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RESEARCH ARTICLE

Chinese Ecological View toward Nuclear Disaster: Investigation on Conceptual Metaphor in Mainstream Media

Hu Jiaqi[1], Zhang Yi[2]

[1,2]School of Foreign Studies, Northwestern Polytechnical University, Xi'an, 710119, Shaanxi, China.

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Corresponding Author: Zhang Yi, School of Foreign Studies, Northwestern Polytechnical University, Xi'an, 710119, Shaanxi, China.

Abstract

The growing prevalence of concerns regarding nuclear construction and contamination necessitates an understanding of how people perceive and interpret the world. Conceptual metaphor theory (CMT) provides a foundation for comprehending these cognitive processes. Drawing upon the principles of ecolinguistics and CMT, this study aims to analyze the conceptual metaphors employed within Chinese news discourses on nuclear issues. The objective is to unveil the underlying ecological orientations and perspectives while emphasizing the urgency of addressing the imminent nuclear crisis. The findings revealed a total of 330 conceptual metaphors, categorized into 10 distinct types. Notably, the metaphors related to the economy, substances, agriculture, war, and architecture accounted for approximately 81.72% of the sample. The presence of beneficial, ambivalent, and destructive metaphors within the discourse is primarily influenced by concerns for future environmental preservation, global economic competition, and specific countries' political negligence and irresponsibility towards others. This study examines the applicability of CMT within the field of ecolinguistics, providing readers with insights into the underlying ecological ideologies that are concealed within these metaphors.

Keywords: Conceptual Metaphor, Ecolinguistics, Nuclear, Ecosophy, News Discourse.

1. Introduction

Since the 1960s and 1970s, the severity of global environmental issues has escalated, prompting linguists to delve into the field of ecolinguistics. Language and discourse play a crucial role in shaping and replicating our understanding of the world and our immediate surroundings. Through discourse, individuals reveal their ecological beliefs, which in turn influence the ecological environment in numerous ways.

Unlike Critical Discourse Analysis and Positive Discourse Analysis, Ecological Discourse Analysis (EDA) focuses on exploring the potential roles of language in shaping ecosystems[1,2]. It aims to decode the ecological implications embedded within discourse, employing an analytical approach grounded in the Hallidayan paradigm [3]. Although EDA has been increasingly utilized to analyze various discourses [4-7], there remains a considerable gap in its application to news discourse, which will be the focus of this research.

News plays a pivotal role in shaping public opinion and influencing the way people think. It encompasses reports of recent events published in newspapers, broadcasted on television or radio. When studying news discourse, Critical Discourse Analysis is the prevailing approach. For instance, Fairclough[8] developed a comprehensive three-dimensional model for in-depth language analysis, while van Dijk[9] focused on interpreting social responsibility, interests, ideology, and other factors through the lens of social cognition[10]. Among the various

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topics covered in news discourse, climate change has garnered significant attention from both domestic and international scholars[11]. Analyzing climate change news discourse from an ecolinguistic perspective involves examining the appraisal system[12], conceptual metaphor[2,13,14], and anthropomorphic metaphor[15]. The objective is to explore how language reflects ecological ideologies, transmits ecological ideas, and contributes to the process of climate governance.

Lakoff and Johnson[16] introduced the conceptual metaphor theory, which explores the use of figurative language as a cognitive mapping rooted in conceptual systems. They argue that metaphors are manifestations of underlying conceptual metaphors, rather than solely creative expressions. Conceptual metaphors not only convey the perspectives and ideals of discourse producers but also unveil the conceptualization outcomes of their work[2]. In the realm of ecolinguistics, Stibbe[17]posited that the primary goal of ecolinguistics is to scrutinize and question the metaphors that shape human beliefs and practices, with the aim of identifying those that foster ecological protection. Consequently, exploring conceptual metaphors from an ecolinguistic perspective represents a relatively new endeavor, contributing to the disclosure of concealed non-ecological factors within discourse. It enables a deeper understanding and guidance of the ideas and public opinions conveyed in ecology-related news discourses.

There has been a prevalent trend in discourse analysis, focusing on environmental issues within the framework of Conceptual Metaphor Theory (CMT). Notably, Zhang and Gai[2]conducted a comparative study of conceptual metaphors in Chinese and American news discourses on climate change from an ecolinguistic perspective. Li[15]employed a diachronic analysis of data from People's Daily (1949-2021) to examine the coupling and co-variation between metaphorical changes and ecological progress in China, using the keyword "daziran" (nature). Liu and Zhao[18] explored conceptual metaphors in energy discourse employing Wmatrix. While these studies have made significant contributions by analyzing conceptual metaphors in ecological discourse, the keyword searches were limited to "climate change" and "nature", with few analyses pertaining to specific environmental cases. Given the recent global concern and opposition aroused by Japan's proposal to discharge nuclear waste into public waters in June 2023, it is imperative to explore attitudes towards nuclear pollution in Chinese news discourse from the perspective of conceptual metaphor. Such an analysis would enhance the audience's judgment and understanding of nuclear contamination and provide a crucial foundation for Chinese and global news media to report on this issue and select appropriate metaphors.

In light of the aforementioned context, the present study endeavors to conduct an ecologically-oriented analysis of conceptual metaphors in nuclear-related news discourse, employing the lens of ecolinguistics. To achieve this goal, a self-established corpus of nuclear emission news from China Daily (English version) will be established. The analysis will involve a combination of qualitative and quantitative approaches, guided by a specific ecosophy. Through this investigation, the study aims to provide a comprehensive understanding of China's perspective and stance on global environmental concerns related to nuclear issues.

2. Theoretical Framework

2.1 The Ecosophy of "Diversity and Harmony, Interaction and Co-Existence"

Ecosophy serves as a crucial guiding concept and ecological evaluation criterion in the process of analysis. He and Wei[3] proposed the ecosophy of "Diversity and Harmony, Interaction and Co-existence" to examine international ecological discourse. This ecosophy is based on traditional Chinese Confucianism and a deep understanding of international relations. The four-word ecosophy reflects the characteristics of the natural ecosystem and the socially benign operating mechanism of the ecological system[15]. "Diversity and Harmony, Interaction and Co-existence" provides a suitable ideology for studying news discourse related to ecology in a global context and can be used as a guiding principle for conducting Ecological Discourse Analysis.

Word choices in discourse can reveal different ecological philosophies. Arran Stibbe[17] categorizes discourse into three categories - beneficial, ambivalent, and destructive - based on the semantic meaning and its correspondence with ecosophy. In this study, ecological ideologies conveyed through conceptual metaphors are compared with ecosophy to determine their consistency or incompatibility. If the semantic meaning of a message aligns with the ecological context and ecosophy, it is considered beneficial. If it contradicts ecosophy, it is deemed destructive. If a message neither supports nor contradicts ecosophy, the choice is considered ambivalent.

2.2 Conceptual Metaphor

Conceptual metaphor refers to the cross-cognitive mapping from the source domain to the target domain, applying the knowledge of the familiar domain to another domain[19]. According to Lakoff and Johnson[16], metaphor is a cognitive practice in which people make systematic links across conceptual domains and use concrete, familiar, and vivid experiences to understand or generate intangible, unfamiliar, and abstract conceptual domain experiences[20].

Here, the target domain is NUCLEAR, which is difficult and abstract to the public. For instance, Example 1 contains a conceptual metaphor NUCLEAR IS BUILDING in which the source domain is BUILDING, whereas the target domain is NUCLEAR. Mappings can be triggered between them, that is to say, the development of nuclear energy is as much a process as constructing a house by mapping the more well-known BUILDING to the more difficult and abstract NUCLEAR.

> Example 1: By 2025 China's installed nuclear power capacity ... 30 million kilowatts under construction, with a combined capacity of 200 million kilowatts...

As for the classification of conceptual metaphor, there are several existing studies suggesting different categorizations based on different criteria[21-23], among which Lakoff and Johnson[16] divided conceptual metaphor into 3 categories—structural metaphor, orientational metaphor, and ontological metaphor.

Regarding the three steps involved in analyzing conceptual metaphor, namely metaphor identification, metaphor classification, and metaphor interpretation, scholars commonly adopt the Metaphor Identification Procedure (MIP) developed by Pragglejaz[24] and MIPVU by Steen[25]. Most scholars have utilized MIP, which focuses on the linguistic analysis of metaphorical expressions in discourse. On the other hand, MIPVU represents an upgraded version of MIP, specifically designed for conducting in-depth discourse analysis. For the current study on nuclear-related news discourse, the MIPVU approach will be employed to analyze conceptual metaphors.

3. Methodology

3.1 Data Collection

In the present study, the international version of ***China Daily*** (https://www.chinadaily. com.cn/) was selected as the corpus source due to the authority, influence, and extensive circulation of this news media outlet. As one of the most prominent international news publications in China, *China Daily* covers a wide range of topics, including politics, economics, and culture.

To collect the data, Python was utilized for web crawling, specifically targeting the keywords "nuclear" and "radioactive" as required and optional terms, respectively. The time frame for data collection was set from June 12, 2023, to July 31, 2023, corresponding to the significant event of Japan's re-announcement of the discharge of nuclear-contaminated water on June 12, 2023.

After conducting data cleaning and manual verification on the collected corpus, all news articles containing the specified keywords were selected to establish the English Nuclear News Discourse in Chinese Media (NDC). The total number of collected news articles was 204, with a total of 24,954 tokens associated with the keyword "nuclear".

3.2 Research Questions

The current research intends to investigate how Chinese media perceive the nuclear pollution incident from the perspective of ecolinguistics and explore the ecological orientation reflected in the discourse. This research aims to answer the following two questions.

1. What conceptual metaphors are contained in NDC? How is it distributed?
2. What ecological orientations does conceptual metaphor in NDC reflect?
3. What ecological viewpoints of China are reflected in NDC?

3.3 Data Analysis

In this study, the corpus analysis and comparison tool used is Wmatrix 5.0[26], which is an automatic online semantic annotating system (Figure 1). This tool incorporates the embedded semantic tagging system known as USAS, which encompasses a total of 21 semantic domains and is further divided into 453 semantic tag sets[2].

For comparison and analysis, the self-built NDC (English Nuclear News Discourse in Chinese Media) can be contrasted with The BNC (British National Corpus) Written Sampler, a written reference corpus available on the web page. In this process, a list of topic semantic domains is compiled and organized

based on keyness. This list will serve as a valuable guide for identifying different types of conceptual metaphors. To determine the significance of key semantic domains, a threshold value of 6.63 (LL value) for $p<0.01$ (with 1 degree of freedom) is utilized. This threshold indicates that the observed keyness is highly unlikely to occur by random chance[27].

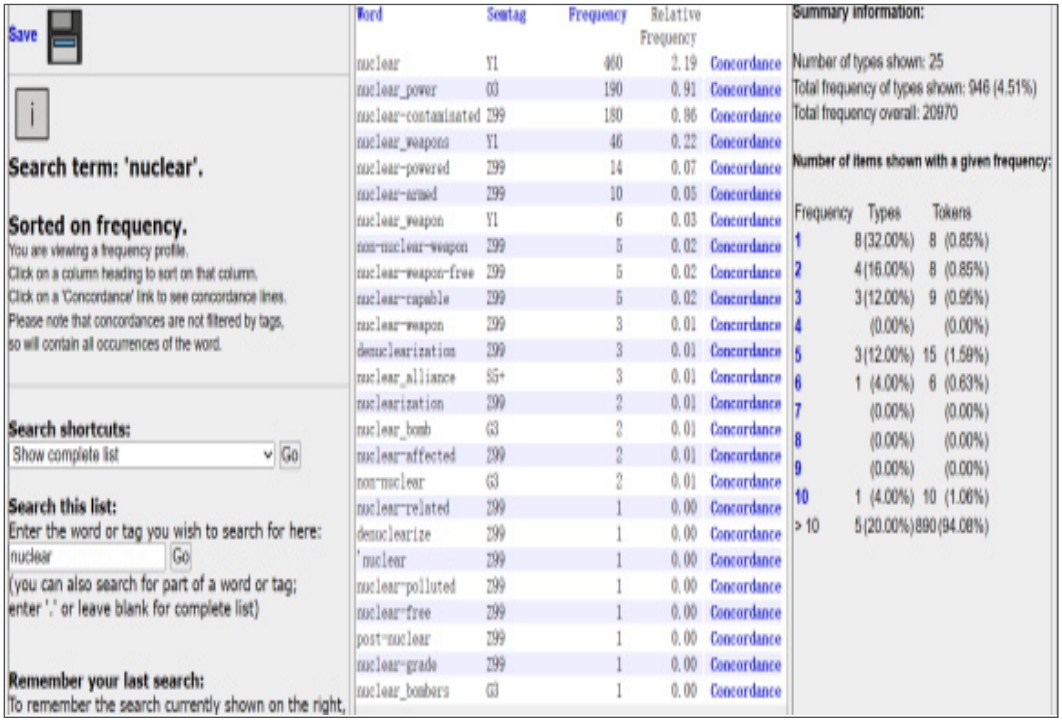

Figure 1. *The Operation Interface of Wmatrix*

The identification of conceptual metaphors typically involves following three steps, as outlined by Zhang and Gai[2]. Firstly, the corpus is annotated and classified based on the USAS semantic annotation system. This step involves assigning semantic tags to different parts of the corpus to identify the underlying conceptual domains.

Secondly, the collocation function of the software is utilized to identify collocation semantic domains. This step helps to identify patterns of word co-occurrence and their associations with specific semantic domains.

Lastly, the text is carefully examined to identify the meaning of sentences within the target domain. Manual recognition is employed to locate metaphorical carrier words from the identified collocation words. The online Macmillan English Dictionary (https://www.macmillandictionary.com/) is used as a reference tool for this task. It has been widely tested in previous research and is proven to be reliable. Different types of conceptual metaphors are then coded according to the Metaphor Identification Procedure for the Variation of Use (MIPVU) methodology proposed by Steen et al. [25].

4. Results and Discussion

4.1 Overall Distribution of Conceptual Metaphor In Ndc

In this study, the Wmatrix and MIPVU tools were employed to automatically label and manually identify conceptual metaphors in sentences containing the keyword “nuclear” and its concordance. The results of this analysis revealed several key findings.

Firstly, a total of 946 expressions containing the keyword “nuclear” were retrieved. However, after removing proper nouns, the analysis focused on a subset of expressions. The exclusion of proper nouns ensures that the analysis primarily captures conceptual metaphors related to the keyword itself, rather than specific entities or individuals. Secondly, within this subset, a total of 10 distinct types of conceptual metaphors were identified. These metaphors represent different ways in which the concept of “nuclear” is metaphorically understood and expressed within the corpus. Furthermore, the identification of these metaphors resulted in the discovery of a total of 330 instances of conceptual metaphors. These instances provide evidence of the prevalence and variety of metaphorical language used in relation to the topic of “nuclear”.

Table 1. *Overall Distribution of Conceptual Metaphor in NDC*

Categories of Conceptual Metaphor	Metaphor Carrier Word	Types/ Tokens	Resonances	Percentages
Economy Metaphor	investment(8); commercial(6); cost(5); asset(4); spending(4); employ(2); strikes(3); trade(1); deal(28); legacy(1); bargaining chip(1)	11/63	693	31.49%
Substance Metaphor	core(18); green light(9); pose(8); spark(3); whitewash(3); curbs(3); umbrella(1); button(1);	8/46	368	16.72%
Agriculture Metaphor	plant(48); rooted(1); fields(9); homegrown(2); spread(8)	5/68	340	15.45%
Architechture Metaphor	construction(20); build(9); room(2); extension(2); lobby(1); barrier(1)	6/35	210	9.54%
War Metaphor	weapons(16); war(11); arsenal(14); force(4)	4/45	188	8.54%
Disease Metaphor	crippled(22); injection(2); disabled(1); outbreak(1); recover(2); suffer(2)	6/30	180	8.18%
Individual Metaphor	arms(11); face(1); play(3); generation(4); long-lived(1); burial(3); assassinations(1)	7/24	168	7.63%
Journey Metaphor	flow(1); drop(2); bypass(1); step(5)	4/9	36	1.64%
Arts Metaphor	drawing(2); cast(2); scenario(1)	3/4	12	0.55%
Sports Metaphor	race(6);	1/6	6	0.27%
Total: 10	330		2201	100.00%

Resonance(∑Types×∑Tokens): reflection of the degree of their productivity in the selected corpus(Charteris-Black, 2004).

Table 1. Provides an overview of the categories of the "nuclear" conceptual metaphor, including information on the form and frequency of metaphor carrier words, types, and tokens, as well as their resonance and percentage.

Upon examining the table, it becomes evident that Economy Metaphor, Substance Metaphor, Agriculture Metaphor, War Metaphor, and Architecture Metaphor are the top five categories in terms of frequency, accounting for the largest proportions. These categories collectively represent a resonance percentage of 81.74%, indicating a high degree of productivity and prominence within the corpus. On the other hand, the remaining five categories, namely Decease Metaphor, Individual Metaphor, Journey Metaphor, Arts Metaphor, and Sports Metaphor, are used less frequently, with a resonance percentage of 18.26%. These categories indicate comparatively lower usage and may have a more limited impact within the discourse.

The utilization of Economic Metaphors (11/63) and Architecture Metaphors (6/35) as the two most frequently employed conceptual metaphors in the discourse on nuclear energy signifies the distinct benefits and development potential associated with this renewable resource. These metaphors highlight the role of nuclear energy in reducing the consumption of coal, which in turn leads to a significant reduction in greenhouse gas emissions. Furthermore, nuclear energy can alleviate the pressure on energy transmission systems, allowing for a more efficient and sustainable energy infrastructure. China recognizes the potential of green and renewable nuclear energy consumption, which can contribute to the establishment of a circular economy and the construction of eco-friendly cities. This acknowledgment suggests a commitment to harnessing the benefits of nuclear energy in promoting sustainable development and environmental stewardship.

Competition and the improper use of resources can indeed lead to disease and war, which helps explain why conceptual metaphors such as "NUCLEAR IS WAR" (4/45) and "NUCLEAR IS DISEASE" (6/30) hold considerable significance within the Nuclear Discourse Corpus (NDC). If nuclear energy is not utilized appropriately, nuclear contamination can occur, as exemplified by the 2011 Fukushima nuclear crisis, which had severe consequences for the future survival of human beings. Additionally, it is concerning that Japan has recently announced its intention to discharge a significant amount of nuclear-contaminated water into public waters, with projections suggesting that the world's seas will be poisoned within the next 30 years. This alarming prospect raises concerns about the potential impact on non-polluted natural resources, as they could become targets for various countries. Furthermore, the introduction of polluted materials into the human body can lead to the development of multiple diseases.

4.2 Ecological Orientations of Conceptual Metaphor in NDC

The ecological orientation assessment of conceptual metaphor aims to promote beneficial metaphors, improve ambivalent metaphors, and abandon destructive metaphors, as proposed by Stibbe[17]. This assessment is achieved by examining ideas that are consistent with or adverse to ecological harmony, as emphasized by Zhang and Gai[2]. In the study of different ecological orientations of conceptual metaphors within the Nuclear Discourse Corpus (NDC), a specific ecosophy "Diversity and Harmony, Interaction and Co-existence" is adopted to justify the idea that different conceptual metaphor conveys.

Following the framework aforementioned, the distribution of three ecological orientations within the NDC is identified and analyzed. The specific distribution of these orientations is presented in Table 2.

Table 2. *Overall Distribution of Ecological Orientations of Conceptual Metaphors in NDC*

Ecological Orientation	Beneficial	Ambivalent	Destructive
Economy Metaphor	16	26	21
Substance Metaphor	16	6	24
Agriculture Metaphor	14	16	38
Architechture Metaphor	27	2	6
War Metaphor	6	16	23
Disease Metaphor	2	2	26
Individual Metaphor	7	1	16
Journey Metaphor	4	2	3
Arts Metaphor	1	2	1
Sports Metaphor	0	3	3
Total	93	76	161

Table 2. provides a clear representation of the distribution of ecological orientations within each type of conceptual metaphor. It is evident that the most prevalent type is the destructive metaphor, with a count of 161. This is followed by the beneficial metaphor, with a count of 93, and the least prevalent type is the ambivalent metaphor, with a count of 76.

The dominant presence of destructive metaphors can be attributed to Japan's decision to discharge nuclear-contaminated water, particularly impacting China's East Sea. As a responsible power and the primary target of the consequences, China possesses both the right and obligation to criticize Japan for its unethical actions. Furthermore, it is imperative for China to inform the public, through various news media outlets, about the devastating effects of nuclear contamination.

Certainly, nuclear energy, as a clean source, holds the potential to facilitate social and economic development while simultaneously protecting the environment. This is of utmost importance for China's effective growth and development. The exploration and utilization of energy resources demand patience as well as the backing of superior technological and scientific advancements. From China's perspective, it is crucial to make the most of this double-edged sword.

To examine the ecological orientation depicted in various metaphors, the study focuses on three frequently used metaphors: the Economy Metaphor, the Architecture Metaphor, and the Disease Metaphor. These metaphors serve as illustrative examples that shed light on the ecological orientations found within the discourse.

4.2.1 Economy Metaphor in Beneficial Discourse

Scarce resources, including nuclear energy, have historically been a contentious issue, as the potential risks associated with their utilization are often proportional to the benefits they offer. However, it is crucial to recognize that the overdevelopment and excessive exploitation of these resources will ultimately burden future generations. Example 2, which employs an Economy Metaphor, serves the purpose of expressing deep concern for the well-being of future generations.

> Example 2: Japan's plan to dump treated radioactive water ... is rather a nuclear legacy issue, ... future generations at stake.

In Macmillan English Dictionary, the term "legacy" encompasses two fundamental meanings. Firstly, it refers to money or property that an individual arranges for someone to inherit after their death. Secondly, it denotes something, such as a tradition or problem, that persists as a consequence of past events. In the context of this study, the target domain is nuclear, while the source domain is money. This suggests that improper handling of resources can pose risks to the future, thereby raising awareness and prompting people to address such issues. This interpretation aligns with the ecosophy of "Diversity and Harmony, Interaction and Co-existence", making it a beneficial metaphor within this specific context.

4.2.2 Architecture Metaphor in Ambivalent Discourse

Indeed, the usage, exploitation, and storage of nuclear energy can often appear abstract and unfamiliar to the general population. To facilitate better understanding of this complex concept, it can be helpful to draw upon familiar and relatable metaphors. Comparing the development of nuclear energy to building a house, for instance, utilizes the Architecture Metaphor as an effective application.

> Example 3: Stressing that safety ... emphasized that the construction of new nuclear power ... should keep pace with the latest safety standards.

In Example 3, the metaphorical use of "NUCLEAR IS BUILDING" serves to convey the magnitude and complexity of the development of nuclear power. By drawing upon the original meaning of construction as "the process of building something large or complicated, such as a bridge or road," the metaphor implies the significant scale of nuclear energy infrastructure. However, it is important to note that while the metaphor emphasizes the importance of safety during the construction process, it fails to address the potential impact on the surrounding environment and living organisms. This omission highlights a lack of consideration for ecological sustainability. As such, this metaphor can be seen as ambivalent, encompassing both beneficial and negative aspects. Ambivalent metaphors should not be entirely rejected; instead, a more supportive approach can be taken to retain the positive elements while eliminating the negative ones.

4.2.3 Disease Metaphor in Destructive Discourse

The use of the metaphor "injection" in the discussion of nuclear waste disposal can provide a deeper understanding of the potential consequences of unwise discharge. By likening the process to a medical injection, it conveys the idea that such actions can cause significant pain and aftereffects. This metaphor helps to emphasize that the environment, particularly the earth, should not have to bear the burden of unnecessary suffering.

> Example 4: Compared to methods such as injection into the ground, ... discharging nuclear-contaminated water into the sea is the most convenient option at the lowest cost.

While the original meaning of "injection" pertains to the process of introducing a drug or substance into the body, the metaphorical use of "injection" in the context of nuclear waste disposal suggests a different interpretation. In this metaphor, the earth is metaphorically portrayed as becoming ill or suffering as a result of improper discharge, thereby equating nuclear waste with a disease. This metaphorical expression can indeed be perceived as destructive, as it highlights the potential harm to the environment caused by improper nuclear waste disposal.

4.3 Factors Influencing the Formation of Ecological Discourse

The construction of ecological discourse is a deliberate process that involves integrating social needs related to environmental issues, catering to readers' interests, and aligning with local ecological policies. This process ensures that the discourse is not accidental but purposefully designed to address specific concerns and engage the target audience.

In response to social needs, countries are increasingly recognizing the significance of environmental degradation and resource scarcity as they develop their economies. The detrimental consequences of inappropriate utilization of new energy sources, such as the recent dumping of nuclear-contaminated water in Japan, have further highlighted the urgency of these issues. To raise public awareness and promote the concept of rational resource utilization and environmental protection, the media play a crucial role by aligning with governmental policies, disseminating responsible concepts, and taking a firm stance on ecological issues.

Readers' interests play a significant role in shaping the formation of ecological discourses. As news is accessible to a wide range of individuals, it is crucial for the content to be presented in a manner that is clear

and easily understandable. The use of conceptual metaphors in these discourses can serve as a powerful tool to transform complex and obscure ideas into clear and comprehensible ones. By employing vivid descriptions and relatable imagery, conceptual metaphors help readers grasp the essence and underlying concepts embedded within the discourse.

China has adopted a policy of "green and sustainable development" and promotes the concept of a "global community with a shared future". In line with these policy guidelines, China believes in taking proactive measures to prevent or minimize pollution and environmental damage. The primary objective of environmental protection in China is to prevent the occurrence and spread of environmental pollution during the process of economic development. China adheres to the principle of "whoever pollutes, whoever governs" and actively contributes to global environmental governance by offering advice and suggestions and providing sustainable solutions. China's official news media play a crucial role in responding to national policies and serving as a platform to showcase China's efforts in the field of ecology. They act as a mouthpiece for the national viewpoint, demonstrating to the world China's determination to combat environmental destruction. Through these media platforms, China showcases its firm stance and commitment towards environmental protection.

5. Chinese Ecological Views Toward Nuclear

5.1 Green and Sustainable Development: Balancing Economic Growth and Environmental Protection

China's ecological concept of green and sustainable development plays a crucial role in shaping its approach to nuclear energy. This concept emphasizes the need to balance economic growth with environmental protection, ensuring that nuclear energy is deployed in a manner that is both economically viable and ecologically responsible. It recognizes the importance of minimizing the environmental impact of nuclear power generation and promotes the integration of renewable energy sources. China's commitment to green and sustainable development is evident in its efforts to implement advanced technology, stringent safety standards, and effective waste management practices in the nuclear energy sector.

5.2 Global Responsibility and Cooperation: Addressing Environmental Risks on a Global Scale

China acknowledges the global nature of nuclear energy and the shared responsibility to address its environmental risks. The ecological concept of global responsibility and cooperation highlights China's commitment to international collaboration and information sharing in the field of nuclear energy. China actively engages in multilateral initiatives, such as the International Atomic Energy Agency (IAEA), to contribute to global nuclear governance and enhance the ecological sustainability of nuclear energy worldwide. By actively participating in efforts related to nuclear safety, waste management, and non-proliferation, China demonstrates its dedication to addressing environmental challenges associated with nuclear energy in a cooperative and responsible manner.

5.3 China's Ecological Commitment: Firmly Opposing Perceived Nuclear Pollution Emissions

China's firm opposition to perceived nuclear pollution emissions is rooted in its strong ecological commitment. By implementing eco-conscious regulations, investing in clean energy alternatives, and prioritizing transparency and public engagement, China demonstrates its dedication to protecting the environment and promoting sustainable development. This holistic approach aligns with China's broader eco-conscious perspective, contributing to a greener and cleaner future.

6. Conclusion

Utilizing a self-established corpus of nuclear emission news from China Daily, this study employs a combined qualitative and quantitative analysis approach to offer an ecological interpretation of conceptual metaphors prevalent in Chinese news discourse on nuclear contamination. Findings reveal the identification of 330 conceptual metaphors across ten categories, with Economy Metaphor, Substance Metaphor, Agriculture Metaphor, War Metaphor, and Architecture Metaphor being the most prominent. The research highlights the significance of environmental preservation for future generations, global economic competition, and the irresponsible actions of certain nations as key influences shaping the exploration of ecological orientations within the corpus. Factors driving the emergence of such ecological discourses include reader interests, alignment with regional ecological policies, and societal needs relating to environmental challenges. This study contributes to a deeper understanding of the nuanced ecological perspectives embedded within news discourse surrounding nuclear contamination in China.

This research carries both theoretical and practical implications. Theoretically, it contributes to the expansion of conceptual metaphor usage within the field of ecolinguistics, showcasing its valuable role in interpreting ecological articles and paving the way for future research in this area. Moreover, from a practical perspective, this study highlights China's responsibility and dependability as a globally influential nation in addressing challenges like nuclear contamination. It encourages readers to prioritize global environmental issues, recognize the significance of ecological preservation, and foster a robust ecological mindset. By emphasizing China's commitment to tackling environmental challenges, this research serves as an instructive resource, inspiring individuals to actively engage in environmental protection efforts and work towards a sustainable future.

Admittedly, this study acknowledges several limitations. The main concern is the small size of the corpus, which restricts the ability to conduct robust quantitative research. This research can be viewed as a pilot study, and future investigations could benefit from a larger corpus to thoroughly explore conceptual metaphor from an ecolinguistic perspective. Furthermore, despite the inclusion of automatic semantic tagging in Wmatrix, subjectivity in the metaphor identification process cannot be entirely eliminated. Therefore, it is important to consider the opinions of other experts in the field of linguistics who are familiar with the relevant procedures. Additionally, future research could explore the diachronic aspects of conceptual metaphor and conduct comparative studies between different countries to investigate chronological and spatial differences. These suggestions aim to enhance the comprehensiveness and validity of the research findings in subsequent studies.

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