

Original Paper

A Comparative Analysis of Chinese and American News Discourse Based on Appraisal Theory

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Abstract

This paper takes news reports about Fukushima nuclear wastewater discharge from China Daily and Washington Post as the research corpus, conducts a comparative analysis on the corpus from three subsystems of appraisal theory including attitude, engagement and graduation, then statistically analyzes the use of appraisal resources in the discourses and their distributional characteristics to explore attitudes and stances of the Chinese and American media towards Japanese wastewater nuclear discharge. The results show that the overall distribution of appraisal resources in China Daily and Washington Post is comparable and the difference in the frequency of using attitude resource is not significant, but the uses of engagement resources and graduation resources in China Daily are higher than those in Washington Post.

Keywords

Appraisal Theory, news discourse, comparative analysis

1. Overview of Appraisal Theory

In the 1990s, Appraisal Theory was proposed on the basis of further development of Systemic Functional Linguistics, this theory provides a framework for discourse analysis constructed on the basis of the study of interpersonal meaning in language. Martin (2005) pointed out that appraisal theory is about evaluating the various attitudes negotiated in a text, the intensity of the emotions involved, and the various ways in which values are indicated and readers are aligned. Wang Zhenhua (2001) argued that in the appraisal system, “appraisal” is the focus, while the “system” is the centre and language is the means. Appraisal theory is a set of theoretical systems that use language to express attitudes and help construct interpersonal meaning, and the realization of evaluation requires the interaction of three subsystems, which are attitude, engagement and graduation.

Foreign studies on appraisal theory are biased in favour of the applied approach, and the objects of

research include news discourse, presidential speeches, academic discourse and so on. Among them, the most researches have been done on news discourse. White (1998) firstly used appraisal theory to analyze the rhetorical characteristics of modern news reports and proposed a framework for discussing the appraisal and ideological status of news discourse. Birot comparatively analyzed the appraisal resource in news reports of CNN, BBC and Al Jazeera. Engelbrecht analyzed news reports on rhino poaching by using a corpus tool based on appraisal theory and found that emotive language is of considerable importance in getting public attention.

On the domestic front, Wang Zhenhua introduced appraisal theory for the first time in 2001, Li Zhanzi (2004) summarized the application of appraisal theory in discourse analysis, Wang Guofeng (2017) compared the Chinese and English translations of *Washington Post* and *Reference News* about the Diaoyu Islands news, and measured whether the source language and the target language expressions of political news discourse have the same attitude; Dong Dan (2019) explored the real attitudes of Italian mainstream media towards the 19th National Congress based on attitude resource ; Wu Jangyue (2022) explored the commonalities and laws of poverty alleviation discourse communication by self-constructing a corpus of poverty-related news reports on Xinhua network with attitude resource as the point of observation; Cai Xinxin (2023) combined appraisal theory with semantic analysis to analyze the text of routine press conference of the Chinese Ministry of Foreign Affairs about the traceability of Covid-19, which provides a reference for advancing the construction of China's diplomatic discourse as a great power.

2. Corpus Sources and Research Methods

Fukushima Daiichi nuclear power plant officially began discharging nuclear wastewater into the Pacific Ocean on 24 August 2023, and the estimated discharge time would last for 30 years. This event attracted extensive international media attention. When Japan announced its discharge plan at first, the United States Department of State took the first opportunity to express its support, believing that Japan's decision was open and transparent and recognizing Japan's nuclear safety standards would be adopted for the discharge nuclear wastewater. China's Ministry of Foreign Affairs believes that Japan's neglect to the international community's opposition and discharge wastewater nuclear into the sea will seriously jeopardize marine safety and ecological balance.

In this paper, we used self-constructed corpus to study 40 news reports about Fukushima nuclear wastewater discharge published in *China Daily* and *Washington Post* from January 2021 to January 2024, with a total word count of 21,251 and 21,040 in the Chinese and American target corpora respectively. *China Daily* is a Chinese newspaper with the highest reprint rate in foreign media, and *Washington Post* is one of the four most influential and authoritative newspapers in America. The two newspapers have the most coverage of the Fukushima wastewater nuclear discharge and they are believed able to represent the attitude and position of their respective governments on international hotspot events. With the help of the appraisal framework in the corpus annotation software UAM

Corpus Tool version 3.3, the study first annotates the appraisal resource in the two corpora; then counts the frequency of the use of each appraisal resource in the target corpus, draws the corresponding excel table to supplement the analysis, and combines the three major sub-systems with the specific cases to evaluate the appraisal discourse of the news about Fukushima wastewater nuclear discharge, to reveal the appraisal meanings of *China Daily* and *Washington Post*, as well as the appraisal means used to achieve such meanings.

3. Appraisal Resources in Chinese and American News Discourse

3.1 Overall Distribution of Appraisal Resources

Appraisal theory is using language to express attitudes, and completing the construction of interpersonal meaning through the interaction of three subsystems: attitude, engagement and graduation. As can be seen from Table 1, the total frequency of appraisal resources in the corpus of *China Daily* is 1,683, which is more than that of *Washington Post*, among which the frequency of engagement resource and graduation resource is higher than that of the American side. The reason for these is the American news did not respond positively to the question of whether Japan's practices met nuclear safety standards and stated that they would not intervene in the issue of wastewater nuclear discharge. China, as the potential victim of marine water pollution, has firmly and clearly stated its attitude and position, which explains why the total number of appraisal resources by *China Daily* is higher than that of *Washington Post*.

Table 1. Distribution of Appraisal Resources in *China Daily* and *Washington Post*

	Attitude	Engagement	Graduation	Total
<i>China Daily</i>	438(26.62%)	534(31.79%)	699(41.47%)	1683
<i>Washington Post</i>	446(32.65%)	438(32.06%)	481(35.21%)	1366

3.2 Attitude Resources

Attitude resource is at the centre of appraisal theory and refers to the evaluation of emotions, human characters and the value of things made by the mind when it is affected. And it can be further divided into effect, judgement and appreciation. As the core of attitude resource, the affect system is the emotional response of language users to behaviors, texts or processes and phenomena; the judgement system is the moral judgment of language users on certain behaviors in accordance with ethics or morality, and is subdivided into social esteem and social sanction; and the appreciation system is the evaluation of texts or processes and phenomena, which includes three categories: reaction, composition and value.

Table 2. Comparison of Attitude Resources in *China Daily* and *Washington Post*

	Affect	Judgement	Appreciation
<i>China Daily</i>	153(34.15%)	63(14.06%)	232(51.79%)
<i>Washington Post</i>	157(35.20%)	87(19.51%)	202(45.29%)

Table 2 shows the use of attitude resource in the two corpora, the use of attitude resource in *China Daily* and *Washington Post* is generally comparable, but there are differences in the use of the three types of attitude resource: *China Daily* used 232 appraisal resources, accounting for 51.79%; its affect resource is used 153 times, accounting for 34.15%; and its judgement resource is used only 63 times, accounting for 14.06%. The frequency of appreciation resource used by *Washington Post* is 202, accounting for 45.29%; the frequency of affect resource is 157, accounting for 35.20%; and the frequency of judgement resource is 87, accounting for 19.51%. The following is a comparative analysis of the attitude resource adopted by China and America towards the Fukushima nuclear wastewater discharge through case analysis.

Example 1: “I was very **excited** (attitude; happy) about the trip before hearing the news, and now I’m **worrying** (attitude; security) about the nuclear pollution problem.” (Sep. 1, 2023, *China Daily*)

Example 2: The accidents also demonstrate the **inadequate** (judgement; capacity) and **ineffective** (judgement; capacity) supervision measures by the Japanese government and once again prove the **lack** (judgement; capacity) of long-term reliability of nuclear water treatment equipment, highlighting the need for international supervision, the spokesperson said. (Feb. 23, 2024, *China Daily*)

Example 3: Still, the release has faced **opposition** (attitude; satisfaction) from Japanese fishing groups, **worried** (attitude; security) about damage to the reputation of their goods, which still carry the stigma of radioactive exposure. (Aug. 31, 2023, *Washington Post*)

Example 4: “We must continue to patiently explain to those countries bilaterally to request lifting of the restrictions,” Kishida said. “And it is also **important** (appreciation; valuation) to firmly show Japan’s position at international meetings and bodies such as the World Trade Organization.” (Nov. 3, 2023, *Washington Post*)

Example 1 is from *China Daily*’s interview of a young couple who were planning a trip to Japan. The girl said they had been expecting the trip until they heard about the Fukushima nuclear wastewater discharge which worried them. “Excited” and “worrying” are the two subjective emotion words reflecting the psychological changes brought about by the discharge. Example 2 quoted from the spokesman of the Chinese Ministry of Foreign Affairs, who mentioned that various accidents occurred frequently in the Fukushima area after the decision to discharge nuclear wastewater was made, and these accidents illustrated the inadequacy of the Japanese government’s supervisory measures. “Inadequate” and “effective” expressed the criticism on Japanese government’s supervisory ability, and proved the lack of long-term reliability of the nuclear wastewater treatment equipment.

In Example 3, “opposition” and “worried” confirmed that Japan’s move has caused strong dissatisfaction among fishermen around Fukushima as well as concerns about the impact of radiation on the fishery industry on which they depend for their livelihoods; Example 4 is a statement made by Japanese Prime Minister Fumio Kishida, the nuclear wastewater discharge into the sea has led to the national restrictions on the import of Japanese seafood products, Fumio Kishida stated Japan’s firm stance on the discharge into the sea and called on the national community to lift the restrictions at an international conference.

3.3 Engagement Resources

Engagement resource focuses on the ways in which the speaker participates in the discourse, or how the authorial voice is expressed and how other voices are made to intervene. Depending on the modality, Martin categorized engagement system into monogloss and heterogloss. Monogloss refers to the appraisal activity is carried out through the author’s personal voice, without reference to sources of information and other possible points of view, whereas heterogloss is the unfolding of statements about things by projecting other voices into the discourse in a variety of ways. Heterogloss can achieve the role of dialogue contract or dialogue expand. Dialogue contract refers to the restriction or denial of certain voices by narrowing down the space of the dialogue, which is divided into the forms of disclaim and proclaim; the dialogue expand, on the other hand, enhances the persuasive power of discourse by giving the speaker space to introduce certain voices and then evoke other voices, mainly in the form of entertaining and attributing (Martin, 2005).

The distribution of the use of engagement resources in the corpora is shown in Table 3, with dialogue contract accounting for about 36% and dialogue expand accounting for 64% in *China Daily*, and dialogue contract taking up for 38% and dialogue expand taking up for 62% in *Washington Post*. The reason why the proportion of dialogue expand is much higher than that of dialogue contract in both Chinese and American news reports may due to the scientific and accurate nature of news reports, and the news of nuclear wastewater discharge will attract readers’ attention because of its seriousness, so the media need to pay attention to readers’ reactions, so compared with direct denial or approval, news reports will be more inclined to allow the existence of other voices or opinions.

Table 3. Comparison of Engagement Resources in *China Daily* and *Washington Post*

	Dialogue Contract			Dialogue Expand		
	Disclaim	Proclaim	Total	Entertain	Attribute	Total
<i>China Daily</i>	154	38	192(36%)	27	315	342(64%)
<i>Washington Post</i>	118	47	165(38%)	20	253	273(62%)

Example 5: Despite rendering approval, the IAEA’s report *pointed out* (expand; attribute) Japan’s Advanced Liquid Processing System cannot remove all the radionuclides in the nuclear-contaminated

water. Data released by Japan *show* (contract; proclaim) over 70 percent of the ALPS-treated water does not meet standards and thus needs further treatment. (July. 22, 2023, *China Daily*)

Example 6: TEPCO and the government *say* (expand; attribute) the process is safe, but some scientists *say* (expand; attribute) the continuing release of water containing radionuclides from damaged reactors is unprecedented and should be monitored closely. (Nov. 20, 2023, *Washington Post*)

Example 7: However, Tokyo Electric Power Company Holdings Inc. and the Japanese authorities have *never* (contract; disclaim) devised a transparent and credible plan to explain how they intend to filter out these radioactive elements and make the water safe. (July. 28, 2022, *China Daily*)

Example 8: “So far, I *haven’t* (contract; disclaim) heard anyone raising safety concerns over the treated water release. I’d say zero,” Kazuto Harada, who works at Marufuto Fish Store near the Onahama Port in Fukushima, said as he stood by a tank of lobsters caught nearby. Nov. 2, 2023, *Washington Post*)

In example 5, *China Daily* quoted a report by the International Atomic Energy Agency stating that Japan’s liquid treatment system is unable to eradicate all radionuclides from nuclear wastewater and more than 70 percent of the treated nuclear wastewater still fails to meet the discharge standards, with the intention of informing readers of the substantial evidence of Japan’s arbitrary behavior without guaranteeing the safety of the discharge. In Example 6, *Washington Post* quoted Tokyo Electric Power Company’s opinion, which claimed that the process of discharging nuclear wastewater is very safe, and some experts argued that the practice is unprecedented and needs to be closely monitored instantaneously. The contrasting attitudes illustrated the failure of Japan’s decision to discharge nuclear wastewater to gain the unanimous approval of Japanese experts.

In Example 7, *China Daily* used “never” directly negated the transparency and credibility of Japan’s discharging plan, illuminating Japan’s disdain for the marine environment and denying the feasibility of the discharge. In Example 8, the staff member of a fish restaurant near Fukushima stated that he has not heard any concerns about the safety of the Fukushima nuclear wastewater discharge, contradicting the report by *Washington Post* in Example 3 that fishermen around Fukushima have raised concerns.

3.4 Graduation Resources

Graduation resource is responsible for regulating the strength of attitudes and the degree of subject intervention in discourse, and it includes two subsystems: force and focus. The force resource is responsible for regulating the strength of attitude categories that can be graded, and is divided into intensification and quantification according to their strength and quantity. Intensification is responsible for evaluating the quality and process, while quantification is used to evaluate the number, mass and extent, of which the extent includes time and space; the focus resource is to grade the categories that cannot be graded, which reflects whether the evaluated person is at the centre or at the periphery, with sharpen being typical of focusing and soften being the opposite (Martin, 2005).

Table 4 shows the small difference between the proportion of the two newspapers’ reports in the ratio of force and focus resources, as well as the overwhelming dominance of force resource in news reports

of China and America. It also suggests that force resource is mainly responsible for regulating the strength of attitude and engagement resources, while focus serves as an auxiliary resource. In addition, subsystems in *China Daily* were all used more frequently than *Washington Post*, with quantification resource being used the most, suggesting that the Chinese side gave a greater deal of number, mass and extent of their reports.

Table 4. Comparison of Graduation Resources in *China Daily* and *Washington Post*

	Force			Focus		
	Intensification	Quantification	Total	Sharpen	Soften	Total
<i>China Daily</i>	270	360	630(90.26%)	20	48	68(9.74%)
<i>Washington Post</i>	226	217	443(92.10%)	12	26	38(7.90%)

Example 9: “Japan should be prepared to face *various* (force; qualification) challenges and may even bear a *heavy* (force; intensification) cost. Undoubtedly, the dumping of contaminated water will also *severely* (force; intensification) affect its international image,” Zhang said. (Aug. 28, 2023, *China Daily*)

Example 10: However, news about the discharge of the nuclear-contaminated water has raised concerns among Chinese travelers heading to Japan, *especially* (focus; sharpen) regarding their personal health and food safety. (Sep. 1, 2023, *China Daily*)

Example 11: Japan says the wastewater is *much safer* (force; intensification) than international standards and that the International Atomic Energy Agency has concluded the environmental and health impact of its release is negligible. (Nov. 17, 2023, *Washington Post*)

Example 12: The IAEA will be supervising the operation. Radiation experts have downplayed the fears about the water too, suggesting that ingesting the water would *only* (focus; sharpen) result in a minute dose of radiation and that the tritium in the water would quickly pass through the body. (Apr. 14, 2021, *Washington Post*)

In Example 9, Zhang Yulai, the deputy director of the Institute of Japanese Studies at Nankai University, argued that Japan should be ready to face all kinds of challenges and to pay the heavy price it has to pay, and the discharge of nuclear wastewater will also seriously affect Japan international image, Zhang employed the three force degrees words “various”, “heavy” and “severely” to emphasize the degree of harm that will be brought about by Japan’s move. Example 10 originated from a report of *China Daily* on the current situation of Japan’s tourism industry, mentioning that Japan’s announcement of the discharge of nuclear wastewater has triggered concerns among some Chinese tourists, although Japan is still a popular tourist destination. “Especially” directly pointed out the effects of the discharge of nuclear wastewater on people’s health and diet, and the fundamental reason why China opposes the discharge of nuclear wastewater.

In Example 11, Japan claimed that its nuclear wastewater discharge was safer than international standards during a bilateral meeting at the 30th APEC, and China and Japan agreed to find a proper way to solve the problem of nuclear wastewater discharge into the sea through constructive consultation and negotiation; in Example 12, *Washington Post* quoted the conclusions of the Japanese experts in an attempt to weaken the people's fear of nuclear wastewater, and used "only" to focus on the harm caused by nuclear wastewater discharge to a tiny amount of radiation, stressing that the harm caused by the discharge is little and explaining that the actual amount of radiation in drinking water is so tiny that it is not enough to cause harm to the human body.

4. Conclusion

Under the guidance of appraisal theory, this paper counts and annotates the appraisal resources in Chinese and American news reports about Fukushima nuclear wastewater discharge with the help of corpus software, and conducts a comparative discourse analysis of their use and distribution. The study shows that *China Daily* uses more appraisal resources than *Washington Post*, and the proportion of appraisal resources between the two news reports is more consistent, with graduation resource takes up the largest proportion. In terms of attitude resource, appreciation resources are used the most frequently; attribute resource in dialogue expand accounts for the highest proportion of engagement resource; and force resource is dominant and focus resource is complementary in graduation resource. By comparing the appraisal content shows that *China Daily* has always maintained a firm position, questioning the reliability of the discharge operation; respecting the real voice of the people, firmly opposing the discharge of nuclear wastewater into the sea and urging the Japanese side to strengthen wastewater management. The American side was ambiguous about the discharge, ostensibly expressing support for the plan, but the focus of the news report was shifted, not only reporting the Fukushima fishermen's dissatisfaction with the discharge but also quoting a large number of Japanese government statements to undermine the hazards that the discharge would bring to the ecological environment and human health. The ocean belongs to the world, a healthy marine ecology benefits the entire world, the protection of the marine environment and human health requires the efforts of people all over the world.

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