

A Research on the Conceptual Metaphors in Re-ports of Carbon Peaking and Carbon Neutrality in China Daily

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Abstract

Based on the Conceptual Metaphors and the framework of Critical Metaphor Analysis, this paper analyzes the news related to carbon peaking and carbon neutrality so as to explore the characteristics of conceptual metaphors' distribution in related reports and the characteristics of the national image behind conceptual metaphors. The results show that ontological metaphors appear most frequently in collected reports, followed by orientational metaphors and finally structural metaphors. These metaphors altogether build an image of a responsible and powerful country that is not only active, dedicated, determined and innovative but also never afraid of difficulties and in pursuit of sustainable development. This study helps to strengthen national and international awareness of China's efforts in climate change.

Keywords

The conceptual metaphors; Ontological metaphors; Orientational metaphors; Structural metaphors; National images

1. Introduction

In recent years, people are facing an unprecedentedly global challenge—climate change. Global warming, glaciers melting and extreme weather events not only threaten the natural environment, but also have a profound impact on global economic, social and political stability. Now global climate governance has become the focus of the international community.

Under such background, China, as the largest developing country in the world, attaches great importance to climate change. Being aware of the seriousness and urgency of climate change, the Chinese government has actively responded to the call of global climate governance and taken a series of effective measures to address climate change. On September 22, 2020, President Xi Jinping put forward the goal of

achieving carbon peaking by 2030 and carbon neutrality by 2060 at the General Debate of the 75th Session of the United Nations General Assembly. In his report to the 20th National Congress of the Communist Party of China, he also stressed it is necessary to advance initiatives to reach peak carbon emissions in a well-planned and phased way in line with the principle of building the new before discarding the old.

As an important platform for carrying information, the media play an important role in shaping the national image and guiding public awareness. China Daily is a mainstream English-language medium in China. What and how it reports are of great significance for the world to understand China's stance and actions on climate change. Through an in-depth study of the conceptual metaphors in the news concerning carbon peaking and carbon neutrality in China Daily, we can find out the positive images of China in dealing with climate change, and further enhance the international community's understanding of China on climate change.

2. Literature Review

This chapter mainly states the theoretical basis of the research and summarizes the relevant domestic researches in the past five years, so as to make the research clearer and more specific.

2.1. Theoretical Basis

2.1.1. The Theory of Conceptual Metaphors

Lakoff and Johnson believe that metaphor is a cognitive way for people to know the world. The nature of that is a way of thinking, which means to understand and experience relatively abstract or unfamiliar things (target domain) through relatively familiar things (source domain). Conceptual metaphor is a cross-domain mapping based on context and conceptual system. The relationships, attributes and knowledge of the source domain are mapped to those of the target domain. The similarities between the source domain and the target domain can help people understand abstract things more vividly (Lakoff & Johnson, 1980).

For example, in the conceptual metaphor "time is money", the source domain is "money" and the target domain is "time". In this metaphor, we use the concept of "money" to understand "time". Money is finite, valuable, and can be spent, invested, saved, or even wasted. Also, the time is finite and valuable, and we can choose how to "spend" it on work, study, entertainment and so on. By comparing time to money, we can understand the value and importance of time more easily. And it can be seen that the function of metaphor can be applied not only to literary works, but also to mass media and our daily life. When we are expressing some abstract and vague concepts or principles that are difficult to understand, metaphor can always enrich our ways of expression, improve the effect of expression, enhance emotional resonance, and help people understand and accept things more easily.

2.1.2. The Framework of Critical Metaphor Analysis

In Charteris-Black's research framework, the process of metaphor research is divided into three stages: metaphor identification, metaphor description and metaphor explanation. In the stage of metaphor identification, we can read the texts carefully according to the definition of metaphor, identify the candidate metaphors, and then carefully examine the selected metaphors in a context to determine whether they are metaphorical or literal. Metaphor description is a process of searching for the relationship between metaphors and exploring the cognitive and pragmatic functions of metaphors. As for metaphor explanation, it emphasizes the social function of conceptual metaphors, which may lie in its function of persuasion and its generation (Charteris-Black, 2004). Charteris-Black's framework of critical metaphor analysis strengthens the strictness and reasonableness of the researches in metaphors. Therefore, based on the theory of conceptual metaphors and the critical metaphor analysis, this study explores the images of China presented by carbon peaking and carbon neutrality news reports in China Daily.

2.2. Research Status At Home

The author used "conceptual metaphors" as the key words to search on CNKI. According to the visual analysis of the search results, it is found that the researches on conceptual metaphors have maintained a high popularity in the past 20 years. Although the popularity of research may have decreased in some periods, the number of published literature works shows that the research in this field has always remained active.

Meanwhile, under the subject of foreign languages and characters, the study of national image has gradually attracted the attention of the academic community. For example, Yang Qin and Gao Ruikuo (2023:113-118+129) revealed the triple dimension of China's images in their in-depth analysis of the "Belt and Road" news reports, that is pioneer, collaborator and builder. Wang Jing and Li Jiakun (2023:128-138) found that China is willing to work together with the world to deal with globally severe environmental problems through a comparative study of conceptual metaphors in Chinese and British environmental news reports, which reflects China's resolute determination and its sense of responsibility as a major country to deal with this challenge. Zhong Lingli, Liu Zhengguang, and Li Siyi (2022: 114-132) used a series of Xi Jinping's speeches as their corpus and identified a series of positive national images of China, such as "people-oriented", "open and inclusive", "helping the world", and "taking responsibilities". Tan Wenhui, Zhu Yaoyun, and Wang Junju (202:38-43) analyzed documentaries about the Covid-19 pandemic in China to explore the multi-dimensional images of China concerning the aspects of its system, politics, economy, technology, and diplomacy.

In a conclusion, although the use of conceptual metaphor theory to study national images has gradually risen in recent years, the related researches are still not enough.

As a complement to the related researches, this paper chooses the reports about “carbon peaking” and “carbon neutrality” as the research subject and use conceptual metaphor analysis to deeply explore the national image of China in dealing with climate change.

3. Research Design

This study mainly focuses on the following two questions:

Question 1: What are the characteristics of conceptual metaphors’ distribution in the reports about carbon peaking and carbon neutrality?

Question 2: What kinds of national images does China Daily build when reporting the carbon peaking and carbon neutrality news?

As a leading comprehensive medium website in China, China Daily is of high influence and authority. In view of this, this study chooses “carbon peak and China” as keywords to collect the news on this website with the time range from October 10, 2023 to February 22, 2024. After careful consideration, this study randomly selected 10 main reports as the research subjects. These reports are detailed, comprehensive and representative, and can reflect China’s attitudes toward carbon peaking and carbon neutrality.

In order to analyze these reports in depth, UAM Corpus Tool 6, a professional software, is used in this study to build a small corpus. This software has been widely used in academic researches with high reliability and accuracy. It can help researchers to conduct efficient and accurate quantitative analysis of corpora. At the same time, combined with the artificial metaphor recognition method MIPVU (Metaphor Identification Procedure), this paper identifies and summarizes the types of conceptual metaphors used in the reports, describes and explains the metaphors according to the conceptual metaphor theory and the critical metaphor analysis framework.

4. Data Analysis

Through manual annotation, the collected data will be sorted and analyzed according to the research questions.

4.1. The Overall Characteristics of Conceptual Metaphors’ Distribution

This paper uses UAM Corpus Tool 6 to have a manual annotation of the reports concerning carbon peaking and carbon neutrality. Through careful annotations, the characteristics of conceptual metaphors’ distribution in the reports are found out. As shown in Table 1., the proportion of ontological metaphors in the reports is the highest, reaching 106 times, followed by orientational metaphors with 77 times, while structural metaphors are relatively rare, with only 14 times. The results show the frequency and importance of different metaphors in shaping the national images. Later, the author will further analyze the distribution of the three metaphors.

Table 1. Distribution of conceptual metaphors in the news reports

Conceptual metaphors	Quantity/frequency	Percentage/%
Ontological metaphors	106	53.8
Orientational metaphors	77	39.1
Structural metaphors	14	7.1
Total Number	197	100

4.2. Ontological Metaphors

According to Lakoff and Johnson's classification, conceptual metaphor is divided into structural metaphor, ontological metaphor and orientational metaphor. Among them, ontological metaphor refers to the metaphor that maps concrete things to abstract ones, for example, "Inflation has caused bad results to shopping and refueling." (Lakoff & Johnson, 1980).

The ontological metaphors are in a dominant position in the carbon peaking and carbon neutrality news reports, accounting for 53.8%, which highlights the crucial role of ontological metaphors in the reports of shaping related issues. Ontological metaphors help readers better understand and perceive abstract concepts or processes by making them substantialized. In carbon peaking and carbon neutrality news reports, the use of ontological metaphors is mainly reflected in human metaphors, accounting for 62.3%. Human metaphor is a typical kind of ontological metaphor, which personifies natural objects. The following is an analysis of the specific application of human metaphors in carbon peaking and carbon neutrality news reports.

Example 1: China's role as a major go-getter and helper in carbon reduction is increasingly prominent. Changes in power generation structure tell the biggest developing country's progress in its efforts to cut emissions.

In this example, the source domain is "a major go-getter and helper" and the target domain is "China's role". By mapping "China's role" to "a major go-getter and helper" which contains qualities of having positive actions and helping others, this metaphor not only shows China's active role in carbon reduction, but also grants China a personal character. This personification enables readers to have a clearer understanding of the importance and contributions of China in the global actions to reduce carbon emissions. Further, by granting "China" the characteristics of "go-getter" and "helper", this metaphor builds an image of a proactive and dedicated country and emphasizes China's sense of responsibility in promoting the process of global carbon emission reduction.

Example 2: China is determined to achieve the world's highest reduction in carbon intensity in the shortest time in history, though this needs arduous efforts.

In this example, "China" is given a characteristic of human and determined to achieve the world's highest reduction in carbon emissions even if it requires hard work. This metaphor not only emphasizes China's firm determination and great efforts in carbon

reduction, but also further builds the image of the country that is determined and unafraid of difficulties. This image demonstrates China's leadership and sense of responsibility in the face of global challenges, as well as the great importance China attaches to environmental protection and sustainable development.

Through the use of human metaphors, these news successfully transforms abstract roles of China and policy goals into concrete, tangible figures, allowing readers to better understand China's efforts and achievements in the field of carbon reduction.

4.3. Orientational Metaphors

Orientational metaphors usually map spacial orientation (such as up and down, front and back, left and right, inside and out, etc.) to non-spatial concepts in order to express something abstract. For example, "I'm feeling up" (Lakoff & Johnson, 1980). Orientational metaphors play an important role in carbon peaking and carbon neutrality news reports, accounting for 39.1%. The use of orientational metaphors helps to form a multi-dimensional understanding of reduction of carbon emissions, and guides readers to think about related issues from the perspective of spatial perception.

Example 1: In 2023, all for the first time, China's installed capacity of non-fossil energy power generation exceeded that of thermal power, accounted for more than half of the total installed capacity, hitting 53.9 percent, and the proportion of coal power installed capacity dropped below 40 percent, the China Electricity Council (CEC) said in a latest report.

In the above example, the use of the orientational metaphors is reflected in two verbs: "exceeded" and "dropped". Respectively, they describe the installed capacity of non-fossil energy generation "exceeding" the installed capacity of thermal power, and the proportion of coal power installed capacity "falling" to less than 40%. The use of the orientational metaphors enables readers to feel the process and results of China's energy structure transformation more directly.

The word "exceeded" maps the upward movement in space to the growth of China's installed capacity of non-fossil energy power generation, which shows China's significant progress and leading position in the field of clean energy. This metaphor not only highlights China's great achievements in carbon reduction, but also builds a national image of being positive and pursuing sustainable development. The word "dropped" maps the downward movement in space to the decrease in the installed capacity of coal power, which shows China's firm determination and effective actions in gradually reducing the use of high-carbon energy and shifting to low-carbon and carbon-free energy. This metaphor not only emphasizes China's determination and achievements in energy transition, but also builds a national image of being brave and innovative to change.

4.4. Structural Metaphors

Structural metaphor refers to the metaphorical construction of one concept on another, for example, “time is money” (Lakoff & Johnson, 1980). In the collected reports, the frequency of structural metaphor is relatively low, accounting for only 7.1%. Even so, by mapping the structure of one concept onto another, this approach enables readers to understand and perceive a relatively unfamiliar concept from a familiar one. Therefore, the use of structural metaphors also plays a positive role in the construction of national image.

Example: The Zero Energy Building is a bright spot among green attempt architectures in the eco-city. All of its energy supplies, including electricity and heating, rely merely on solar power.

The above example describes the Zero Energy Building in Tianjin, where all of the energy supply, including electricity and heating, rely solely on solar energy. In this sentence, the source domain is “a bright spot” and the target domain is “the Zero Energy Building”, which emphasizes the importance and prominence of the Zero Energy Building, a kind of green building in the eco-friendly city. By comparing this new eco-friendly building with the “bright spots” in daily life, readers can have a directer feeling of this building’s positive role in promoting green development and reducing carbon emissions. This structural metaphor not only enhances the readability and attractiveness of the reports, but also builds a national image of being positive, innovative and responsible, which shows China’s firm determination and positive actions in addressing climate change and promoting green development.

To sum up, through the use of ontological metaphors, orientational metaphors and structural metaphor, news reports have successfully created an image of a responsible country that is active, dedicated, determined, fearless of difficulties, innovative and pursuing sustainable development.

5 Conclusion

This study makes a detailed interpretation and analysis of the reports about carbon peaking and carbon neutrality from three aspects: ontological metaphors, orientational metaphors and structural metaphors. It is found that relevant reports not only present objective facts, but also reflect the positive image of China and its society, which helps to enhance China’s reputation and influence in the world. At the same time, it also encourages domestic readers to recognize and support the work of carbon reduction. Therefore, the use of this conceptual metaphors in the carbon peaking and carbon neutrality news report not only enhances the expression of the texts, but also effectively promotes the public’s understanding and participation in the issue of carbon reduction.

Although the results of this study are valuable, there are still some limitations. First, data accuracy. The data in the study mainly came from the author’s subjective judgment. Although the author has checked many times in the process of analysis, it is still unable to guarantee the correctness of the identification. Second, the corpus size

is small. This study is only based on only 10 corpora for analysis, and the relatively small corpus size may limit the breadth and depth of the study, thus affecting the universality and representativeness of the research conclusions to some extent. At the same time, it is also hoped that future researchers can do better in these aspects and contribute more valuable results to the research in related fields.

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