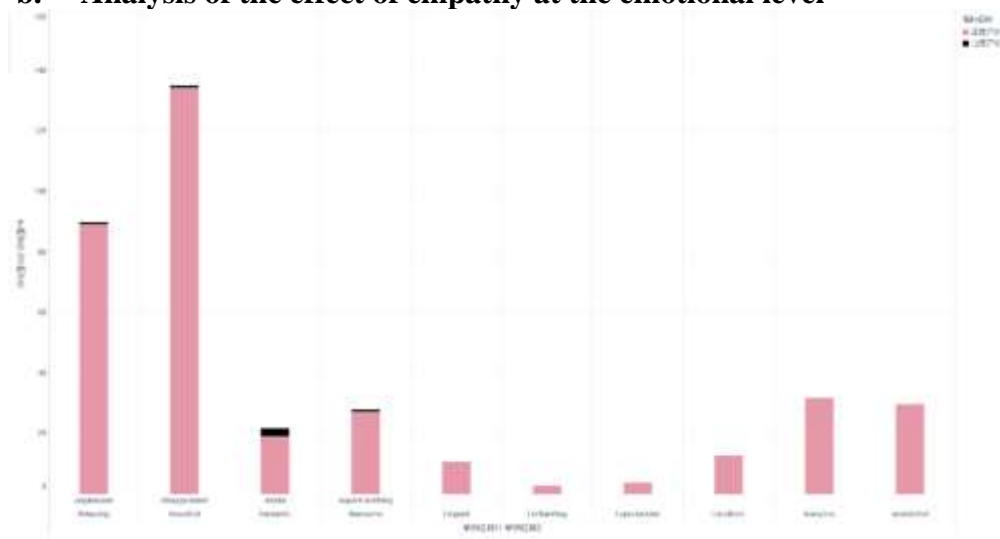


Figure 3. Comparison between Positive and Negative Reviews

Empathetic communication creates a likable image. The so-called empathy (empathy, also translated as "empathy", "empathy") refers to a person's ability to understand another person's unique experience and respond to it. Empathy enables a person to empathize with another person and act altruistically (Fei, 2019). The generation of empathy contains "Emotional Contagion" (Emotional Contagion), "Perspective Talking" (Perspective Talking) and "Empathic Attention Empathic Concern" (Empathic Concern) three components or three stages. Love is the foundation of empathy, and communication promotes empathy. From this point of view, positive empathic communication can promote wider recognition, identification or consensus. Therefore, empathy communication is an important way to shape the image of lovely China.

The Winter Olympics brings together countries with different interests and demands in various regions and customs in the form of sports. The opening ceremony of the Winter Olympics is able to break the distinction and boundaries between countries, nationalities, cultures, political ideologies, etc., which provides an important cultural interpretation of the ideal state of a commonwealth society in the ideal sense, and this is also the best moment for empathic communication. (Song& Yao& Li& Yang& Zhang, 2021)

Empathy rituals not only have an impact on people defining political reality on a cognitive level, but also have an important influence on emotions.(David, 2015) The "disintermediation" feature of global media events allows the country in question to directly reach out to a global audience, and through empathic communication triggers the audience to resonate with it, stimulating a sympathetic experience that can even "share in the internal feelings of another country" (Daniel& Elihu, 2000) Based on the emotional support provided by empathy, the national image is more likely to become a cognitive consensus, i.e., to be recognized and accepted by many actors in the international community.(Zhang &Zhang , 2019) (Xue& Zhang&Hu, 2022)

In addition, during the opening ceremony, viewers around the globe experience sensory perception of objective things such as music, images, words and gestures used in the program. Due to the differences and stages of culture and individual physical and mental development, people have a rich variety of feelings about things. The countdown of the twenty-four seasons presented innovatively in the Winter Olympics Opening Ceremony has been described as "the countdown, and the water pouring down from heaven... so beautiful, so beautiful, just beyond imagination! just beyond imagination! so beautiful, so creative and so culturally rich!" In summary, this viewer felt that the countdown was beautiful, creative and culturally rich.

Therefore, on an emotional level, this audience member generated rich and positive feelings, reflecting a positive evaluation of the Opening Ceremony.

c. Analysis of the effectiveness of advocacy at the behavioral level

According to an article by the Australian Broadcasting Corporation (ABC), the choreography and visual effects of the opening ceremony of the Beijing Winter Olympics were amazing, but what was more impressive was the idea of "one world" throughout, which prompted people to pay attention to and think about how the Olympics can bring people together, which is also the mission of the Olympic movement.

After people watched the opening ceremony of the Winter Olympics, the changes that occurred at the cognitive level and emotional attitude level were reflected in words and deeds, i.e., the impact at the behavioral level, behind which the effectiveness of communication is reflected.

First, the total number of comments on YouTube for the Beijing Winter Olympics Opening Ceremony is as many as 3,620, and viewers from different countries and regions have left their feelings about watching the Opening Ceremony, which reflects the action behavior on the level of words.

Secondly, through the analysis of the effectiveness of communication at the cognitive level and affective-attitudinal level, it can be concluded that the multimedia publicity channels of the Winter Olympics Opening Ceremony enabled the audience to give immediate behavioral feedback, which was reflected in the tracking reports of famous news media, such as the articles of the Australian Broadcasting Corporation (ABC), the high level of attention to the Olympic Games events, such as the record-high communication data of the Winter Olympics Opening Ceremony at home and abroad, with the number of people watching it globally amounting to 500 million, and so on. In short, the communication effectiveness of the Winter Olympics Opening Ceremony at the behavioral level is diverse and positive. However, due to the limitations of the data selected for this study, the analysis in this section is limited.

CONCLUSION

The Opening Ceremony of the 2022 Beijing Winter Olympics has left a deep impression on people from all over the world, and is a successful model for the construction and dissemination of China's image as a great power. In the era of China's increasing comprehensive national power, it is necessary to shape China's image in a more vivid, in-depth and understandable form. In this paper, we analyze the phenomenon of multimodal metaphors in the opening ceremony, reflect the positive role of multimodality in the dissemination of national image, and study the mechanism of communication effectiveness and the feedback effect of the extranet of the opening ceremony, so as to provide a reference for the future use of multimodal discourse to disseminate the image of the country in large-scale performance occasions. Of course, this paper also has some research shortcomings, such as it is difficult to compare and quantify the behavioral effects before and after the opening ceremony, and the platform and influence of the opening ceremony of the Winter Olympics has its own special characteristics.

REFERENCES

- ChinaDaily. (2022, February 06) *Waimei: Beijingdongaohui kaimushi zhangxian zhongguo daguodandang* [Foreign Media: Beijing Winter Olympics Opening Ceremony Highlights China's Role as a Great Nation]. Retrieved October 06, 2022, from <https://cn.chinadaily.com.cn/a/202202/06/WS61ff227fa3107be497a053d5.html>.
- Dayan, D., Katz, E., & Ma, Z.Q. (2000) *Media Events: The Live Broadcasting of History*. Beijing: Communication University of China press.
- Hu, F. (2014) *Zhongguo meiguo riben guojiaxingxiang xuanchuanpian de xushixue bijiaofenxi* [Narratologies' Comparative Analysis of Chinese, American and Japanese National Promotional Film]. [Unpublished Doctoral dissertation]. *Huazhong University of Science and Technology*.
- Guo, Y. (1999) *Minjian shehui yu yishi guojia* [Civil Society and the Ceremonial State]. Dushu, (09),125-131.
- Kertzer, D., & The Asia Foundation. (1988). *Ritual, politics, and power*. New Haven: Yale University Press.
- Lan, C., & Cai, Y. (2013) *Dianshiguanggao zhong duomotaiyinyu de renzhiyuyanxue yanjiu: Yi haifeisi guanggao weili* [Cognitive Linguistics of Multimodal Metaphors in TV Advertising: A Case Study of the Advertising of Head & Shoulders]. *Foreign Languages Research*, (05),17-23.
- Li, W. (2021) *Zhongmei yingxiongdiaying haibao duomotai yinyu de duibi: Yi Spider-Man 3 he honghaixingdong weili* [Comparison of Multimodal Metaphors of Chinese and American Hero Movie Posters: Taking Spider-Man 3 and Operation Red Sea as Examples]. *Journalism & Media Studies*, (05),163-165+176.
- Liu, X. (2022) *Guangyu chuanmei suzao guojiaxingxiang de sikao* [Thinking on Shaping of State Images by the Media]. *Chinese Journal of Journalism & Communication*, (02),61-66.
- Schramm, W. (1973). *Men, messages, and media*. New York: Harper & Row.
- Song, W.L., Yao, X.L., Li, Z.P., Yang, R.Z., & Zhang, T. (2021) *Guojichuanbo shijiaoxia dongaohuikaimushi wenhuazhanshi de lujing tanxi* [Cultural Exhibition of Opening Ceremony of Winter Olympic Games from Perspective of International Communication]. *Journal of Wuhan Sports University*, (12),12-19.
- Sun, Y. (2012) *Duomotai huayuyiyi goujian: Yi 2011 Xi'an shijie yuanyibolanhui huihui weijidian* [A Multimodal Discourse Construction of Meaning: Based on the Emblem of 2011 Xi' an International Horticultural Exposition]. *Foreign Languages and Their Teaching*, (01),44-47.
- Sun, Y. (2020) *Duomotai yinyu yanjiu* [Multimodal Metaphor Research]. *Journal of Zhejiang International Studies University*, (05),30.
- Sun, Y., & Tang, P. (2021) *Duomotaiyinyu yanjiu zhaoshi: yuanyou yu jinlu* [The Initiation of Multimodal Metaphor Research: Access and Approach]. *Journal of Tianjin Foreign Studies University*, (05),9-24+158.
- Tang, J.B. (2008) *Kuawenhuachuanbo yu shenaopian de guojiaxingxiang jiangou* [Cross-Cultural Communication and Construction of Nation Image in the Promo Bid for Olympics]. [Unpublished Doctoral dissertation]. Fudan University.
- Wu, F. *Gongqingchuanbo de lilunjichu yu shijianlujing tansuo* [An Analysis on the Theoretical Foundation and Practical Approach of Empathetic Communication]. *Journalism & Communication*, (05),59-76+127.
- Wu, X., & Zhang, K. (2016) *Guojiaxingxiang: gainian, tezheng, ji yanjiulujing zhi zaitantao* [National Image: A Re-Exploration of Concepts, Characteristics and Research Paths]. *Modern Communication (Journal of Communication University of China)*, 38(01),57-62.

- Xi, Y., & Liu, L. (2023) Jilupian shanhesuiyue de duomotai huayuyanjiu [A Multimodal Discourse Study of the Documentary Years in Mountains and Rivers]. *News World*, (03),76-80.
- Xue, W.T., Zhang, L., & Hu, H. (2022) Yishi·yiyi·rentong: Beijingdongaohui kaimushi yu zhongguoxingxiang suzao [Ceremony-Significance-Identity: the Opening Ceremony of Beijing Winter Olympics and China's Image Building]. *China Radio & TV Academic Journal*, (04),8-12.
- Zhai, Y. (2021) Duomotai huayufenxi shijiao de chengshixingxiang de goujian: Yi shisiyun xuanchuanpian weili [The Construction of Urban Image from the Perspective of Multimodal Critical Discourse Analysis: A Case Study of the Promotional Video of the 14th National Games]. *Modern Communication*, (21),107-109.
- Zhang, D.L. (2009) Duomotai huayufenxi zonghelilunkuangjia tansuo [On A Synthetic Theoretical Framework for Multimodal Discourse Analysis]. *Foreign Languages in China*, (01),24-30.
- Zhang, K., & Zhang, T.Y. (2019) “Gongshi” yu “gongshi de chengdu”: guojiaxingxiang renzhi de biezhongchengdu [“Consensus” and “Degree of Consensus”: A Dimension of National Image Cognition]. *Modern Communication (Journal of Communication University of China)*, (06),68-72.
- Zhang, L. (2022) Dongaohui guojichuanbo yu zhongguoxingxiang suzao [Beijing Winter Olympics International Communication and China's Image Building]. *Qianxian*, (03),50-52.
- Zhao, X.F. (2011) Gainianyinyuyanjiu de xinfazhan — duomotaiyinyuyanjiu — jianping Forceville & Urios-Aparisi’s Multimodal Metaphor [New Development of Conceptual Metaphor Studies — Multimodal Metaphor Studies — Comment on Forceville & Urios-Aparisi’s Multimodal Metaphor]. *Foreign Languages Research*, (01),1-10+112