An Ecological Discourse Analysis of Engagement Resources in News Reports on Marine Conservation in China Daily

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Manuscript received October 7, 2024; revised November 28, 2024; accepted January 25, 2025; published February 28, 2025.

Abstract—Ecological Discourse Analysis is a research methodology that focuses on the study of language use in relation to ecological issues and environmental concerns, aiming to reveal underlying ecological thoughts and ideologies by analyzing language. And Engagement System is a language resource used to express writer's stances and attitudes and contains the potential meaning of negotiating with readers. In recent years, the marine pollution has been a heated focus of environmental protection. 20 news reports about marine protection have been selected from China Daily, the official news platform, to study in detail. In this research, all kinds of engagement resources have been tagged and identified to analyze the interaction between editors and readers and explore the news' ecological orientations. Results show that there are far more heterogloss resources than monogloss resources, reflecting the news writers' attempts on establishing a dialogue with readers. In terms of ecological orientations behind engagement resources, there are few destructive discourses in the news reports, and most of them are beneficial or neutral discourses, which show the traditional Chinese ecological philosophical thoughts of "harmonious coexistence between human beings and nature". The aim and significance of this research is to encourage news writers to interact with the public to enhance people's ecological consciousness.

Keywords—China Daily, ecological discourse analysis, engagement system, marine conservation

I. INTRODUCTION

On August 24, 2023, Japan discharged nuclear effluent from the Fukushima Daiichi nuclear power plant into the sea, an act that triggered a hot debate around the globe. In recent years, Marine protection is one of the current hot topics of global environmental protection. With the growth of global population and rapid economic development, human use of marine resources has been increasing, which has led to serious damage to marine ecosystems.

China, as a responsible country advocating the building of human community with a shared future, has also continued to pay attention to reports on marine conservation. And China Daily is an important window for China and the world to get to know each other. Ecological discourse analysis can tap into the ecological tendencies of Chinese media, while the engagement system embodies the interaction between authors and readers, also in news between editors and the Chinese and foreign public. So it can convey China's attitude towards marine protection to the international community, spread China's ecological philosophical concepts, and thus build up the ecological image of the Chinese nation.

This study aims to explore the ecological orientations in the news by analyzing the engagement resources, and then provide suggestions for news writers to shape China's image. The research questions are as follows:

- 1. What engagement resources are utilized in news reports about marine conservation in China Daily?
- 2. What is the distribution of various types of intervention resources in the marine conservation news reports in China Daily?
- 3. What kind of Chinese eco-philosophy is reflected in marine conservation news discourse through the engagement system?

II. LITERATURE REVIEW

Ecolinguistics emerged in the 1970s, and its research is divided into two major models: the first is the "Haugen's model" based on ecology, which focuses on the interrelationship between language and ecological environment, emphasizes using ecological theories and methods to study the existence and development of language. While the second is the "Halliday's model" based on systemic-functional linguistics, which focuses on the impact of language on the ecological environment [1]. This paper refers to the latter. In the Ninth International Conference on Applied Linguistics, Halliday [2] pointed out that there is ecology in the language system itself, and the grammatical features of the language will have an impact on people's subconscious ecological concepts. He highlighted the "social responsibility of linguists", which emphasizes that linguists should remember what they can contribute to environmental protection. Since then, in the field of eco-linguistics, the research model of revealing the ecological nature of language through discourse analysis has gradually emerged. Ecological Discourse Analysis (EDA) first appeared in Alexander & Stibbe's article-" From the analysis of eco-discourse to the ecological analysis of discourse" [3]. And Stibbe distinguishes ecological features of language into three types: destructive, neutral, and beneficial, which is measured primarily by the analyst's eco-philosophical outlook [4].

In China, scholars such as Huang put forward the localized concept of "harmonious discourse analysis" in the context of Chinese culture, with the aim of promoting the harmonious relationship between human beings and nature, as well as language and ecology [5]. He and Wei [6] further clarified and developed the eco-philosophical concept of "pluralistic harmony and interactive symbiosis" by explaining the principles of ecology and based on Chinese excellent traditional culture and philosophical thought, which is mainly divided into three categories: beneficial, neutral and destructive discourse [7]. Beneficial stances follow the international eco-philosophical concept of "harmonious coexistence between human beings and nature" and promote the protection of ecosystems, which is worth advocating; [8] stances neither follow nor violate

eco-philosophical concept, which do not have a positive impact on ecosystems, and need to be improved; and destructive stances violate this eco-philosophical concept, which impede the protection of ecosystems and need to be resisted [9].

Martin has developed the appraisal theory and engagement system is one of its sub-categories, which has triggered a systematic academic discussion among scholars at home and abroad. Many researchers have widely adopted evaluation theory to study academic discourse and news discourse. Fu & Lai [10] studied dialogic construction in literature review part of academic papers from the perspective of engagement. Deng & Zhang [11] revealed that the distribution of engagement resource in the discussion section of academic papers in applied linguistics is affected by the rhetorical goals of the discourse. In addition, there are many studies on news discourse from the perspective of engagement system, Dong [12] made a research on the interpersonal meaning of foreign news reports about Boao Forum for Asia by analyzing the engagement features. Jiang & Chen [13] analyzed the discourse construction by engagement resources in the foreign news of "Belt and Road". Amount of studies have focused on the distribution features and function of engagement resources in news. However, fewer studies have analyzed the ecological thoughts behind engagement resources in news discourse. Jia [14] described the characteristics and differences of the distribution of engagement resources in the mainstream media in China and the United States on the topic of the new crown epidemic from the perspective of ecolinguistics, and the mining of eco-philosophical ideas needs to be enriched.

At present, most of the topics about marine conservation are political news or legal studies, and there are few studies on discourse strategies in news reports from a linguistic perspective. Therefore, this paper takes 20 news reports about marine conservation in China Daily as a corpus, and analyzes the distribution characteristics of engagement resources to reveal China's eco-philosophical thoughts behind these discourse strategies, and to provide insights for the dissemination of China's international eco-image of environmental-friendly [15].

III. FRAMEWORK

Martin & White [16] proposed evaluation theory based on the development of systemic functional linguistics. The engagement system is a sub-system of evaluation theory that is concerned with the source of evaluation and consists of two main components: monogloss resources and heterogloss resources. Monogloss implies that evaluation originates from a single party, excluding the dialogical space of language, and is divided into presumption and assertion; Heterogloss refers to the indirect indication of writer's own position by drawing on others' ideas, opinions, and is divided into contraction and expansion.

Contraction engagement means that the writer directly or indirectly negates, opposes or rejects the reader's viewpoints different from his/her own, narrowing and compressing the space of the conversation with readers, which is mainly realized by disclaim and proclaim. Disclaim refers to the fact that certain dialogically different voices or positions are directly or indirectly rejected, replaced, or considered inappropriate, presented as a result opposite to the speaker's point of view. In English, this is mainly done through

negative words such as "no", "never", "nor" and "yet", "but", "although" and other concessions. While proclaim is not a direct negation of another voice, but rather a limitation of its dialogic space in some way. It contains three sub-semantic categories: concur, pronounce and endorse. Concur means that the writer agrees with the other voice, which is expressed in English by words such as "of course" and "obviously" to share a point of view with the reader. Pronounce refers to the author's direct assertion of his or her point of view. For example, by using words such as "claim" and "think", the author adds credibility to the author's voice and detracts from the strength of the voice that is different from that of the text. Endorse refers to the author's endorsement of another voice, which in the author's opinion is correct or indisputable, and is often reflected by phrases such as "prove" and "point out".

Expansion engagement means that the writer can be accommodated or accepted by the reader when expressing his/her own views, positions and attitudes, or encouraging the reader to express views different from his/her own, which is mainly realized by entertain and attribute. Entertainment refers to the fact that the author's voice is one of many possible voices, and that the author accommodates other voices and provides dialogic space for these voices. It is mainly realized by means of modal verbs, modal adverbs and inferential clauses such as "should" and "believe". While attribution refer to the author's quoting of voices outside the discourse, expanding the space for dialog with the reader. Excerpts are further divided into acknowledgment and distancing. Distancing means that the author maintains a significant distance from another voice in the text, but there is no "distancing" resource in the corpus of this paper, so it will not be discussed. Acknowledgement means that the author recognizes the viewpoint or proposition quoted and guides the reader to think and dialogue from multiple perspectives, such as "somebody said", "as reported", etc. [16].

The engagement system can reflect the different intervention methods and dialogic attitudes of writers, but it cannot directly reflect the ecological orientation of discourse. Therefore, with reference to Wei and He [6] model, this paper analyzes the engagement resources of the news articles on marine conservation in China Daily in both quantitative and qualitative terms, in an attempt to analyze China's eco-philosophical outlook. (See Fig. 1.)

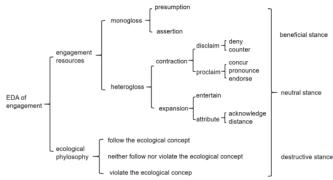


Fig. 1. Engagement system of ecological discourse [9].

IV. METHODOLOGY

A. Corpus Building

As the most influential official media platform, China Daily not only reflects the immediate interests and needs of

the public, but also serves as a window for communication between China and international community, a medium for showcasing China's image. In recent years, the issue of marine pollution has attracted the attention of the public, and according to statistics, in the past five years, China Daily has a total of about 120 pieces of news about marine pollution and protection. This study adopts a random sampling method, selects 20 pieces of news, with a total of 17,213 words to analyzes the intervening resources in the news discourse, and lasso the ecological tendency embedded behind it. The selected reports mainly focus on marine biodiversity conservation, nuclear wastewater pollution in Japan, and marine pollution in the Baltic Sea.

B. Research Tools

Text Editor, UAM Corpus Tool 6 were utilized to process and annotate the collected corpus. Text Editor Text Editor helps to convert the text format for subsequent annotation. UAM corpus tool is a freely available program for the annotation of text corpora, which allows users to annotate multiple texts. The 20 news were imported into the software and a careful manual annotation was carried out based on the scheme. Each type of engagement resource is annotated and calculated. In addition, this software provides functions for searching linguistic features and presenting statistics, which is convenient and helpful for researchers to conduct research.

C. Research Processing

This study adopts a combination of quantitative and qualitative analysis, firstly quantitatively analyzing the distribution of each type of engagement resources in marine conservation news reports. The cleaned and processed corpus is annotated sentence by sentence by using the UAM Corpus Tool 6, and various types of engagement resources are annotated and counted respectively. The types of engagement

resources were then qualitatively analyzed, and combined with examples in the news from the perspective of eco-linguistics to reveal the eco-philosophical ideas of Chinese media's news discourse on marine conservation, and to explore the implications for China's image communication to the world.

V. DISCUSSION

A. Distribution of Engagement Resources

Overall, there are 528 engagement resources in marine conservation news reports in China Daily, among which there are 101 monogloss resources, accounting for 19.1% of the total engagement resources, and 427 heterogloss resources, accounting for 80.9%, and the borrowed heterogloss are much larger than the monogloss resources, and the specific distribution of the types is shown in Table 1.

As can be seen from Table 1, acknowledge resources take the first place among all resources because it merely paraphrase the words and opinions of external voices without obviously indicating the speaker's standpoint on the proposition, so they are more reflective of the objectivity of the report and are in line with the discursive characteristics of news reporting. Among the heterogloss resources, there are significantly more expansion resources than contraction resources, suggesting that the writers of China Daily are more likely to create spaces to socialize and share multiple voices in conversation with readers. Because China Daily is based in China and oriented to the world, conveying to the world China's values of advocating the building of a shared community of human and calling on the international community to participate in the action of ocean protection, the expansion resources not only express the attitude of the narrator, but also show the author's willingness to build shared values with the readers [17].

	Table 1. Distrib	oution of engagement i	resources for marine cor	servation news		
Type				Number	Percentage	Total
Monogloss	Assertion			44	8.3%	-
	Presumption			57	10.8%	
	Contraction	Disclaim	Deny	25	4.7%	101
			Counter	81	15.4%	
		Proclaim	Concur	23	4.4%	
Heterogloss			Pronounce	44	8.3%	
			Endorse	12	2.3%	
	Expansion	Entertain	Entertain	93	17.6%	
		Attribute	Acknowledge	149	28.2%	
			Distance	0	0.0	

B. Analysis of Engagement Resources

1) Monogloss

Monogloss do not refer to other voices and perspectives. There is only one voice in the news text, i.e., the author only provides a position that does not need to be discussed or argued by the reader, but only acknowledged rather than responded to, embodied in affirmative declarative sentences. In conjunction with the eco-philosophical perspective, monogloss is categorized as beneficial, neutral, and destructive speech.

Example 1: The UNEP helps protect the seas and oceans, drills down to the root causes of the pollution, strengthens

"environmental governance" and safeguards ecosystems.

Example 2: Overseeing Japan's discharge of the nuclear-contaminated water is not only an affair of the International Atomic Energy Agency, but also other related international organizations such as the United Nations Environment Programme, the Food and Agriculture Organization and the International Maritime Organization.

The above two examples of China Daily's attitude towards the nuclear wastewater discharge incident in Japan are affirmative discourses that do not refer to other voices and opinions and do not need to be interpreted, covering beneficial and neutral assumptions. Example 1 reports the attitude of the United Nations Program, "strengthens

'environmental governance' and safeguards ecosystems' reflecting China's endorsement of the United Nations' attitude and support for its actions, which is in line with the eco-philosophical concept. Example 2 is an objective statement of the responsibility of international organizations to supervise the discharge of nuclear wastewater from Japan, which is a neutral stance.

2) Heterogloss

Heterogloss corresponds to monogloss, projecting the voices of government officials, experts and scholars, ordinary people and historical figures into the discourse in an implicit or explicit way through a variety of ways, providing space for the author to carry out a dialogue with the readers [18]. Divided into contraction and expansion resources, contraction is to negate, reject, restrict or avoid voices that are different from one's own point of view; expansion is the author's creation of a space with the readers, accommodating and accepting a variety of voices and exchanging dialogues with different voices.

(1) Contraction Resources

While recognizing the existence of multiple voices, contraction inhibits the expression of others' views by denying and opposing the interlocutor's viewpoints and positions [19]

Example 3: Virginijus Sinkevicius, the EU's commissioner for the environment, oceans and fisheries, said the agreement on fishing opportunities was important, but that the bloc must "not shy away from addressing our most pressing challenge: the environmental status of the Baltic Sea".

Example 4: The commission's State of the Baltic Sea 2023 report revealed that overall conditions in the sea have not improved, with some indicators actually showing decline, reported The Guardian newspaper.

The above two examples report China's views on the issue of marine pollution in the Baltic Sea, using the discourse of the Baltic Marine Environment Protection Commission to indicate China's position, using contraction to intervene in the resources, narrowing the space for dialogue, and highlighting the non-negotiable and firm attitude of the news writer's viewpoints [20]. Example 3 employs the deny strategy, using the concessive word "but" to emphasize that although the development of the fishing industry is important, the first priority is to solve the problem of marine pollution, which is a beneficial discourse. In Example 4, the author of the news article uses the report "State of the Baltic Sea 2023" to objectively state the current situation of the Baltic marine environment, which is a neutral stance.

(2) Expansion Resources

Expansion resources mean that the sender can be accommodated or accepted in expressing his or her own views, positions and attitudes, and even encourage the listener to express views different from his or her own, which is mainly realized through entertainment and attribution [21].

Example 5: "We call on Japan to engage in substantial consultations with neighboring countries and establish a long-term, effective international monitoring mechanism, ensuring the meaningful participation of relevant parties, including neighboring countries. This should be done in a responsible manner for the disposal of nuclear-contaminated water," the spokesman said.

Example 6: "The ocean is the largest reservoir of heat in the Earth's climate system and one of the primary factors determining climate change," Jian said.

In Example 5, "should" is used as a modal verb to express a polite request, indicating that the Chinese speaker calls on Japan to take responsibility for its nuclear wastewater and to actively participate in the protection and governance of the oceans, and the text cites the speaker's viewpoints to offer suggestions for Japan's future development in dealing with the oceans, while at the same time providing space for these possibilities for a dialogue to be developed, and for the realization of the harmony between man and nature to be discussed together. The text quotes the speaker's views to provide suggestions for Japan's future development in dealing with ocean issues, and at the same time opens up a space for dialogue on these possibilities and for joint discussion to realize harmony between human beings and nature, which is a beneficial stance. In Example 6, Prof. Jian Zhimin, an academician of the Chinese Academy of Sciences, is quoted, and the author recognizes his viewpoints and guides readers to think and dialogue from multiple perspectives, which increases the authenticity, basis, and authority of the news, and Prof. Jian's words indicate the importance of ocean protection, which is also beneficial stance.

VI. CONCLUSION

In terms of the distribution of engagement resources, heterogloss resources is greater than monogloss resources, which is conducive to increasing the authenticity, basis and authority of the news; expansion resources is more than contraction resources, which demonstrates that the author of China Daily is adept at constructing a space for dialogue with readers, and is tolerant of a variety of voices. This is conducive to reflecting the public communication role of news, readers are more likely to accept the views and calls of news.

From the viewpoint of ecological philosophy embodied in the discourse, when we look at the news reports on marine conservation, there are only a few destructive discourses, and most of them are beneficial or neutral stances, and all of these engagement resources convey a kind of ecological philosophy of "harmonious coexistence between human beings and nature", which shows Chinese environment-friendly image [22].

In conclusion, China Daily not only expresses the public's concern for marine conservation, but also reflects China's international image. Therefore, it is necessary to pay attention to the dialogues in the news to better convey China's eco-philosophy and call on people all over the world to participate in marine conservation together [23].

There are some shortcomings in this study, and it is hoped that future research can further clarify the selection criteria of news, such as topic relevance, news hits, etc, expand the sample size of the research database to improve the scientificity of the study, and additionally study more than one news media to conduct a comparative study, making up for the shortcomings of this research area.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Jiang Lingling conducted the research; Zhang Yi gave detailed guidance and suggestions. both authors had approved the final version.

ACKNOWLEDGMENT

We would like to express our gratitude to all the individuals and organizations who have contributed to the successful completion of this research project. First and foremost, we would like to thank our supervisor, Pro Zhang, for her invaluable guidance, support, and encouragement throughout the course of this study. Her expertise and insights have been instrumental in shaping the direction of our research and in helping us overcome various challenges along the way. In addition, we would like to thank our families and friends for their unwavering support and understanding throughout this research project. Their encouragement and belief in us have been a constant source of motivation. Thank you to everyone who has played a part in making this research a reality.

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