
RESEARCH ARTICLE

Co-governance, Co-assistance, and Common Concern: A Discourse-Historical Analysis of Chinese Sturgeon Release News in Mainstream Media

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ABSTRACT

This study employs the Discourse-Historical Approach (DHA) as an analytical framework to examine the content and discursive strategies of Chinese sturgeon release reports in China from 2017 to 2024. It then discusses the historical changes in Chinese sturgeon conservation discourse and its construction methods. The findings reveal that compared to the period from 2017 to 2020, the period from 2021 to 2024 showed increased attention to contents of "policy support" and "habitat and natural reproduction." At the level of discursive strategies, there were additional terms such as "commercial fishing" and "tracking management," as well as predicates like "breed" and "hope" that express specific actions and emotional expressions. More authoritative sources were selected, but the views of ordinary people were not adequately considered. Based on this, the study suggests that subsequent related reports should include the elements of "Comprehensive Regulation," "Diversified Participation," and "Concern for Chinese Sturgeon." The research aims to help relevant media more effectively promote China's efforts to save the endangered Chinese sturgeon and encourage more people to engage in ecological protection work.

KEYWORDS

Chinese Sturgeon Release News; Discourse-Historical Approach (DHA); Chinese Sturgeon Conservation

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1. Introduction

The Chinese sturgeon is one of the oldest living vertebrates. As a flagship species of the Yangtze River basin, its existence plays a crucial role in maintaining the basin's ecological stability. However, due to overfishing, blocked migration routes, and the loss of key habitats, the wild population of Chinese sturgeon has experienced a dramatic decline in recent decades. They even lost the ability to reproduce naturally in the wild (Xu et al, 2023). To date, the species has been listed as a national first-class protected wildlife and as critically endangered by the International Union for Conservation of Nature (IUCN). To restore the population of Chinese sturgeon, numerous studies have been conducted in various fields such as sociology, oceanography, and biology (Wang & Li, 2024). However, research in linguistics and communication is relatively scarce. As an important channel for information dissemination, the content and discursive strategies of media reports not only influence public understanding and attitudes towards Chinese sturgeon conservation but also reflect societal values and directions of action regarding ecological protection. Based on this, this study collects reports on Chinese sturgeon release from domestic mainstream media since 2017 and conducts a discourse-historical analysis. Specifically, the study examines the content, discursive strategies, and linguistic means employed in Chinese sturgeon release news at different times. By synthesizing the results of the discourse-historical analysis of the two periods, this study attempts to construct a feasible framework for Chinese sturgeon conservation discourse for reference in related reporting.

2. Literature Review

The Discourse-Historical Approach (DHA), also known as the Discourse-Historical Analysis, originated from the Vienna Circle and was initially employed to interpret and reconstruct latent anti-Semitic ideas within public discourse. This research paradigm emphasizes the historical and cultural context of language, aiding in the resolution of specific societal issues (Van Dijk, 2008; Wang & Zhou, 2021). Notably, Ruth Wodak, an Austrian linguist, and her team have made significant contributions to the refinement of DHA theory. They have outlined three key steps in the DHA research paradigm: identifying the content and themes of discourse, analyzing discursive strategies, and discussing the linguistic means to realize these themes and strategies (Wodak et al., 1999), which encompass nomination, predication, argumentation, perspectivization, and strategies of intensification and mitigation.

DHA primarily focuses on empirical research of political or media discourse. Studies have centered on the identity construction and representation strategies of specific groups, with a particular emphasis in China on the construction of corporate images (Zhang & Hou, 2023; Hu & Xu, 2023) and national images (Zhang & Chang, 2021). Abroad, there is a tendency to explore the construction of collective identities within nations or international alliances (Unger, 2013; Khan et al, 2019). Additionally, articles have analyzed speeches and news texts to study international relations (Wang & Jie, 2023; Yang, 2017). In recent years, DHA research has begun to address non-political issues such as the environment. Wu Jianguo et al (2024) have utilized corpus software to examine the representation of China's environmental image in climate change reporting. However, discussions within DHA on non-political topics like the environment are still limited, and there is a dearth of research exploring the dynamic changes in discourse over time. In light of this, this study focuses on the current environmental issues and investigates the historical changes in discourse producers' strategies for constructing ecological protection discourse through reports on the release of Chinese sturgeon. The study aims to answer the following questions:

- (1) What are the trends in the themes focused on by Chinese sturgeon release news in China from 2017 to 2024?
- (2) What are the trends in the discursive strategies employed in Chinese sturgeon release news in China from 2017 to 2024?
- (3) What recommendations can be made for the construction of discourse on Chinese sturgeon conservation in China?

3. Method

3.1. Research Data

The corpus for this study is drawn from the mainstream English media in China, namely China Daily and China Global Television Network (CGTN). The search terms were set as "Sturgeon," and relevant discourses concerning the release of Chinese sturgeon were manually retained. For video news, the narration was transcribed into text. Due to the unresolved issues with artificial breeding of Chinese sturgeon in earlier years, reports on the release of Chinese sturgeon by China Daily before 2017 were scarce, and CGTN did not have any relevant reports at that time. Consequently, this study includes news from 2017 to 2024, totaling eight years, and divides the corpus into two time periods: 2021-2024 (5591 words) and 2017-2020 (5307 words).

3.2. Research Framework

The study follows the three-step approach of the DHA research paradigm, integrated with corpus tools. The first step involves identifying the themes. The corpus is imported into the quantitative software KH Coder for a co-occurrence network analysis of keywords, resulting in a visualized map to determine the main content of the news. The second and third steps involve examining discursive strategies and discussing specific linguistic means. Three key discursive strategies are identified: nomination strategy, predication strategy, and perspectivization strategy. The corpus is then imported into the corpus tool Antconc 4.2.4 to search for target vocabulary and descriptions of the target vocabulary, enabling a comparative analysis of the evolution of vocabulary usage or pragmatic strategies in the Chinese sturgeon release news across the two periods.

4. Results

4.1. Thematic Analysis

Co-occurrence analysis utilizes the occurrence of word pairs or noun phrases together to ascertain the relationships among themes within a discipline (Wu & Lü, 2012). As illustrated in Figure 1 and Figure 2, the themes in the 2021-2024 corpus are notably more diverse compared to those in the 2017-2020 corpus. During the first time period, there are approximately four themes: Theme 1 predominantly represents the act of releasing Chinese sturgeon itself, with the most representative words stemming from Cluster 6; Theme 2 focuses on the current status of various endangered fish species, with representative words from Clusters 3 and 9; Theme 3 reflects the latest advancements in Chinese sturgeon conservation research, with words from Cluster 2; and Theme 4 signifies the efforts made by local fishermen to save the Chinese sturgeon, with words from Cluster 1.

The second time period encompasses Themes 1, 2, 3, and 4, with the addition of some new themes: Theme 5 highlights the policy support provided for the protection of Chinese sturgeon, with words mainly from Clusters 8 and 11, and Theme 6 addresses the habitat and natural reproduction issues of Chinese sturgeon, with words from Clusters 5, 7, and 9.

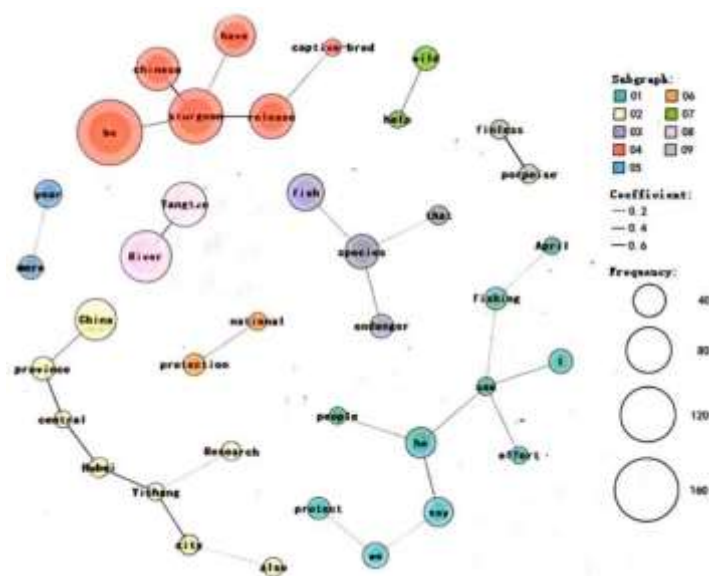


Figure 1: Co-occurrence of Vocabulary in Chinese Sturgeon Release News (2017-2020)

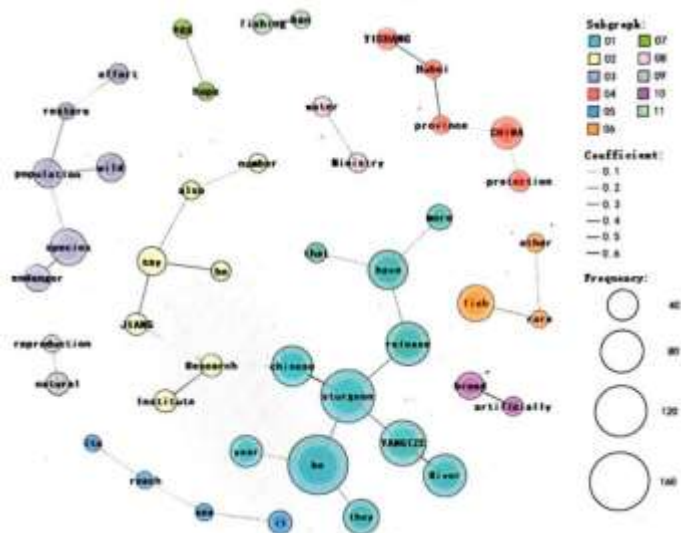


Figure 2: Co-occurrence of Vocabulary in Chinese Sturgeon Release News (2021-2024)

4.2. Discursive Strategies

4.2.1. Nomination Strategy

Nomination Strategies Typically Realized Through Determiners and Nouns for the Purpose of Naming and Categorizing Participants in Social Practices. The analysis of Nomination strategies in this study was conducted using Antconc 4.2.4's concordance function, which displays target words and their contexts line by line (Liang, 2016). Upon importing the corpus into

Antconc and entering “Sturgeon || Sturgeons,” it was found that the singular and plural forms of “Chinese sturgeon” appeared 119 times between 2017 and 2020, and 133 times between 2021 and 2024. After screening the content associated with “Sturgeon” on both sides, the modifying components or synonyms of “Chinese sturgeon” were retained for classification, as detailed in Table 1. It can be observed that between 2017 and 2020, when reporting on Chinese sturgeon, the media typically referred to it as an “endangered species” to emphasize its protection status and significance. The reports also described the biological characteristics of Chinese sturgeon, such as their size and habits, to help readers better understand their “biological characteristics.” To reflect the characteristic of “artificial breeding” of Chinese sturgeon, specific collocations were used. The media also compared Chinese sturgeon to pandas and living fossils, endowing them with rich “symbolic meanings” to more vividly highlight the current endangered status and ecological value of Chinese sturgeon. Of course, the generic terms “Sturgeon Fish” and “Fish Stocks” were also used as common substitutes for Chinese sturgeon. Between 2021 and 2024, Chinese sturgeon was referred to as “None Commercial Species,” reflecting constraints on fishermen and emphasizing the national prohibition of “commercial fishing” for Chinese sturgeon. During this period, related reports also associated Chinese sturgeon with words like “Tagged” and “Trackable,” indicating that relevant departments continued to track and protect them after release.

Table 1: Nomination Strategies in Chinese Sturgeon Release News Across Two Phases

Time Periods Involved	Nomination Strategies	Example
2017-2020 ; 2021-2024	Protection Level and Importance	strictly protected species in China
2017-2020 ; 2021-2024	Biological Characteristics	one of the largest sturgeons
2017-2020 ; 2021-2024	Artificial Breeding	artificially-bred sturgeons
2017-2020 ; 2021-2024	Symbolic Significance	giant panda in water
2017-2020 ; 2021-2024	General Descriptions	sturgeon fish
2021-2024	Commercial Fishing	none commercial species
2021-2024	Tracking and Management	the tagged sturgeons

Example (1): The oldest trackable Chinese sturgeon released is now 9 years old, as reported by Jiang. Researchers must wait an additional 5 years for the sturgeon to reach sexual maturity and migrate back to the river. In the meantime, they hope to learn more about the species’ behavior.

Example 1 is from the period of 2021-2024, which reports on the application of tracking technology for Chinese sturgeon. In previous years, although the artificial breeding and release of Chinese sturgeon received attention, the actual effects on the species’ natural development and population continuation in the wild were unclear. The term “trackable Chinese sturgeon” not only reflects comprehensive attention to the species but also highlights the continuous advancements in species protection technology in China, contributing to the construction of a more scientific and professional discourse system for Chinese sturgeon conservation news.

4.2.2. Predication Strategy

Predicate strategies generally assign positive or negative attributes to subjects through explicit and implicit predicates. By examining the word frequency list and retaining verbs that appeared ≥10 times in either corpus phase, we obtained Table 2. The P-value for “protect” is 0.02, indicating that the frequency of this word significantly decreased in the latter phase compared to the former. The P-value for “breed” is 0.00, suggesting an extremely significant increase in its usage in the latter phase. Similarly, the abstract action verb “hope” has a P-value of ≤0.01, proving a highly significant increase in its frequency. Other words such as “release,” “endanger,” “reach,” and “restore” also show some degree of growth, although their significance is not as high.

Table 2: Predicate Strategies in Chinese Sturgeon Release News Across Two Phases

Rank	Predicate	Frequency	P
1	be	171→166	0.45
2	release	77→83	0.88
3	have	66→66	0.76
4	say	33→34	0.93
5	endanger	20→29	0.27
6	protect	18→7	0.02
7	breed	11→32	0.00
8	see	11→9	0.57
9	help	10→9	0.73
10	reach	8→12	0.43
11	hope	2→11	0.01
12	restore	7→10	0.53

Example (2): "It's really hard to be a volunteer, as many people want to join to help the endangered species. I hope the Chinese sturgeons can be removed from the list of endangered species soon."

Example 2 is from the period of 2021-2024 and involves an interview with volunteers participating in the Chinese sturgeon release initiative. The first sentence's "want to" and the second sentence's "hope" both belong to the mental process of functional grammar transitivity, representing the speaker's positive expectations for the restoration of Chinese sturgeon biodiversity. In the report, the modal verb "can" and "be" together form the predicate component, which somewhat intensifies the speaker's emotional color, making the Chinese sturgeon release news more motivational. However, as it is a low-modality modal, it also proves that the recovery of the Chinese sturgeon population is by no means.

4.2.3. Perspectivization Strategy

Perspectivization strategies involve speakers integrating their viewpoints into their reports by selecting different perspectives. In this study, after retrieving evidence markers such as "say," "announce," "tell," "report," and "accord," the sources of citations were analyzed and categorized in Table 3. As shown in the table, compared to the period of 2017-2020, the frequency of citing scientific researchers' viewpoints in the Chinese sturgeon release news from 2021-2024 significantly increased ($P=0.01$), while the frequency of citing department heads' viewpoints showed a certain degree of growth. However, the citations from the public significantly decreased in the latter period ($P=0.00$), indicating a stronger bias in the sources of information.

Table 3: Perspectivization Strategies in Chinese Sturgeon Release News Across Two Phases

Rank	Source of Citation	Frequency	P
1	Department Heads	13→20	0.28
2	Official Documents	2→2	0.96
3	Scientific Researchers	3→14	0.01
4	the Public	25→2	0.00
5	News Reports	2→2	0.96
6	Research Materials	3→1	0.28

Example (3): "All in all, what determines the fate of the Chinese sturgeon will always come back to the clean water and fewer threats created by us. Only by then, we are safe to say they are saved."

Example 3 is from the period of 2017-2020 and summarizes the entire Chinese sturgeon release event. The first sentence uses the modal verb “will” to firmly emphasize that water quality and human activities greatly influence the survival of Chinese sturgeon. In the second sentence, the author employs a perspectivization strategy by using the evidence marker “we are safe to say” to construct a shared cognitive framework. The word “we” places the reporter and the reader in the same camp, regarding everyone as an indispensable member of the Chinese sturgeon protection action. This choice of perspective helps to unite the public and share the responsibility of protecting the Chinese sturgeon.

5. Discussion

With the maturation of Chinese sturgeon aquaculture and monitoring technologies (technological means) and the enhancement of public ecological protection awareness (social consensus), both the content and strategies of discourse have undergone significant changes across the two periods. Based on the comparative results, the study attempts to summarize three elements for the construction of Chinese sturgeon conservation discourse (see Figure 3).

The first element is “Comprehensive Regulation,” achieved through “Artificial Intervention Nomination Strategies” and “Integrated Management Systems.” Both the formulation of Chinese sturgeon protection policies by relevant departments or the tracking of their natural continuation by various industries demonstrate China’s comprehensive governance capabilities across all dimensions and throughout the entire process. Such scientific and reasonable protection measures have effectively promoted the recovery of the Chinese sturgeon population.

The second element is “Diverse Participation,” realized by “Artificial Intervention Nomination Strategies” and “Balanced Perspectivization Strategies,” reflecting the increasingly significant positive role of humans in Chinese sturgeon conservation actions. In terms of perspectivization strategies, the second phase focuses more on citing “department heads” and “scientific researchers” as sources, with a reduction in the quotation of the public. While this choice ensures the professionalism and evidentiality of news reporting, it may also lead to certain limitations. He (2011) stressed that over-reliance on a few individuals and organizations as sources will prevent the news media from fully performing its function of guarding the environment. If Chinese sturgeon release news could appropriately select the public as sources, it would bridge the gap with the audience, making it easier to involve them in the atmosphere of national action and promote the broader implementation of Chinese sturgeon conservation efforts.

The third element is “Concern for Chinese Sturgeon,” achieved through “Ecological Value Nomination Strategies” and “Emotional Predicate Strategies.” The news extensively uses references related to the ecological value of Chinese sturgeon to educate the public about their important ecological functions, which helps to popularize the significance of Chinese sturgeon conservation. In terms of predicate strategies, the latter phase of reporting frequently uses predicates that represent specific actions and genuine emotions. Such reporting captures the audience’s psychology, reflects the strong emotional investment of the media and the public in Chinese sturgeon conservation efforts, and aligns with audience concerns (Yuan, 2018).

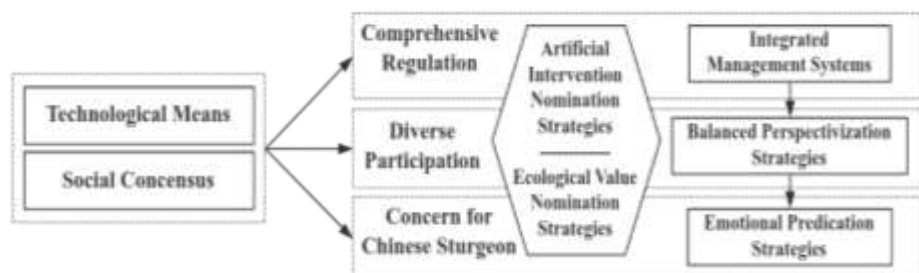


Figure 3: Chinese Sturgeon Conservation Discourse Model

6. Conclusion

This study employs the Discourse-Historical Approach (DHA) to analyze Chinese sturgeon release news from China Daily and CGTN over an eight-year period. It investigates the diachronic differences in related reports between 2017-2020 and 2021-2024.

Based on this, this study attempts to construct a viable discourse model for Chinese sturgeon conservation. For future reporting on Chinese sturgeon conservation, it is recommended to include expert and responsible parties' perspectives while adding interviews with the public to make the discourse more credible and relatable to the general population. This approach aims to create a conservation discourse with the characteristics of "comprehensive monitoring," "diverse participation," and "commitment to Chinese sturgeon," thereby encouraging more people to join the efforts to save the species.

This article enriches the application of discourse-historical research and expands the interdisciplinary study of Chinese sturgeon conservation. However, there are limitations in the overall design of the study. As the research is merely confined to two media outlets, China Daily and CGTN, only a relatively small number of texts are collected. Future research could enhance its persuasiveness by expanding the corpus to include a broader range of mainstream media or even social media reports. It is believed that with the joint efforts of the media, researchers, government departments, and the public, greater progress in Chinese sturgeon conservation will be achieved, promoting a harmonious coexistence within the entire ecosystem.

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